UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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MAY 2 0 2013

Mr. Charles Wakild
Director, Division of Water Quality
North Carolina Department of Environment
and Natural Resources
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Subject: Martin Marietta Materials, Inc.
National Pollutant Discharge Elimination System Permit No. NC0089168

Dear Mr. Wakild:

On February 19, 2013, the above-referenced draft National Pollutant Discharge Elimination System (NPDES) permit and fact sheet were received by the U.S. Environmental Protection Agency from the North Carolina Department of Environment and Natural Resources (DENR), Division of Water Quality (DWQ).

On March 15, 2013, in accordance with Section IV.B.3 of the Memorandum of Agreement (MOA) between the State of North Carolina and the EPA, 40 Code of Federal Regulations (CFR) § 123.44(a), the EPA provided a written notice that it would use the full 90-day review period authorized by the MOA and federal regulations. The EPA has completed its review of the draft permit and is providing notice of its recommendations with respect to the draft permit in accordance with MOA Section IV(B)(3) and 40 CFR § 123.44. Based on a review of the draft permit, fact sheet, other information provided by DWQ and additional documents obtained from other sources, the EPA has determined that the draft permit does not ensure compliance with applicable water quality standards (WQS) and we are providing the following comments and recommendations.

Project Summary

On September 7, 2011 Martin Marietta Materials, Inc. obtained a modified mining permit from DENR/Division of Land Resources for the proposed Vanceboro Quarry. The modification was to increase the permitted acreages to 1664.1 acres, including approval to disturb 993.9 acres, contingent upon obtaining necessary approvals and permits from DWQ. The Notice of Public Hearing which was issued by DWQ on February 4, 2013, for 401 Water Quality Certification states, in part:

> "The activity for which this Certification is sought is to impact 14,937 linear feet of jurisdictional man-made ditches and 6.69 acres of 404 jurisdictional wetland to construct a proposed 649-acres open pit aggregate mine located on the Beaufort/Craven county line."

On October 13, 2011, Martin Marietta Materials, Inc. submitted an individual NPDES permit application to DWQ for authorization to discharge comingled groundwater and stormwater from the Vanceboro Quarry.

The draft NPDES permit authorizes new discharge of 9 million gallons per day (MGD) of mine influenced wastewater from a new open pit aggregate mining facility to two unnamed tributaries to Blounts Creek with 7Q10 of zero (0) cubic feet per second. Blounts Creek is in the Tar-Pamlico River Basin and is a Nutrient Sensitive Water and Class C swamp. Blounts Creek discharges to Blounts Bay which is impaired by copper and chlorophyll a. Blounts Bay is classified as SB-NSW. Martin Marietta Materials, Inc. proposes to use two 50 million gallon clarification ponds to treat the effluent prior to discharge. The application stated that "No treatment plant will be part of the process and no chemicals are used in the production of the crushed stone."

The applicant provided summaries of estimated effluent characteristics for this new discharge. One groundwater sample was taken on August 7, 2007, from a spigot at a wellhead with no settling or treatment. Samples taken on February 7, 2011, and July 1, 2011, from a discharge from Martin Marietta Materials, Inc.'s Clarks Quarry were provided as representative samples with the NPDES application. These samples detected several pollutants: cadmium, calcium, chloride, fluoride, iron, magnesium, manganese, sodium, total dissolved solids, gross alpha, uranium, total suspended solids, total organic carbon, ammonia, aluminum, vanadium, nickel, copper, zinc and barium as well as measurements of turbidity, pH, acidity, hardness and temperature.

North Carolina has established applicable numeric WQS in 15A NCAC 02B .0211 (Fresh Surface Water Quality Standards for Class C Waters) for turbidity, temperature, pH, cadmium, fluoride, gross alpha, ammonia and nickel. North Carolina has also established numeric action levels for chloride, iron, copper and zinc. The other potential pollutants of concern are addressed by narrative WQS described in 15A NCAC 02B .0211(1-3). The WQS for the downstream Blounts Bay are described in 15A NCAC 02B .0222 (Tidal Salt Water Quality Standards for Class SB Waters) and 15A NCAC 02B .0220 (Tidal Salt Water Quality Standards for Class SC Waters).

