

## Barron, Robert B SAJ

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**From:** Daniel Pagan [daniel\_paganrosa@yahoo.com]  
**Sent:** Friday, August 05, 2011 5:31 AM  
**To:** Barron, Robert B SAJ  
**Cc:** Collazo, Osvaldo SAJ; Jousef Garcia; IVELISSE SANCHEZ SOULTAIRE; EDWIN BAEZ; FRANCISCO E. LOPEZ GARCIA  
**Subject:** Re: Questions related to terrestrial alternatives (UNCLASSIFIED)  
**Attachments:** Questions presented by Bob2[1] revised[1].pdf

Bob

Sorry for the delay. I have being on several medical appointments. Here is the first set of information. In the morning today Yousev will be delivering the detailed wetland analysis for the 3 alternatives considered in the EIS as well as the rational and analysis performed to select the preferred one. This will include a detail evaluation of the wetlands on each of the options considered as well as summary for each one.

Danny

**From:** "Barron, Robert B SAJ" <[Robert.B.Barron@usace.army.mil](mailto:Robert.B.Barron@usace.army.mil)>  
**To:** Daniel Pagan <[daniel\\_paganrosa@yahoo.com](mailto:daniel_paganrosa@yahoo.com)>  
**Cc:** "Collazo, Osvaldo SAJ" <[Osvaldo.Collazo@usace.army.mil](mailto:Osvaldo.Collazo@usace.army.mil)>  
**Sent:** Thursday, August 4, 2011 9:45 AM  
**Subject:** Questions related to terrestrial alternatives (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Danny, can you help me by answering the following minor questions regarding the "terrestrial alternatives". I am working the barge/LNG terminal alternatives and if any questions will get them to you shortly. I am discussing with Engineering their revised frac-out report.

1. Regarding our discussion on the phone on comparing the quantity of wetlands along the three alternative routes (since the alternatives analysis in the application nor response letters did not), subsequently I have prepared the enclosed images to accompany a narrative comparing the routes and estimate approximately 24 miles of Route C is in wetlands are along highways of Route A (a small section in karst). Do you have any existing documents besides the following regarding constraints along those portions of highways? The purpose of the question is simply to double-check that I have all your available information regarding this. I have: the information on # of road crossings from the BCPeabody response letter in February; your statements during the PDT meeting about avoiding communities and presence of

infrastructure; FHWA verbal comments about capacity; FHWA's CFR references; and some personal observations driving the route.

2. The number of residences within 150 feet of the centerline in the "Selection Matrix" at 1.7.5 of the JPA totals 3 for Route C. During our meeting on July 1st I understood there were 32 residences within 50ft and total of 92 within 150ft. Can you help me understand the difference in analysis? The purpose of my question is to confirm the reliability of the "Selection Matrix".

3. The number of Bodies of Waters in the "Selection Matrix" at 1.7.5 of the JPA is much lower than the number of crossings in the Joint Permit Application. Is the difference simply that the EIS referred to the larger waterbodies?

4. Can you confirm that the 2006 Power Technology Corporation study only had the two routes each between San Juan to Cambalache and Cambalache to EcoElectrica? The purpose of my question is to double-check that all available (if relevant) alternatives are displayed. I ask because the Joint Permit Application at 1.7.4 states "Corridors were evaluated every 1,000 meters"

By the way, as alignments and work areas and extent of wetlands are refined the acres have changed. Joint Permit Application shows 0 acres permanent, 143.92 acres temporary in wetlands and 7.84 acres in open water. Revised Wetland Maps June 21st show 1.68 acres permanent, 288.33 acres temporary in wetlands and 24.73 temporary in canals.

Bob Barron  
Project Manager, Regulatory Division  
Cellphone (904) 304-9572 - - Office (904) 232-2203

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1. Regarding our discussion on the phone on comparing the quantity of wetlands along the three alternative routes (since the alternatives analysis in the application nor response letters did not), subsequently I have prepared the enclosed images to accompany a narrative comparing the routes and estimate approximately 24 miles of Route C is in wetlands are along highways of Route A (a small section in karst). Do you have any existing documents besides the following regarding constraints along those portions of highways? The purpose of the question is simply to double-check that I have all your available information regarding this. I have: the information on # of road crossings from the BCPeabody response letter in February; your statements during the PDT meeting about avoiding communities and presence of infrastructure; FHWA verbal comments about capacity; FHWA's CFR references; and some personal observations driving the route.

