

Estratégico sustentable, los Objetivos y Políticas Públicas del Plan de Uso de Terrenos de Puerto Rico y el Programa de Inversiones de Cuatro Años.

La construcción y operación del gasoducto sur-centro-norte tendrá un impacto significativo sobre el uso de terrenos. Su construcción alteraría la vegetación, la fauna, la topografía, la hidrografía (manantiales, quebradas, ríos, fuentes de agua potable), la estabilidad de los suelos, actividades agrícolas, lugares cercanos a viviendas, escuelas, iglesias, comercios, parques, áreas recreativas y otras actividades. La operación del gasoducto transformaría las características naturales y sociales del ambiente en esos lugares.

Alegó que los dueños de terrenos serán obligados a vender sus propiedades en todo o en parte, al precio que esté dispuesto a pagar la Autoridad de Energía Eléctrica (AEE), para hacer factible la construcción y operación del gasoducto. Aquellos que permanecieran cerca del gasoducto durante su operación verían alterado, su uso y disfrute de la propiedad, su bienestar, como resultado de la tensión que resultaría del peligro de fuegos y explosiones al que estarían sometidos de manera continua.

Un gasoducto es una porción de un proyecto industrial que tiene que ser evaluado como tal en cuanto a uso de terreno. El gasoducto requiere una zonificación industrial. Los dueños de terrenos y estructuras no solo colindantes sino cercanas, serían sometidos a una alteración del uso y disfrute de sus terrenos.

La construcción de un gasoducto terrestre para la transportación de gas natural es una tarea muy difícil, punto menos que imposible, en Puerto Rico. Ello implica que la distancia del gasoducto a las viviendas, escuelas, comercios, parques y otros centros de actividad tendría que ser más de ciento veintiocho metros, si este va a tener un diámetro de 24 pulgadas y una presión de 650 libras por pulgada cuadrada. A corto plazo, esta presión del gas es suficiente para suplirlo sólo a la planta que puede operar como ciclo combinado de 400 MW, localizada en Puerto Nuevo, San Juan.

Los fuegos y explosiones del gas natural en los gasoductos son reales y tienen efectos devastadores sobre los que viven a cientos de metros de distancia. En el caso que nos ocupa había que mantener una distancia de más de 128 metros a ambos lados del gasoducto para proteger la salud y seguridad de los humanos, animales y las propiedades. La presión  $p$  está dada en libras por pulgada cuadrada y el diámetro de la tubería en pulgadas.  $R$  es el radio en pies requerido para proteger alrededor del 99% de la población de los efectos negativos del juego y la explosión.

La gerencia de la AEE no le ha informado al pueblo que pretenden aumentar de forma significativa la presión del gas en la tubería en el futuro. Si se aumentare la presión a más de 650 libras por pulgada cuadrada, como se contempla entonces la distancia sería mucho mayor. Para una presión de 1050 libras por pulgada cuadrada la distancia tendría que ser mayor de 162.3 metros. Si la presión fuera 1450 libras por pulgada cuadrada, entonces la distancia aumentaría a más de 174.4 metros.

Se ha señalado que la reglamentación de EU no establece una distancia fija entre un gasoducto, viviendas, comercios, oficinas y otras estructuras en las que están presentes humanos. No existe una distancia fija porque ésta varía por la presión del gas y el diámetro de la tubería. A mayor la presión del gas y el diámetro de la tubería, mayor será la

distancia requerida para proteger la seguridad y la salud de la gente, además de sus propiedades. A mayor densidad poblacional mayor el número de gente que sería afectada por el fuego y explosión y más difícil su relocalización inmediata más allá del radio de 200 metros.

La AEE ha expresado que 22.86 metros (75 pies) o en unos casos menos, es suficiente para propósitos de conservación y mantenimiento (servidumbre de mantenimiento) (DIA-P). Que la servidumbre de mantenimiento de 75 pies (22.86 metros) a cada lado de la tubería podrá ser reducida o aumentada según fuere el caso en cada lugar de la ruta. La AEE expropiará los terrenos dentro de la servidumbre de operación de veinticinco pies (7.62 metros) a cada lado de la tubería. De ser necesario extenderán la adquisición de terrenos dentro de toda la servidumbre de mantenimiento.

Se señala que donde único sería prohibida la existencia de estructuras es en la servidumbre de operación de cincuenta pies, es decir a veinticinco pies (7.62 metros) a cada lado de la tubería. Están diciendo que la AEE no viene obligada a expropiar o a compensar a los que lleven a cabo actividades a más de 7.62 metros y menos de 22.86 metros de distancia de la tubería, donde termina la servidumbre de mantenimiento. Implican que algunas de estas estructuras podrían ser usadas para vivienda.

Se asevera que en el pasado se gestó oposición a un proyecto similar, debido a una percepción errada de la población de que el transporte de gas natural es una operación insegura. A pesar de todos los adelantos tecnológicos los fuegos y explosiones surgidos en rupturas de gasoducto siguen ocurriendo. No es un asunto de percepción equivocada, es una conclusión que surge de la experiencia.

