



North Carolina Department of Environment and Natural Resources

Division of Air Quality

Beverly Eaves Perdue  
Governor

Sheila C. Holman  
Director

Dee Freeman  
Secretary

July 29, 2011

Gwendolyn Keyes Fleming  
Regional Administrator  
USEPA Region 4  
Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303-8960

Dear Ms. Fleming:

This letter serves as the North Carolina Division of Air Quality's (NCDAQ's) commitment to revise the maintenance plan for the Raleigh-Durham-Chapel Hill 1997 8-hour ozone nonattainment area (referred to as the Triangle area) to incorporate the construction emissions for the Progress Energy Shearon Harris nuclear power plant, units 2 and 3.

The construction project requires consideration of general conformity since the United States Nuclear Regulatory Commission (USNRC) must approve the construction of the nuclear units. It was determined that the nitrogen oxide (NOx) and carbon monoxide (CO) emissions would exceed the de minimis level of 100 tons per year, and therefore a general conformity determination is required. The amount of winter day CO emissions estimated for this project were within an acceptable level and the NCDAQ concluded that this project together with all other emissions in the maintenance area would not exceed the emissions budgets specified in the Triangle area CO maintenance State Implementation Plan (SIP).

In reviewing the estimated summer day NOx emissions for constructing this project, it was determined that this project would be approximately twenty-one percent of the estimated construction emissions for Wake County in 2013, the peak emissions period. The NCDAQ concluded that the 1997 8-hour ozone maintenance plan should be revised to include these emissions.

Since the NCDAQ has concluded that the emissions for this project, together with all other emissions in the maintenance area, could potentially exceed the emissions budget specified in the SIP, the Code of Federal Regulations (CFR) requires the State to make a written commitment to the United States Environmental Protection Agency (USEPA) to revise the maintenance plan [40 CFR 93.158(a)(5)(i)(B)]. The following address the five elements required for the commitment letter.

*(1) A specified schedule for adoption and submittal of a revision to the SIP.*

The NCDAQ plans to revise the Triangle area 1997 8-hour ozone maintenance plan for both this general conformity project and to update the on-road motor vehicle emissions with the USEPA's Motor Vehicle Emission Simulator (MOVES) model. In discussions with the transportation partners, the necessary data for developing the on-road mobile source emissions will not be available until late December 2011. Therefore, the NCDAQ's schedule for revising and submitting a revision to the SIP is:

- January 2012 receive on-road mobile data and develop revised emission estimates for the Triangle area and revise the nonroad mobile source emissions to account for the Shearon Harris construction project;
- March 2012 the draft revision will be provided to the USEPA for review and comments;
- May 2012 the SIP revision will be put out for public comment;
- August 2012 the final SIP revision will be submitted to the USEPA

Since the start of the plan revision is reliant upon receiving data from the transportation partners, it is possible that this schedule may slip slightly. However, the NCDAQ will ensure that the final SIP revision is submitted within eighteen months of the conformity determination as required by the general conformity regulations.

*(2) Identification of specific measures for incorporation into the SIP which would result in a level of emissions which, together with all other emissions in the nonattainment or maintenance area, would not exceed any emissions budgets specified in the applicable SIP.*

The Triangle area has a sufficient margin of safety for 2011, 2014 and 2017 to account for this project. The NOx safety margins for the Triangle area for these years are 52.66 tons per day, 71.89 tons per day and 86.06 tons per day, respectively. The NCDAQ will apply a portion of the safety margin to the construction and rail emissions budgets so that the maintenance SIP will include this project.

*(3) A demonstration that all existing applicable SIP requirements are being implemented in the area for the pollutants affected by the Federal action.*

All of the control measures listed in the Triangle area redesignation demonstration and maintenance plan for the 1997 8-hour ozone standard continue to be implemented. These include the state measures of an inspection and maintenance program, the NOx SIP call, the Clean Smokestacks Act, the open burning rules, prevention of significant deterioration rules, and the air awareness program. Additionally, the maintenance plan included the federal measures of Tier 2 passenger vehicle and fuel standards, heavy duty engine and fuel standards, large nonroad diesel engine and fuel standards, nonroad spark-ignition engine and recreational engine standards all of which are being implemented.

*(4) A determination that the responsible Federal agencies have required all reasonable mitigation measures associated with their action.*

Below is a list of mitigation measures that will be implemented during the construction of the Shearon Harris units 2 and 3. The NCDAQ has determined that all reasonable mitigation measures will be taken.

- The clearing of timber around Harris Reservoir will be phased over time. This will minimize the potential for air emissions at any given time. In addition, because most of the areas would be cleared before constructing units 2 and 3, the potential for interaction with air emissions from other construction activities will be minimized. Additionally, there will be no burning of the land clearing debris during the ozone season. The timber will be sold and any remaining land clearing debris will either be chipped or hauled away.
- In discussion with Progress Energy it was stated that a parking area for the construction employees will be located just inside the project gate. The employees will access the construction site by foot or in some cases using a limited number of small company provided construction fleet vehicles to move around the site.
- The concrete batch plant will be set up near the rail line. This will be where the raw materials for the concrete batch plant will be delivered and will reduce the additional truck emissions that would have been created if the batch plant was located nearer to the construction site. Additionally, the concrete batch plant will be electric, reducing emissions further. Although the Triangle area is not a particulate matter nonattainment or maintenance area, Progress Energy will also implement a number of measures to reduce the windblown dust.
- Progress Energy has committed to idle reduction for trucks and locomotive engines. Additionally, as part of the Combined License Application, Progress Energy is requiring all fuel-burning equipment to be maintained in proper mechanical order to minimize emissions.
- The majority of the painting will be done at the manufacturing site. However, for the painting that will be done on site, low volatile organic compound (VOC) paints will be used.
- Finally, although not a mitigation measure in the construction of the project, once completed the additional nuclear energy capacity will reduce fossil fuel-fired electric generation emissions in North Carolina.

*(5) Written documentation including all air quality analyses supporting the conformity determination.*

Attached is a letter from Progress Energy dated July 14, 2010. In this letter, Progress Energy estimates the emissions for this project considering two scenarios; one where the project starts in 2011 and one where the project starts in 2018. The emission estimates were conservative often using the highest emission factors from the USEPA's NONROAD model for a group of equipment to estimate the emissions. The highest emissions occurred in the early start scenario for 2013 with 2.01 tons per day of NOx emissions. Therefore, to account for this project in the

Triangle area maintenance plan 1.92 tons per day (construction equipment and onsite trucks emissions) will be added to the nonroad mobile source construction equipment emissions and 0.09 tons per day will be added to the railroad locomotive emissions for 2011, 2014 and 2017. This will ensure that the project is covered regardless of when the project starts. Additionally, 0.15 tons per day and 0.01 tons per day of VOC emissions will be added to the construction equipment and railroad locomotive emissions budgets, respectively, for all three years. The NCDAQ has determined the amount of VOC emissions from painting are negligible and are considered to be covered by the existing area source emission estimates.

As stated earlier, the NCDAQ is committing to revise the 1997 8-hour ozone maintenance plan for the Triangle area to incorporate the building of Shearon Harris units 2 and 3. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488.

Sincerely,



Sheila C. Holman

SCH/lab

Attachment

cc: Michael Abraczinskas, NCDAQ  
Laura Boothe, NCDAQ  
Scott Davis, USEPA  
Donald Palmrose, USNRC  
Monte Matthews, USACE  
John Elnitsky, Progress Energy