GOVERNMENT OF PUERTO RICO

Puerto Rico Electric Power Authority

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Sent Via E-Mail: enck.judith@epa.gov

Ms. Judith Enck
Regional Administrator
U.S. Environmental Protection Agency, Region 2
290 Broadway, 27th Floor
New York, NY 10007-1866

Dear Ms. Enck:

RE: Puerto Rico Electric Power Authority
Vía Verde Natural Gas Project
Public Notice Number SAJ-2010-02881 (IP-EWG)

Regarding the Environmental Protection Agency's (EPA) December 21, 2010 letter (EPA letter) expressing concerns about the Joint Permit Application (JPA) for the proposed construction of the Vía Verde Project (Project), the Puerto Rico Electric Power Authority (PREPA) states that this project is urgently needed to respond to the energy infrastructure crisis that Puerto Rico faces at this time. The project will allow PREPA to generate electricity by burning the much cleaner and cost effective fuel natural gas instead of fuel oils. Electric power produced in Puerto Rico costs 21 cents per kilowatt/hour compared to an average cost in the United States of only 9 cents, a situation that is directly undermining Puerto Rico's economy. The shift from oil to natural gas-based power that would be enabled by the Vía Verde project would allow PREPA to reduce criteria pollutants by a significant 64%, which would greatly improve air quality for Puerto Rico. Also, greenhouse gas emissions will be reduced by up to 30%. The Government of Puerto Rico, accordingly, has identified Vía Verde, along with the development of renewable generation, as top priority for the island.

The JPA was filed with the United States Army Corps of Engineers, Antilles Office (USACE) on September 20, 2010. USACE issued a public notice (USACE PN) of the JPA on November 19, 2010. Pursuant to Puerto Rico Law 416 (PR Law 416), dated September 22, 2004, which establishes a NEPA-like environmental evaluation process for the Project, PREPA conducted a detailed environmental study of the Project, including the opportunity for public comment and participation at three public hearings, and drafted an environmental impact statement (EIS). This environmental study culminated in the release of a final version of the EIS (Final EIS) on November 29, 2010, which was approved by the Puerto Rico Environmental Quality Board (EQB) as the Final EIS (DIA-F) for the Project. (See Enclosure, Electronic Copy of Final EIS.)

PUERTO RICO VERDE

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The EPA letter, filed in response to the USACE PN, makes several points concerning the environmental study of the Project. Prior to addressing them individually, though, we note that the EPA letter appears to be based on an evaluation of only the First Draft of the EIS (*Borrador de Declaración de Impacto Ambiental Preliminar*, DIA-P). In fact, the First Draft of the EIS was revised twice in preparing the Final EIS, with PREPA incorporating changes based on and responding to public comments received at three public hearings, via the public press, and through direct input from relevant federal and state government agencies. PREPA assures that the EPA's concerns have been addressed in the Final EIS, which was published on the webpage of the EQB and PREPA, and that the Project does not require any further environmental studies or analyses. Notwithstanding this, PREPA will address each individual comment included in the EPA letter.

A Final EIS already has been Completed for the Project

The EPA letter states that an environmental impact statement (EIS) rather than an environmental assessment (EA), needs to be prepared for this Project, in order to properly evaluate its environmental impacts. PREPA strongly disagrees with this statement, since it has already conducted a highly detailed and professional NEPA-like environmental study, pursuant to PR Law 416, and prepared a comprehensive EIS for the Project, not an EA. This environmental impact study process has been used in Puerto Rico consistently for the last forty years by all state and federal agencies evaluating projects requiring governmental approval, as codified by federal and state agencies. The evaluation performed by the federal agencies has historically been carried out under the *Federal and Commonwealth Joint Permit Application for Water Resource Alterations in Waters, Including Wetlands, of Puerto Rico* (JPA).

In conducting the environmental evaluation for both, the EIS, pursuant to PR Law 416, and the JPA, pursuant to Clean Water Act, PREPA carefully evaluated environmental impacts from the Project and determined the nature and level of mitigation efforts required. Recognized professionals were contracted to perform the required scientific studies and surveys. Also, PREPA listened, analyzed and considered all comments received through state and local administrative and judicial processes, and via the public press. The resulting analyses and determinations were incorporated into both, the Final EIS and the Project design and specifications. Also, pursuant to the Clean Water Act, PREPA will address all new comments received through the USACE PN prior to USACE's final evaluation of the JPA.

