

To: Carol Soderberg  
From: Judith Enck

Sindulfo Castillo  
Chief, Antilles Regulatory Section  
Jacksonville District Corps of Engineers  
400 Fernández Juncos Avenue  
San Juan, Puerto Rico 00901-3299

Re: Via Verde Natural Gas Pipeline; SAJ-2010-02881 (IP-EWG)

Dear Mr. Castillo:

This is in further reference to the Via Verde natural gas pipeline project proposed by the Puerto Rico Electric Power Authority (PREPA). Since our December 23, 2010 letter, additional information has been provided by PREPA and its consultants to address the U.S. Environmental Protection Agency's (EPA's) concerns. In addition, the applicant met with EPA representatives on several occasions to present and/or discuss such additional information, including chapters four and six of the local Environmental Impact Statement (EIS) for the project, plus several summary sections.

In our previous letter, EPA objected to the issuance of a Department of the Army permit for the project based on the lack of a detailed alternatives analysis, concerns regarding the use of directional drilling, the lack of suitable compensatory mitigation to address wetlands impacts, and the need to complete a federal Environmental Impact Statement (EIS) for the project. The comments provided herein are based on a thorough review of the additional information furnished by the applicant and its consultants.

To address the alternatives analysis issue, PREPA provided information on the alternatives contained in the local EIS prepared for the project. These included a no action alternative, the construction of a natural gas import terminal on the north coast of the island, tanker and buoy systems and/or transfer platforms for receipt of natural gas at PREPA's Palo Seco, San Juan and Cambalache plants, gravity based systems, floating storage and re-gasification units, and several terrestrial alignments for a natural gas pipeline system. While this represents a significant milestone in the review of alternatives for the project, the documents provided included an additional option: The use of natural gas at PREPA's existing Costa Sur and Aguirre power generating facilities on the south coast of Puerto Rico, combined with the conversion of the nearby Las Mareas Port facility to receive liquefied natural gas (LNG) as means to achieve significant energy production using an alternative fuel. This project, formerly known as the "Gasoducto del Sur", was previously considered by PREPA as means to address the diversification of the electric power supply methods in Puerto Rico. The project was briefly

mentioned in response to comments from the U.S. Army Corps of Engineers and the Puerto Rico Engineers and Surveyors Association. EPA believed that PREPA's dismissal of this alternative was inconsistent with the current project's overall project purpose, since it would provide PREPA with an alternative fuel option for two major generating facilities with lesser environmental impacts. However, after evaluating additional information furnished by the applicant's environmental consultant, it appears that *Gasoducto del Sur* was geared to provide natural gas to the combined cycle units located at the Aguirre Power Plant with a 592 MW operational capacity. On the other hand, Via Verde would provide natural gas and an increase in PREPA's operational capabilities to a total of 1,519 MW. Moreover, the Via Verde Project would provide PREPA with the flexibility to operate the most efficient power generating units on the island, which are located on the north coast, through the monitoring of each unit's rated capacity, individual fuel consumption and the type of fuel that fosters the lowest power generating costs. The Via Verde project would thus allow a more efficient use of such power generating units, allowing reductions in the transmission losses, as observed in other PREPA electric power transfer systems. EPA also defers to PREPA's expertise on the fact that "*Gasoducto del Sur*" may destabilize the island's electrical system, resulting in frequent collapses of the electric network of Puerto Rico. Upon further consideration of the supplied information, EPA believes that the alternatives analysis issues have been ~~fully~~ addressed by the applicant.

