Ms. Kathleen Waylett  
Senior Deputy Attorney General  
Environmental Division  
North Carolina Department of Justice  
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Raleigh, North Carolina 27602-0629

Ms. Sheila C. Holman  
Director, Division of Air Quality  
North Carolina Department of Environment and Natural Resources  
1641 Mail Service Center  
Raleigh, North Carolina 27699-1641

Re: North Carolina’s Implementation of Visibility Impact Assessment Requirements for New Major Stationary Sources and Major Modifications Subject to Clean Air Act Prevention of Significant Deterioration Requirements

Dear Ms. Waylett and Ms. Holman:

This is in response to the enclosed March 20, 2012, letter from then-Senior Deputy James Gulick to Brian Doster of the U.S. Environmental Protection Agency’s Office of General Counsel (OGC) summarizing North Carolina’s understanding of the EPA’s views regarding the evaluation of the visibility impacts of new and modified sources on Class I areas under the Clean Air Act’s Prevention of Significant Deterioration (PSD) permitting program. It followed the enclosed March 9, 2011 letter from Beverly Bannister, Director of the EPA Region 4 Air, Pesticides and Toxics Division to Sheila Holman, Director of the Division of Air Quality of the North Carolina Department of Environment and Natural Resources and the enclosed August 19, 2011 letter from Mr. Gulick to David Coursen of OGC. The March 20, 2012 letter requested that the EPA review North Carolina’s summary and determine whether it accurately describes the EPA’s position on the legal basis for requiring a comparison to natural visibility conditions in determining whether emissions from a new or modified source will cause visibility impairment in a Class I area. In addition, the letter requested confirmation that North Carolina’s summary accurately identifies the main elements of the two-step process necessary to determine whether any visibility impacts rise to the level of an “adverse impact on visibility,” which the EPA described at our February 23, 2012, meeting with representatives from your office, the North
Carolina Division of Air Quality (NC DAQ), the U.S. Fish and Wildlife Service, and the U.S. Forest Service. The March 2012 letter accurately summarizes the key components of the EPA’s interpretation, but the EPA is not in complete agreement with some of the details reflected in the letter’s summary. We clarify the EPA’s views on these topics below.

The EPA agrees that North Carolina’s summary accurately describes the substance of the “two-step process” for determining whether a new or modified major stationary source that may affect visibility will cause an “adverse impact on visibility.” The first step requires an assessment of visibility impairment based on how visibility would change from what would have existed in the absence of any human-caused pollution, and this analysis must be provided to the appropriate Federal Land Manager(s) regardless of whether the Class I increment is exceeded. The EPA also agrees that the second step in the analysis, the determination of whether the source will have an adverse impact on visibility, requires a more holistic evaluation of various factors affecting visibility, potentially including current visibility conditions and whether the State is on track toward improving visibility.

The above interpretation is consistent with North Carolina’s state implementation plan (SIP)-approved regulations. Specifically, 15A NCAC 2D.0530, provides that: (a) finding a “visibility impairment” is a prerequisite to finding an “adverse impact on visibility;” (b) the visibility analysis the State provides to the Federal Land Manager(s) must assess whether the proposed new or modified source will cause “visibility impairment;” (c) “visibility impairment” refers to “any change in visibility . . . from that which would have existed under natural conditions;” and (d) “natural conditions” includes “naturally occurring phenomena that reduce visibility” (and necessarily excludes human-caused factors impacting visibility such as pollution from existing industrial sources). Because North Carolina’s SIP already incorporates by reference the key federal regulatory provisions underlying the EPA’s interpretation, it is not necessary for North Carolina to revise its SIP to meet PSD visibility requirements. Moreover, applying the EPA’s interpretation of the visibility impact assessment requirements would not in any respect make North Carolina’s requirements more restrictive than federal law.4