In particular, the Final EIS includes a Socioeconomic Study (Chapter 7), undertaken pursuant to the EPA Region 2, Interim Environmental Justice Policy and the President's Executive Order Number 12898, that is intended to satisfy the same need as is met by the Environmental Justice Analysis required under NEPA, which is consistent with the position of EPA Region 2 to use a socioeconomic analysis in lieu of the Environmental Justice Analysis for ethnically homogeneous populations like those in Puerto Rico.[1]

[1] United States EPA Region 2 Interim Policy on Identifying EJ Areas, December, 2000

We note that USACE determined, in page 5 of the USACE PN, that an EIS under NEPA is not necessary for the Project. We agree. We believe that the Final EIS completed pursuant to PR Law 416 (which addresses the specific concerns expressed in the EPA letter) definitively obviates the need for conducting a new EIS under NEPA, as this largely would duplicate the work already completed and unnecessarily delay the benefits of this important Project.

Alternatives to the Project

The EPA letter states that a more thorough alternatives analysis, including the use of other fuel sources and the construction of an alternative terminal near one of the north coast power plants (with the installation of a shorter length pipeline between Arecibo and Toa Baja), should be considered for the JPA. We understand that 40 CFR 1502.14 provides that an EIS should examine all reasonable alternatives to the Project, with reasonable alternatives including those that are practical or feasible from the technical and economic standpoint and using common sense.[2] We conducted just this type of evaluation of alternatives, as described in Chapter 4 of the Final EIS, and also included in the JPA.

With regard to our Final EIS Chapter 4 alternatives analysis, we note that PREPA cannot reasonably consider the use of other fuels for electric generation, such as coal or nuclear fuels. The use of coal for PREPA's large generating units was not considered due to the limitations imposed by laws already enacted in Puerto Rico, like PR Law 82 of July 19, 2010, among others, and to EPA's new Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, of November, 2010, which regulate carbon dioxide (CO_2) and other greenhouse gas emissions. Even using the newest clean technology for burning coal, the amount of CO_2 emissions is around 30% lower when natural gas is burned instead of coal. CO_2 sequestering technology for coal-burning power plants is far from fully developed.

Regarding nuclear fuels, it must be noted that harvesting energy from this type of fuel is expressly excluded by the Puerto Rico Energy Policy established by the Governor's Executive Order OE-1993-57. It must also be noted that the alternatives analysis does consider the use of renewable energy sources to meet PREPA's generating needs, as was requested during the public comment period, and that Puerto Rico's substantial plans to develop renewable generation is discussed in detail in Chapter 4 of the Final EIS, Section 4.4, which was not included in the Preliminary EIS.

Horizontal Drilling in Karst Areas

EPA expresses concerns regarding the use of Horizontal Directional Drilling (HDD) in karst areas, due to past experiences that are not specified. EPA also requests that PREPA establishes mechanisms to monitor drilling operations, so that any escape of drilling mud is detected immediately, as well as to identify steps to be taken to minimize potential impacts of an escape.

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[2] Council on Environmental Quality, http://ceq.hss.doe.gov/nepa/regs/40/1-10.HTM#2, as recovered from the Internet on December 22, 2010.

It must be clarified that the utilization of the HDD technology as described in the *DIA - F* will be mostly geared to cover construction of the Vía Verde Pipeline on areas associated with river and highway crossings. Special precautions and care must be taken to ensure that contractors adhere to prudent practices to avoid the accidental release of bentonite mud within the above-mentioned areas.

It is recognized that contractors must take due care and adhere to prudent practices to avoid the accidental release of bentonite mud. The North American Society for Trenchless Technology (NASTT) provides guidance for the analysis and design of tooling essential in reducing the incidence of hydro fractures (frac-outs) in karst environments. Hydro fracture or "frac outs" result when the fluid pressures built up in the borehole exceed the overburden effect of the surround soil medium. Several drilling factors and procedures will be monitored to preclude the development of hydro fractures. Eight significant factors will be evaluated at each HDD. These include: annular space; back ream rate; borehole pressure; depth of cover; reamer type; reamer diameter; soil composition; and soil density.