In regards to EPA's concerns about the use of directional drilling in wetlands and karst terrain, PREPA provided additional information regarding best management practices, the monitoring to be performed and the presence of specialized personnel during drilling operations to monitor the process and stop work immediately if any escape of bentonite mud into karst formations and/or waters of the United States is suspected. In addition, during a March 2, 2011 meeting at the Corps of Engineers, PREPA's consultants announced that directional drilling operations in karst terrain would be greatly reduced, since the pipeline route would be altered to circumvent haystack hills ("*mogotes*"), light equipment would be used, and a pipeline pull method would be required to further reduce impacts. We commend PREPA on these impact reduction measures, and <sup>now believe</sup> ~~remain confident~~ that best management practices, combined with adequate monitoring by qualified personnel should minimize any undesirable impacts from directional drilling. EPA recommends that that a special condition to the Corps of Engineers permit, requiring the presence of a trained geologist/engineer with expertise on karst terrain in the field at all times during drilling operations to closely monitor the process and stop work if any issues or abnormalities are detected be included. We also urge the Corps to consider additional special conditions requiring the avoidance of major karst formations during pipeline construction.   
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In our previous letter, we commented on the unsuitability of the initially proposed compensation for unavoidable impacts to aquatic resources. Additional information supplied by PREPA to address this issue includes, among others, a commitment to coordinate with the Department of Natural and Environmental Resources (DNER) to develop suitable on-site mitigation in a 3:1 ratio for any unavoidable impacts to aquatic resources. While PREPA has repeatedly stated that a suitable mitigation plan would be developed in a timely manner, EPA believes that such plan must be reviewed and accepted by the Corps of Engineers' resource

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agencies before construction of the project begins. In addition, questions remain regarding the concept of "temporary impacts". PREPA expresses that after placing the pipeline, areas would be immediately brought back to initial conditions so that natural re-colonization by prevailing vegetation begins. However, sections of the local Environmental Impact Statement (EIS) prepared for the project indicate a willingness to enhance areas by suppressing invasive and/or nuisance species at locations such as Caño Tiburones or other ecologically valuable areas. If PREPA plans to pursue such wetlands enhancement options, the areas need to be identified, quantified, and a specific plan to address local conditions must be developed. Additional details on the management/maintenance methods to be used need to be clarified. EPA believes that any mitigation and/or wetlands enhancement plans should include performance/success rates to evaluate their suitability and long term viability. Furthermore, please be advised that on January 14, 2011 the Council on Environmental Quality (CEQ) provided guidance for departments and agencies of the Federal government on mitigation and monitoring of activities. As highlighted in this guidance, "Mitigation measures included in the project design are integral components of the proposed action, are implemented with the proposed action, and therefore should be clearly described as part of the proposed action." Therefore, EPA believes that a more robust description of the mitigation and monitoring plans needs to be developed to ensure that this federal objective is fulfilled. The guidance further states that "Mitigation commitments needed to lower the level of impacts so that they are not significant should be clearly described in the mitigated FONSI [finding of no significant impact] document and in any other relevant decision documents related to the proposed action." Therefore, any Corps-issued Environmental Assessment coupled with a FONSI for this project should include that information. We look forward to receiving and reviewing the mitigation plan documents as they become available.

One additional remaining concern for EPA is the proposed project's right-of-way (ROW). At various times throughout the documents supplied by PREPA, the ROW is described as being 100, 150 or 50 feet wide. The applicant's consultant has provided a brief description of the ROW categories, but we would appreciate a written, detailed explanation of the concept and its implementation along the final pipeline route in order to include it in the project review file for future reference.

In summary, we believe PREPA has addressed most of our major concerns regarding the Via Verde Natural Gas Pipeline project. However, additional information is required to fully comply with the Clean Water Act, Section 404(b)(1) Guidelines requirements. We, therefore, condition our approval of the proposed project to receiving, for review and approval, a comprehensive mitigation plan which addresses compensation for both, temporary and permanent impacts to wetlands and a detailed explanation of the project's variable right-of-way before project construction activities begin. In addition, we request that the permit includes a special condition requiring the presence of qualified personnel during drilling operations to closely monitor the process and stop work if any issues or abnormalities are detected.

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If you have any questions or require additional information on this matter, please contact Ms. Teresita Rodriguez, Chief of the Multimedia Permits and Compliance Branch (MPCB), at 787-977-5864 or Mr. José Soto, of the MPCB, at 787-977-5829.

Sincerely,

Carl-Axel P. Soderberg  
Director

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