The EPA also wishes to clarify its views on two topics discussed in North Carolina’s letter. First, the EPA does not view the discussion of “natural conditions” in its 1999 Federal Register notice as clarifying existing regulations, but instead as reiterating what already was clear from the plain language of the federal regulations. See 64 Fed. Reg. 35714, 35728/2 (July 1, 1999) (explaining that “[n]atural

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1 See North Carolina SIP rule 15A NCAC 2D.0530(b) (incorporating by reference the federal definitions at 40 C.F.R. § 51.301; 51 Fed. Reg. 2695, 2695 (Jan. 21, 1986) (stating that the federal definitions of “adverse impact on visibility” and “visibility impairment” are incorporated into the North Carolina SIP).
2 See 40 C.F.R. § 51.301 (defining “adverse impact on visibility,” as “visibility impairment which interferes with the management, protection, preservation, or enjoyment of the visitor’s visual experience of the Federal Class I area”) (emphasis added).
3 Because a source cannot be found to have an “adverse impact on visibility” unless the source’s anticipated emissions would cause “visibility impairment,” the analysis provided to the Federal Land Manager(s) pursuant to 40 C.F.R. § 51.307(a)(1) must demonstrate whether the proposed source would cause a “visibility impairment.” See also North Carolina SIP rule 15A NCAC 2D.0530(q)(3) (providing that the visibility impact analysis provided to the Federal Land Manager(s) should indicate whether the source may cause “visibility impairment”).
4 See Letter from James C. Gulick, North Carolina Department of Justice (NC DOJ), to David Coursen, U.S. EPA Office of General Counsel, dated August 19, 2011, at 5.
conditions” are “the visibility conditions that would be experienced in the absence of human-caused impairment”). Second, while North Carolina’s letter recognizes that the factors listed in the definition of “natural conditions” at 40 C.F.R. § 51.301 are “not exhaustive,” and the EPA believes that there may be additional “natural” factors that would affect visibility under “natural conditions,” the definition of “natural conditions” cannot be extended to include unnatural factors such as pre-existing visibility impairment caused by industrial sources.

Further, under 15A NCAC 2D .0530(q), it is North Carolina’s obligation to identify proposed new or modified sources that may affect visibility in a Class I area, and to provide the Federal Land Manager(s) with timely notice of such proposed sources along with the required visibility analysis. This obligation reflects the EPA regulations requiring that a state PSD implementation plan provide for “[w]ritten notification of all affected Federal Land Manager(s) of any proposed new major stationary source or modification that may affect visibility in any Class I area,” that must “include an analysis of the anticipated impacts on visibility in [the] Class I area.” 40 C.F.R. § 51.307(a)(1). Such notification reflects the statutory and regulatory recognition that “[t]he Federal Land Manager and the Federal official charged with direct responsibility for management” of Class I lands “have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a class I area...” 42 U.S.C. § 7475(d)(2)(B); 40 C.F.R. § 51.166(p); see also 40 C.F.R. Part 51, Appendix W. The EPA strongly encourages North Carolina to work directly with the Federal Land Manager(s) to establish mutually agreeable and effective procedures for both notifying the Federal Land Manager(s) of those sources that may affect visibility and administering the visibility impact assessment requirements in the manner described above.

The EPA appreciates the time that NC DOJ and NC DAQ have invested in addressing the EPA’s concerns regarding North Carolina’s implementation of the PSD Class I visibility impact assessment requirements. If the North Carolina Department of Environment and Natural Resources (NCDENR) has any further questions, please feel free to contact Beverly Banister, Director of the EPA Region 4’s Air, Pesticides and Toxics Management Division, at (404) 562-9326.