To ensure that the HDD operations to be conducted in association with the Vía Verde pipeline will comply with all regulatory permits and standards, proper preconstruction geotechnical investigations will be conducted on the *in situ* soil formations along the proposed installation route. Tooling used in HDD installations will be matched to the soil medium to be encountered. The Frac-Out Plan (Draft included in the approved FEIS) will be updated to stipulate lined pits and all environmental details depicted for the sedimentation ponds.

In summary, the HDD operation to be utilized on the Vía Verde pipeline will include proper preconstruction geotechnical investigations, limit drill fluid application rates, utilize an appropriate type reamer to reduce the extent and magnitude of the drilling fluid dispersed, carefully monitor drilling mud pressures increased until the midpoint of the installation is attained, and insure proper containment, recycling, and/or reuse of drilling muds. All HDD operations for the Vía Verde pipeline will be conducted in accordance with the guidelines and recommendations of the NASTT for karst environments. Regardless, PREPA is willing to include any specific recommendations provided by the USCOE aimed to improve the Frac-Out Plan included in the FEIS. Condition. monitor

Construction associated with the Vía Verde pipeline within the Manatí karst area will be undertaken in accordance with the procedures established in the FEIS Chapter #6 pages 6-18. The construction approach within this area will include the utilization of small construction equipment, as well as pulling the pipeline into the required open trenches. Together with the above PREPA will either avoid entirely the "Mogotes" hills located within said area, or will use the bore technique to go under nice them. Vía Verde pipeline alignment will be adjusted as required to prevent any impact to the karst area hill potential habitat for plants listed in the endangered species list.

The approaches mentioned above address all concerns presented by the Fish and Wildlife Service (FWS), as well as other federal regulatory agencies.

Compensation and Mitigation Offsets

EPA indicates concerns regarding the adequacy of the compensation to offset any impacts to jurisdictional areas; the need for specific plans to address mitigation in advance; and criteria identified in the USACE PN for "determining whether mitigation sites will be successful." PREPA addressed each of these issues in the Final EIS, where it committed to a mitigation ratio of 3:1 regarding forested and wetland areas. This ratio is greater than the one that would be the minimum accepted by EPA (1:1). These commitments are included on pages 6-2, 6-6, and 6-18 of the Final EIS. This document also considers the compensation to the offset of protected habitats that are part of a Work Plan that was jointly developed and agreed upon by USACE, PREPA and the FWS. PREPA is developing the required mitigation plans and will submit them in the near future for the USACE review and needed action.

Endangered Species Impact

The EPA letter states that a formal Endangered Species Act consultation has been required. However, as of the date of this letter, PREPA has not been notified of any such determination, which we understand falls within the jurisdiction of USACE. Based on the information gathered by field surveyors, including those from FWS, such action is not warranted. Moreover, comments on the Project by the Puerto Rico Department of Natural and Environmental Resources (DNER) indicate that they do not believe that the Project would pose a significant impact to resources covered by the Endangered Species Act (ESA). Thus, to our knowledge, USACE has not modified its original determination to use an informal consultation process under ESA.

In closing, PREPA reemphasizes the seminal importance of the Via Verde Project to Puerto Rico, both environmentally and economically. Once fully implemented, this project will allow PREPA to eliminate over 129 MM pounds of regulated pollutant emissions into the environment, or 64% of our current total and up to 30% of CO_2 emissions. In addition, transitioning away from oil-fired generation will free our people and businesses from being hostage to the international price of oil, which rise has rendered our manufacturing and other business sectors virtually uncompetitive, contributed to the devastating 15% unemployment rate currently being suffered by our workforce, and been punishing our families, half of whom live below the federal poverty line, with energy costs so high that many are unable to afford basic electric service.

PREPA is committed to continue to scrupulously examine the environmental impact of the Project, as shown by our public study process and the release of our Final EIS. PREPA respectfully requests to meet with you and your staff to discuss the concerns expressed in the EPA letter at the soonest possible time, in order that you can be assured of the quality and completeness of our environmental examination.

Cordially,

Enclosure