Reasonable Potential Analysis

Federal regulations at 40 CFR § 122.44(d) require a reasonable potential analysis (RPA) to determine if the receiving water body has sufficient assimilative capacity to ensure that the proposed discharges do not cause or contribute to violations of applicable numeric and narrative WQS. The EPA commends the DWQ for requiring several water quality studies that are summarized in the fact sheet and that provide data and information about the potential impacts of this proposed discharge.

Although it was not included with the draft fact sheet, North Carolina DWQ provided the EPA with an evaluation on April 26, 2013. However, this analysis does not appear to use a statistical multiplication factor consistent with the procedures outlined in the document "Reasonable Potential Analysis: North Carolina's RPA Policy for Establishing Permit Limits," approved by the EPA on November 17, 2000. The EPA recommends that DWQ analyze the effluent data using its policy and include the RPA in the fact sheet for the final permit. The evaluation provided by DWQ indicated that reasonable potential exists to cause or contribute to exceedances of numeric or narrative WQS for turbidity and iron.

The draft fact sheet notes that "[t]he pH would be raised from the 4.0-5.5 range to 6.3-6.9 in Blounts Creek above the confluence with Herrings Run...It was concluded that potential increases in pH in upper Blounts Creek may result in increases to the numbers and diversity of acidic-intolerant species...No adverse effects are likely to occur to fish species. Increases in pH provide more habitat and less stress to freshwater species; and diadromous species may also have a more suitable habitat for spawning...No adverse effects are likely to occur to macroinvertabrates or managed invertebrates."

The EPA recommends that the final permit require Martin Marietta Materials, Inc. to complete and submit items V and VI of Application Form 2C no later than two years after the commencement of discharge as required by 40 CFR § 122.21(k)(5)(vi).

Effluent Limitations

Effluent limitations are required for any pollutant or parameters for which there is reasonable potential for the discharge to cause or contribute to an excursion above WQS according to 40 CFR § 122.44(d)(1)(i). The final permit should include effluent limitations that are as stringent as necessary to meet applicable narrative and numeric WQS.

The EPA recommends that the final permit include whole effluent toxicity limits consistent with 122.44(d)(1)(v) and 15A NCAC 02B .0211(4). The EPA also recommends that DWQ re-evaluate the draft limit for pH for consistency with water quality standards at 15A NCAC 02B .0211(3)(g) ("swamp waters may have a pH as low as 4.3 if it is the result of natural conditions") and 15A NCAC 02B .0211(1,2) ("maintenance of biological integrity"). Depending upon the result of a revised RPA, additional effluent limits may also be required.

Antidegradation Policy

The EPA recommends that the final fact sheet include all required elements of an antidegradation analysis consistent with North Carolina's Antidegradation Policy (15A NCAC 2B .0201) and 40 CFR § 131.12. The antidegradation analysis should include a finding by DWQ that the proposed lowering of water quality is necessary to accommodate economic or social development in the area. Inherent in such a determination is the consideration of alternatives for minimization or eliminating the discharge. Further, the antidegradation analysis should document that all existing uses will be fully protected and that the highest statutory and regulatory requirements shall be achieved for this new point source.

Proposed Permit

In accordance with the MOA Section IV.B.6.c and 40 CFR § 123.44 and § 124.17, the EPA requests that DWQ send a copy of the proposed permit and response to comments for a fifteen (15) business day review prior to issuing the final permit.

I want to emphasize that our review of the draft permit has been guided by our mutual goal of protecting water quality consistent with the requirements of the CWA. We recognize the important role that the CWA provides to states in administering NPDES programs. In 2007, the DENR and the EPA Region 4 signed an updated NPDES MOA in which we agreed to maintain a high level of cooperation and coordination to ensure successful and effective administration of the NPDES program. Together we share an important responsibility to implement the CWA and we appreciate your efforts to work with us

to address issues identified during our permit review. Thank you again for your willingness to work with us to protect public health and water quality consistent with the requirements of the CWA. If you have any questions, please call Ben Ghosh of the Municipal and Industrial NPDES Section at (404) 562-9432.

Sincerely,

James D. Giattina
Director
Water Protection Division

cc: Mr. Steve Whitt
Director, Environmental Services
Martin Marietta Materials, Inc.

Ms. Heather Jacobs Deck ✔
Pamlico-Tar RIVERKEEPER

Mr. Tom Belnick (tom.belnick@ncdenr.gov)