Sincerely,

[Signature]

Beverly H. Banister
Director
Air, Pesticides and Toxics Management Division
U.S. Environmental Protection Agency, Region 4

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5 North Carolina has requested that the EPA approve a newer version of this regulation as part of North Carolina’s SIP, but the EPA has not yet granted approval. The new version of the regulation (state-effective date January 2, 2011) includes substantially the same regulatory language at 15A NCAC 2D .0530(t).
Enclosure(s)

cc: Mr. Stephen T. Smith, Chairman
   Environmental Management Commission, NCDENR

Ms. Sandra Silva, Chief
Branch of Air Quality
U.S. Fish & Wildlife Service

Mr. Bret Anderson
U.S. Forest Service
August 19, 2011

VIA EMAIL (coursen.david@epa.gov) and USPS
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Re: Modeling impacts to Class I areas for PSD permits

Dear Mr. Coursen:

On March 9, 2011, Sheila Holman, the Director of North Carolina’s Division of Air Quality, received the attached letter from Ms. Beverly H. Banister at Region 4. The letter discusses modeling procedures under the Prevention of Significant Deterioration (“PSD”) program regarding Class I areas. The timing of this letter was unfortunate, as it was received one business day prior to the Environmental Management Commission’s consideration of the issue in a particular contested case. However, my larger concern is that the letter appears to conflict with prior EPA rulemaking and EPA’s earlier approvals of the North Carolina approach. To our knowledge, the letter represents the first and only statement by EPA setting out this new interpretation of federal requirements with respect to Class I areas.

I write to you in an effort to clarify North Carolina’s position and seek EPA’s assistance to resolve this matter. The matter, of course, concerns modeling by which the “Federal Land Manager [may] demonstrate[] to the satisfaction of the State” that a new or modified source “will have an adverse impact on the air quality-related values (including visibility)” of any Class I areas. Clean Air Act §165(d)(2)(D)(ii), 42 U.S.C. 7475(d)(2)(C)(ii). Specifically, should the impacts of
the modeled source be measured against existing air quality conditions ("existing background") or against an ideal, "natural" baseline ("natural background")?

At the suggestion of Stan Meiburg, Deputy Administrator of Region 4, last week I had a telephone conversation on this subject with Vera Kornylak and Keri Powell in the Regional Counsel’s office at Region 4. In that conversation, Ms. Powell indicated that the views expressed in Ms. Banister’s letter were the considered views of EPA headquarters. Following the conversation, I asked for a contact at EPA Headquarters with whom I could discuss the matter and she suggested that I contact you, as you were involved in preparation of the March 9 letter. As you are on vacation until August 26th and I will be on vacation from August 25th to September 8th, I thought it would be helpful to summarize my thoughts in a letter to you so you can be considering them before we talk.

During my conversation with Region 4, I was told that the March 9 letter reflects EPA’s view that the plain language of the federal rules requires the use of natural background for Class 1 PSD modeling. (In other words, impacts should be compared to circumstances in which only “natural conditions” impact visibility.) We respectfully disagree; until now, EPA’s consistent interpretation, in formally promulgated rules, has been just the opposite. EPA’s previous positions would have to be changed, if at all, by a formal rule-making. Ms. Banister’s letter cannot override a consistent history of formal pronouncements. See NRDC v. EPA, 643 F.3d 311 (D.C. Cir. 2011).

Ms. Banister’s letter (p. 2) asserts that under the plain language of EPA’s rules, particularly 40 C.F.R. §§51.301 and 51.307, “the required assessment of a proposed new or modified source’s visibility impacts must involve an analysis of how the project’s emissions would impact natural conditions.” As Ms. Banister observes, “‘natural conditions’ is defined as ‘naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration’” (quoting 40 C.F.R. §51.301 (definition of “natural conditions”)). North Carolina agrees, as Ms. Banister notes, that modeling must assess the “humanly perceptible change in visibility (light extinction, visual range, contrast, coloration) from that which would have existed under natural conditions.” 40 C.F.R. §51.301 (definition of “visibility impairment”). That is to say, modeling must account for “naturally occurring phenomena” such as humidity and ambient light conditions, “that reduce visibility.”
But the question with which we are confronted is not whether “natural conditions” such as humidity and ambient light levels must be considered, but to what extent emissions from other anthropogenic sources are to be considered. The rule text cited in Ms. Banister’s letter does not address the latter issue. Nevertheless, on that question EPA’s rules are also clear: Visibility modeling under the PSD permitting program must include existing background conditions as encumbered by current manmade pollutant loadings including other permitted sources.

