Excerpt 9

Letter from EPA, Steven Riva, to Energy Answers Consultant, Kevin Scott, October, 11, 2011, AR II.A.6

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

OCT 11 2011

Kevin Scott
Associate Project Manager II
Arcadis
801 Corporate Center Drive Suite 300
Raleigh NC 27607

Re: Response to Several Air Quality Modeling Submittals for the Proposed Energy Answers Arecibo Renewable Energy Project

Dear Mr. Scott:

The U.S. EPA, Region 2 Office reviewed the following submittals regarding the PSD permit application for the proposed Energy Answers Renewable Energy Project in Arecibo, Puerto Rico: the PSD Air Quality Modeling Analysis dated July, 2011, the Response to EPA Comments to the PSD Air Permit Application – Air Modeling Issues dated August, 2011, the Preconstruction Monitoring Waiver (addendum) Request for PM_{10} & $PM_{2.5}$ dated September 2, 2011, and the PSD Air Quality Modeling Protocol Addendum for PM_{10} and $PM_{2.5}$ dated September 8, 2011. The latter two submittals were provided in order to assess air impacts from a revised PM_{10} and $PM_{2.5}$ emission rate. Our comments on these submittals are provided below:

- Regarding the September 2011 preconstruction monitoring waiver request addendum for PM_{10} and $PM_{2.5}$, we agree that the facility continues to be less than the Significant Monitoring Concentrations found in 40 CFR 52.21. Therefore, preconstruction ambient monitoring is not required for PM_{10} or $PM_{2.5}$.

- Regarding the September 2011 modeling protocol addendum for PM_{10} and $PM_{2.5}$, we find the protocol is acceptable. The protocol follows the EPA guidance memorandum dated March 23, 2010 from Steven Page of our Office of Air Quality Planning and Standards. Three years of ambient monitoring data has been obtained from the Barceloneta site at the recommendation of the PREQB. This background concentration will be added to the modeled impacts. We agree that this is acceptable. The emission inventory is also acceptable provided that building dimensions from PREPA Cambalache and the Battery Recycling Company are included in the analysis in order to assess the possibility of building downwash from these facilities.

  While not stated explicitly, we want to ensure that the receptor grid for a PM_{10} and $PM_{2.5}$ NAAQS and increment analysis is extended throughout the circular SIA and not limited to those receptors where the facility only is significant.

- Regarding the July 2011 PSD Air Quality Modeling analysis, various entries in Table 5-2 need to be corrected and QA'ed. For example, the information regarding PM_{10} and $PM_{2.5}$ is for 1 municipal waste combustor (MWC) while the information for the other pollutants is for 2 MWCs. In addition, the stack height of the emergency generators and fire-pump is listed as 6 meters but modeled at 10 meters. We understand that the $PM_{10}/PM_{2.5}$ emission rates need to be revised due to the revised emission rates of the MWCs and cooling towers. However, please ensure that all entries of this Table are correct and correspond to the modeled parameters.

- Appendix C of the July Modeling Analysis contains the monitored background information for NO_2. The 3 year average of the maximum measured concentrations was proposed for calculating the background. This is the average of 0.040, 0.038, and 0.032 ppm which equals 0.0367 ppm (converted to 68.95ug/m^3) rather than 0.0347ppm. This value should be corrected.

- Compliance with the 1 hour NO_2 and 1 hour SO_2 NAAQS is demonstrated if the annual distribution of the 98th percentile of daily maximum 1 hour NO_2 or 99th percentile SO_2 impact at each receptor is less than the NAAQS. This may be shown with AERMOD in a few ways. One way, is to output the MAXTABLE and ensure that the maximum concentration for that percentile plus background is attained. If not, the MXDYBYYR should be used to see the extent of the exceedances at other receptors including those at lower percentiles. The MAXDCONT postprocessor may then be used to see which source(s) cause to contribute to the exceedances.

  The above procedure should be followed in this case. We do not recommend the procedure used in the application which ranked the maximum impacts regardless of the receptor location and hour. The form of the standard is such that the ranking must be is done at each receptor rather than the across the receptor field.

- The GEP stack height is defined as the greater of 65 meters or the formula height. Other than the MWCs, the GEP stack height is 65 meters. Table 5-1 should be corrected.

- The emission rates in the start up and shutdown modeled scenarios are based on the MWCs operating at 100% load (or 500 MMBtu/hr). The start up/shut down emissions should be based lower loads which cap out at 80% load (or 400 MMBtu/hr). The emergency generator and fire pumps are also modeled at full emissions without consideration of the 30 minute duration. These impacts should be revised. In addition, please clarify whether the corresponding parameters listed in Appendix B of the July submittal is for 1 or 2 MWCs.

- The Environmental Justice analysis should be expanded to include low income areas surrounding Cambalache in order to see whether there are disproportionate or adverse impacts. The EPA Region 2 EJ Interim Policy defines this distance as

the furthest distance after which the impacts level off to a concentration that is less than the Significant Impact Levels. We also recommend doing a qualitative assessment of the air toxic emissions in the surrounding areas. All the documents pertaining to the EJ analysis including all public outreach that was performed should be consolidated into one document for ease in review.

Please ensure that copies of all submittals are provided to Ms. Evelyn Rivera-Ocasio in our EPA Office in San Juan. We will continue our review upon receipt to the responses to our comments above. If you have any questions regarding this letter you may contact Annamaria Coulter of my staff at (212) 637-4016.

Sincerely,

Steven C. Riva, Chief
Air Permitting Section, APB

Cc: Mark Green, Energy Answers