In order to minimize project environmental impacts and at the same time expediting the permit process, the installation of the Via Verde pipeline along the highways corridors and right of ways was PREPAS # 1 choice. However, after completing a comprehensive route evaluation, in light of the three project objectives mentioned on the previous write up, (to be delivered under a separate E-Mail) the project designers and environmental consultants discarded the option of utilizing 100% of roads right of ways due to the following factors:

- Limited construction space that would require "borrowing" space from the expressways, creating traffic jams, delaying the construction schedule and rising construction costs;
- risk of hitting the superacueduct pipeline that runs through the PR 22 right of ways;
- challenge related with reaching those PR 10 segment from Ponce to Adjuntas without crossing the Ponce Municipality highly populated areas or forcing the construction of the project through extremely difficult topography;
- hardness of geology along PR 10 from Ponce to Adjuntas would require use of explosive that would damage the road rising construction costs and also affecting traffic flow;

In contrast, the clays located along alluvial and flood prone valleys, allow the fastest, cheapest and safer construction and operation of the project. Only at PR 10 segment along the karst area and PR 22 segments near highly populated areas, it was determined feasible utilizing the highways right of ways. The chosen alignment is then the best choice considering the following factors:

- **constructability (including time and costs)**
- **safety of communities and mental anguish of people**
- **safety of other infrastructure (particularly the superacueduct that transport 100 million gallons daily to the San Juan metropolitan area from Arecibo)**
- **avoidance of traffic jams and damage to roads during construction**
- **avoidance of known archaeological sites**
- **avoidance of endangered species core habitat**
- **avoidance of high value wetlands (forested)**
- **minimization of impacts over karst areas**
- **minimization of impacts over wetlands by reducing construction footprint and adoption of best management practices**
- **Compensation of temporary impacts by enhancing marginal wetland areas, land acquisition for endangered species, reforestation of half (50 feet wide) right of way of construction and restoring 100% the herbaceous wetlands impacted.**

**There's a report prepared by Gulf Interstate regarding the preliminary evaluation of utilizing strictly the roads right of ways. However, the conclusions are similar to the ones stated above.**

*2. The number of residences within 150 feet of the centerline in the "Selection Matrix" at 1.7.5 of the JPA totals 3 for Route C. During our meeting on July 1st I understood there were 32 residences within 50ft and total of 92 within 150ft. Can you help me understand the difference in analysis? The purpose of my question is to confirm the reliability of the "Selection Matrix".*

**The alignment has been continuously adjusted to address all environmental and archeological concerns and so the numbers. The most important issue with this regard is that alternatives running near expressways show the highest number of nearby residences (high density urban developments). At the discarded alternatives, the nearby residences are in the order of hundreds. If such analysis and numbers are needed we will be able to provide them by tomorrow.**

*3. The number of Bodies of Waters in the "Selection Matrix" at 1.7.5 of the JPA is much lower than the number of crossings in the Joint Permit Application. Is the difference simply that the EIS referred to the larger waterbodies?*

**Yes the EIS didn't take into consideration tens of "death water" canals along the Caño Tiburones. Those were considered as a whole with that wetland system.**

*4. Can you confirm that the 2006 Power Technology Corporation study only had the two routes each between San Juan to Cambalache and Cambalache to EcoElectrica? The purpose of my question is to double-check that all available (if relevant) alternatives are displayed. I ask because the Joint Permit Application at 1.7.4 states "Corridors were evaluated every 1,000 meters"*

**The Power Technology Study evaluated other alternatives including a loop with additional power plants far to the west side of the island (Mayaguez municipality) among other scenarios. But those were not taken into consideration because they area out of the scope of these project. Also the study considered what in our opinion could be considered as worst environmental alternatives since they were recommending crossing the island in a diagonal way.**

*By the way, as alignments and work areas and extent of wetlands are refined the acres have changed. Joint Permit Application shows 0 acres permanent, 143.92 acres temporary in wetlands and 7.84 acres in open water. Revised Wetland Maps June 21st show 1.68 acres permanent, 288.33 acres temporary in wetlands and 24.73 temporary in canals.*

**Please revise. Based on our calculations, the temporary impacts total are 281.36 acres, which considered the canals and crossings acreage all wrap together.**

*Bob Barron  
Project Manager, Regulatory Division  
Cellphone (904) 304-9572 - - Office (904) 232-2203*

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