In 1985, EPA promulgated a final rule designed to “implement the existing new source review and consultation requirements in §51.307” and “not . . . to modify these requirements or the definitions in §51.301 associated with them.” State Implementation Plans for Visibility New Source Review & Monitoring Strategy, 50 Fed. Reg. 28,544, 28,547 (1985). There, EPA stated plainly that “[i]n assessing a proposed source’s impact on visibility, the reviewing authority must necessarily review that impact in the context of existing background visibility. This point does not seem debatable.” Id. at 28,548 (emphasis added). During my conversation with Ms. Powell, she asserted that North Carolina took this statement out of context. We disagree. EPA concluded the same paragraph of the rule with this statement: “The EPA concludes that the proposed language on assessing whether a proposed source will cause an adverse impact on visibility requires the reviewing authority to review the new source’s impact in the context of background visibility impacts caused by both existing and previously permitted sources. Id. (emphasis added).

Moreover, in a later, separate rulemaking, EPA reiterated this conclusion: “[A]n assessment of whether a proposed source would cause an adverse impact on visibility requires the permitting authority to review the new source’s impact in the context of background impacts caused by both existing and previously permitted (not yet constructed) sources.” Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR), 61 Fed. Reg. 38,249, 38,284 n.57 (1986) (citing 45 Fed. Reg. at 28,548).

Most particularly, on January 21, 1986, EPA by rule approved North Carolina’s proposed SIP changes to implement the required consultation with Federal Land Managers regarding impacts to Class 1 areas, and to provide for visibility monitoring in the context of making permit decisions. In that formally promulgated rule, EPA stated:
The visibility monitoring program meets the criteria for an approvable plan, as it will provide the State with reliable background visibility data for making permit decisions and for assessing visibility trends. It has been reviewed and been found to meet the provisions contained in 40 CFR 51.305.

The Weather Service provides visibility measurements in units of distance, or visual range, which are recorded three times a day for every day of the year. This data is appropriate for use in modeling potential visibility impacts of new sources.

[Existing] National Weather Service Stations should provide acceptable regional background data to use in making visibility related permit decisions. The State will use this visibility data in making its permit decisions.

Approval & Promulgation of Implementation Plans; N.C. Visibility SIP, 51 Fed. Reg. 2695, 2696 (1986) (emphasis added). This rule shows EPA’s specific intent and understanding that North Carolina use existing conditions gleaned from current monitoring data in permitting decisions. Together, these formal documents unmistakably evidence EPA’s considered opinion that existing background visibility data are to be used to evaluate impacts to visibility when issuing permits under the PSD program.

Further, EPA’s Guidelines on Air Quality Models — another formally promulgated authority — indicates that “[b]ackground air quality includes pollutant concentrations due to: (1) Natural sources; (2) nearby sources other than the one(s) currently under consideration; and (3) unidentified sources.” 40 C.F.R. Part 51, Appx. W, §8.2.1 (July 1, 2010). Finally, EPA’s Interagency Workgroup on Air Quality Modeling Phase 2 Summary Report and Recommendations for Modeling Long Range Transport Impacts (Dec. 1998) (“IWAQM”), also eschews the use of natural background. Instead, it allows for “estimates of background visibility conditions at Class I areas” to be “derived from the IMPROVE (Interagency Monitoring of PRotected Visual Environments) network.” Id. at 27. IWAQM establishes background as “the average of the cleanest 20% of the data from IMPROVE” at a given site. But IWAQM recognizes that although it refers to
these data as "clean conditions," they are not indicative of a natural background because "[e]ven the data from the cleanest days usually exhibit some made-made influence." Id.