La AEE incluye la distancia a la residencia y zona de tranquilidad más cercana. Si se aplicará la posición de la AEE discutida en los párrafos anteriores solo tendrían que expropiar la Iglesia Presbiteriana al borde de la PR-10 en Utuado y las estructuras cercanas a las carreteras PR-690 y PR-2 en Vega Alta. Estas son las únicas que están a menos de 7.62 metros del centro de la tubería. Lo que eso implica es que la AEE pretende no responsabilizarse por la seguridad y salud de la gente en lugares más allá de 7.62 metros (25 pies) hasta 22.86 metros (75 pies) de la tubería.

Hay cuando menos ocho sectores en los cuales hay estructuras a menos de 22.86 metros (75 pies) del centro de la tubería. La mitad de estos están en Utuado, el segundo municipio en tasa más elevada de familias bajo el nivel de pobreza (60.3%). Este asunto se discute en mayor detalle en la evaluación del análisis de Justicia Ambiental de la llamada DIA-P.

En muchos lugares habría que comprar mucho más terreno y viviendas, además de estructuras. El costo del proyecto aumentaría de forma significativa.

No se discute la ubicación concreta de los segmentos de la tubería en cuanto a las categorías de alta consecuencia a lo largo de la ruta del gasoducto.

Se ha fragmentado la evaluación del impacto del proyecto sobre los componentes sociales y naturales del ambiente, al no incluir varias actividades contempladas en los planes de la AEE.

La JP, en el Plan Integral de Desarrollo Estratégico Sustentable de 16 de agosto de 2010, reconoce la forma fragmentada e improvisada con que

se han evaluado los asuntos energéticos y sostiene que hay que priorizar en la generación de energía con fuentes renovables. Que la planificación local no ha considerado integralmente los aspectos energéticos y ambientales como parte de su análisis general y específico de las consecuencias de las actuaciones e inversiones locales y globales que se realizan en el territorio de Puerto Rico. La planificación ambiental tiene que integrar las políticas públicas de energía, ambiente y desperdicios sólidos en una estrategia sostenible que permita el uso de tecnologías renovables de producción energética, la conservación, tecnologías de transformación de desperdicios y el reciclaje en toda capacidad.

En el PIDES la JP reconoce que el sector de energía ofrece la oportunidad estratégica para fomentar el desarrollo de una industria de energía y el desarrollo de métodos alternos, ambos basados en la utilización de fuentes renovables. Reconoce que el acceso a recursos confiables y sostenibles de energía a costos competitivos es una preocupación fundamental en todo el mundo.

La JP afirma la necesidad de fomentar la reducción en consumo energético, en particular aquel proveniente de combustibles que no son renovables. La AEE insiste en sustituir la dependencia de derivados de petróleo con la dependencia del gas natural, hasta un 71% de la generación de energía eléctrica a partir del año 2014. La AEE y la legislatura pretenden mantener esa dependencia intacta hasta cuando menos el año 2035. Parten de la premisa errada que el precio del gas natural se va a mantener bajo por 25 años o más. Es de esperarse que la disminución en la disponibilidad de petróleo con costo de producción bajo encarezca esta materia prima. El pago por la emanación de bióxido de carbono en Europa y en el futuro cercano en Estados Unidos y otros países, se nota un incremento en el consumo de gas natural para producir energía eléctrica.

Solicitó que la Junta de Planificación siga el trámite normal y ordinario de consulta de ubicación para este proyecto, puesto que no existe una situación de urgencia energética. Sometió copia de los comentarios sobre el gasoducto sur-centro-norte entregados a la JCA para la evaluación del panel examinador y la JP.

11. GINECO, Dra. Carmen Ortiz Roque, ginecóloga-obstetra. Compareció en calidad de representante de GINECO, Corp. GINECO es una organización sin fines de lucro dedicada a la investigación reproductiva y a la educación en el área de salud con el Caribe. La doctora definió lo que constituye una emergencia y urgencia. Se debe evaluar el posible daño que cause un accidente. Puede haber accidentes agudos y crónicos. Entiende que el proyecto puede causar una gran emergencia. Puede poner en riesgo la vida de los ciudadanos como resultado del proyecto. Entiende que las consecuencias de un accidente pudieran ser las siguientes: peligro de explosión, peligro de fuego, cálculo de escape de gas y análisis de áreas de peligro. Que se debe calcular la probabilidad de riesgo de accidentes. Esta discutió los efectos a la salud por inhalación del gas natural tales como: metano: Asfixia y muerte; radón: Asma, alergias, daño pulmonar, depresión, pérdida de conocimiento; BTEX: Cáncer, daño al feto; organometales, mercurio y plomo: Alta presión, cáncer, daño al feto; PBC: cáncer, daño al feto y Methylmercaptan: mareo, dolor de cabeza, pérdida de conocimiento.