These authorities point unerringly to the use of existing background data in the modeling of source impacts to Class 1 areas under the PSD program. North Carolina has adhered to these authorities, including the recommendation in IWAQM to use "the average of the cleanest 20% of the data," and does not require the use of natural background. We believe this is consistent with EPA’s historical and longstanding reading of its own rules.

For all the foregoing reasons, North Carolina respectfully disagrees with EPA’s assertion that its rules, as written, plainly require the use of natural background. EPA’s position appears out of step with the range of authorities discussed above.

Before this summer, the Environmental Management Commission ("EMC") – North Carolina’s air quality rulemaking body – could have decided to alter North Carolina’s rules to require the use of natural background for PSD modeling purposes regardless of whether the views expressed in the Banister letter are correct or not. There has recently been at least some support for requiring the use of natural background expressed by some EMC members. Such a change would have resolved the conflict without the need to clarify the basis for EPA’s recent interpretation further. However, new North Carolina legislation, enacted just this summer over the Governor’s veto, puts new restrictions on adoption of state environmental rules that are “more restrictive” than EPA rules on the same subject. 2011 N.C. Sess. Laws 398, §2 (codified in relevant part at N.C. Gen. Stat. §150B-19.3). This makes it vital that we resolve this matter.

Therefore, I request that you review these matters again. I would appreciate the opportunity for further discussion to get a better understanding of EPA’s legal position and also to see if there is a way to resolve this matter to allow North Carolina to determine the best path forward in compliance with the requirements of the Clean Air Act, EPA’s regulations and North Carolina’s rules. I look forward to discussing this with you after September 8, 2011.
Sincerely,

s/ James C. Gulick

James C. Gulick
Senior Deputy Attorney General

Copies: Vera Kornylak, EPA Region 4
        Keri Powell, EPA Region 4
        Sheila Holman, NC DAQ
March 20, 2012

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Re: Modeling impacts to Class I areas for PSD permits

Dear Brian:

Our meeting on February 23, 2012 was very helpful. Thank you for your help. The purpose of this letter, as we discussed, is to summarize North Carolina's understanding of EPA's position with regard to the evaluation of the visibility impacts of new sources in Class I areas under the PSD permitting program. This summary is not intended necessarily to represent DAQ's agreement with any particular EPA position or statement.

We would appreciate your review of our summary to determine whether it accurately summarizes EPA's positions, first, on the legal basis for requiring a comparison to natural background in determining visibility impairment, and, second, with regard to describing the main elements of the two-step process necessary to complete the PSD visibility review that EPA described at our meeting.
Summary of EPA's View of Legal Requirement for Comparison Against Natural Background in Determining “Visibility Impairment”

The definition of “visibility impairment,” read in the context of the statutory goal, necessarily requires a comparison of the source’s emissions against natural background:

Visibility impairment means any humanly perceptible change in visibility (light extinction, visual range, contrast, coloration) from that which would have existed under natural conditions.

40 CFR § 51.301.

The term “natural conditions” is defined in the rules as including naturally occurring phenomena such as light extinction, visual range, contrast, or coloration. However, the definition of the term is not exhaustive:

Natural conditions includes naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration.

40 CFR § 51.301 (emphasis added). EPA believes that its 1999 rulemaking concerning the regional haze program clarified that “natural conditions” as used in the definition of “visibility impairment” means natural background (which includes naturally occurring phenomena).

A plain reading of the definition of “adverse impact on visibility” demonstrates that a finding of “visibility impairment” must be made prior to a finding of adverse impact:

Adverse impact on visibility means, for purposes of section 307, visibility impairment which interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairments, and how these factors correlate with (1) times of visitor use of the Federal Class I

\(^1\) The statutory goal is “the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.” 42 U.S.C. § 7491(a)(1).
area, and (2) the frequency and timing of natural conditions that reduce visibility. This term does not include effects on integral vistas.

40 CFR § 51.301 (emphasis added). The term "visibility impairment" precedes the other considerations in the rule. Thus, in order to find that an adverse impact exists, there must be a threshold finding of "visibility impairment."

Summary of EPA's Two Step Process

Step 1 – Is there “visibility impairment”?  

The first step in the PSD visibility inquiry is determining whether there is a “visibility impairment” as defined in 40 C.F.R. § 51.301. In making this determination, the proposed source’s visibility impacts must be compared to the visibility in the Class 1 area in the absence of any man-made pollution, or, as North Carolina has referred to it, “natural background.” This determination must be made and provided to the FLM regardless of whether the increment is exceeded.

If there is no visibility impairment, the applicant does not need to proceed further, because there can be no “adverse impact” without visibility impairment.

Step 2 – Is there an adverse impact on visibility?

If there is a finding of visibility impairment, it must then be determined whether that impairment “interferes with the management, protection, preservation, or enjoyment of the visitor’s visual experience of the Federal Class I area,” such that there is an adverse impact on visibility Id. § 51.301. This process involves taking a more holistic approach. In determining whether the visibility impairment rises to the level of an adverse impact on visibility, the FLM will then consider a number of factors potentially including current conditions, and whether the State is on the “glide path” toward improved visibility. This is a case-by-case evaluation.

Here, cumulative impacts and the State’s regional haze SIP, progress and planned progress toward the statutory goal may be considered. For example, where, as part of a larger emissions reduction program, a proposed new source will

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2 Beverly Banister’s March 9, 2011 letter to Sheila Holman indicates that the impacts of the proposed source on a Class I area are for permitting purposes to be “compared against what visibility would be in [the] Class I area under natural conditions.”

3 Additionally, an understanding of the degree or intensity of any visibility impairment, while not dispositive, assists in evaluating whether there is an adverse impact on visibility.
be replacing older, more polluting sources such that there will be a net reduction in emissions, this net reduction would be considered in evaluating whether there is any adverse impact on visibility.

EPA's March 9 letter (at p. 2) indicates that current visibility conditions "may" be relevant to the FLM's determination of visibility impacts. Neither the statute nor EPA's rules require the FLM to consider "current visibility" conditions. However, current visibility conditions are properly considered by the FLM or the State in order to evaluate whether the visibility impairment "interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the Federal Class I area."

The preambles to EPA's rulemakings in 1985 said, for example, that "[i]n assessing a proposed source's impact on visibility, the reviewing authority must necessarily review that impact in the context of existing background visibility." This language reflects EPA's view that under the second step it is appropriate, if not necessary as a practical matter, for the reviewing State to consider current conditions in evaluating adverse impact. Thus, even if the FLM does not consider current conditions, the State can find that it is not satisfied by the FLM's decision and base its own determination as to whether the proposed source will have an "adverse impact on visibility" at least in part on its consideration of the proposed source's visibility impacts in light of current conditions.4

With regard to the adverse impact analysis and determination, the burden shifts between DAQ and the FLM depending on whether increment analysis shows that the increment is exceeded. See CAA § 165(d), 42 U.S.C. § 7475(d).

(a) If the increment is not exceeded, the burden is on the FLM to demonstrate that there is an adverse impact. If DAQ disagrees with the FLM, DAQ can still issue the permit. Of course, DAQ's action must be consistent with applicable administrative law principles governing review of agency decisions.

(b) If the increment is exceeded, the burden is on the owner or operator or the State to convince the FLM that there is no adverse impact. If the FLM concurs, then DAQ may issue the permit.

4 NC's understanding is that EPA does not believe that it would be correct to aggregate all manmade emissions, including those from the proposed source, and compare the aggregate result together to natural background. This would not fulfill the statutory and regulatory mandate to determine the visibility impacts of "such facility." See, e.g., 42 U.S.C. §7475(d)(2)(C)(ii).
Sincerely,

/s
James C. Gulick
Senior Deputy Attorney General

C:    David F. Coursen, EPA Headquarters
      Vera Kornylak, EPA Region 4
      Keri Powell, EPA Region 4
      Sheila Holman, NC DAQ