Esta habló sobre los riesgos de explosión y fuego en gasoducto de gas natural y que no se pudo identificar un análisis de riesgo de inhalación, fuego o explosión en la DIA y no se identifica distancia seguridad para humanos y hasta donde pudiera llegar la llamarada. Entiende que el diámetro del gasoducto es determinante y que esto incide en el alcance

de la llamarada. La evaluación de riesgo del gasoducto es defectuosa en relación a las consecuencias de un accidente. No se identificó distancias seguras ni se calculó el área de riesgo.

Expresó que han ocurrido accidentes en otros países desarrollados. Es de la opinión que la evaluación de riesgo de gasoducto Vía Verde es defectuosa; que no se pudo identificar que se definiera distancia segura o prudente para la residencia de humanos; no se pudo identificar que se definiera distancia segura para la existencia de escuelas y hospitales; no se calcula riesgo en áreas de alta densidad poblacional y vías de tránsito. El Gasoducto puede provocar una emergencia médica mayor.

Entiende que el Sistema de Salud de Puerto Rico no está preparado para atender una emergencia. Ella definió el término emergencia, como la condición que pone en riesgo la vida de un individuo o significa pérdida de función y órgano. Esta emplazó al Secretario de Salud a que evalúe la capacidad del Sistema de Salud para atender una emergencia mayor con números de vidas humanas a riesgo.

12. Lcdo. Armando Cardona Acaba - Es residente de Toa Baja se expresó en la vista pública de Toa Baja y posteriormente presentó su ponencia por escrito. Este hizo preguntas sobre el contenido del aviso publicado el 6 de octubre de 2010. Si se señalaban en el aviso el número de catastro de los titulares que se verían afectados con la posible adquisición de terrenos.

En la misma expresa que según fue anunciado a principios de las vistas, la vista sería de naturaleza adjudicativa. Está de acuerdo que así sea ya que el Reglamento de Procedimiento Adjudicativos de la Junta de Planificación así lo establece. No hay manera de celebrar vistas adjudicativas simultáneamente sobre el mismo proyecto. Al adjudicarse la consulta no puede haber tres récords distintos ante tres oficiales distintos, en tres lugares distintos con diferente prueba, los cuales solo han escuchado una tercera parte de la prueba. Entiende que este procedimiento es uno que solo se podría utilizar en unas vistas públicas administrativas investigativas. El hacerlo como se ha hecho o sea, simultáneamente, se convierte la vista en una vista investigativa de facto, que viola el propio reglamento de la Junta.

De otra parte expresó que el concepto de Pre-consulta no puede violar lo establecido en la Ley de Política Pública Ambiental en su Artículo 4(B)3, ni la propia reglamentación de la Junta. La acción afecta significativamente la calidad del medio ambiente y no es la Junta de Planificación la agencia promovente. Esta es una consulta pública, por lo que la Autoridad de Energía Eléctrica tiene que acompañar su solicitud de consulta con una DIA-Final y no con un borrador de una DIA-Preliminar. La Autoridad es la Agencia proponente, esta no puede llevar a cabo acción alguna, como lo sería solicitar la consulta sin antes haber cumplido con dicha Ley. Entiende que la solicitud debió haber sido devuelta a la AEE por ser una solicitud incompleta.

La Junta de Planificación está utilizando el llamado procedimiento expedito para evaluar la presente consulta. Dicho trámite solo se usa en casos de emergencias. En cuanto a la presente consulta no hay duda ni controversia, ni siquiera pretensiones, de la AEE que su proyecto va dirigido a lidiar con una emergencia. Entiende que el proyecto no constituye una emergencia y por lo tanto debe seguir el trámite normal.

Hay plantas de la Autoridad que se construyeron que ya están capacitadas para usar el gas natural como combustible y las que faltan por convertir a uso de combustibles múltiples no requieren de consultas de ubicación para así hacerlo. El gasoducto es solo uno de muchas

maneras de mover el gas de un sitio a otro. Le hubiese gustado someter comentarios sobre los aspectos ambientales del proyecto.

13. **Francisco Adrover** - Es residente de Dorado. Tuvo la oportunidad de examinar el proyecto. Este mostró preocupación porque la alineación discurrirá por la escuela en la que el imparte clases y por el posible daño que pudiera tener su madre como resultado de un accidente quien es residente de Levittown.
14. **Rogelio Molina** - El señor Molina mostró preocupación por los aspectos de seguridad y los posibles accidentes que pudieran surgir como resultado del proyecto propuesto. Se dio a la tarea de buscar información sobre el Gasoducto en la red de internet. En Estados Unidos, México y Europa han muerto y perdido sus viviendas como resultado de proyecto como el propuesto. Criticó el procedimiento expedito que se ha utilizado.
15. **Luis Navarro** - El señor Navarro es residente de Levittown y mostró preocupación por los aspectos de seguridad del proyecto. Fue testigo de lo acontecido con CAPECO y todavía recuerda el suceso. Le preocupa que pudieran ocurrir accidentes.
16. **Carlia Álvarez** - La señora Álvarez es residente de Levittown y mostró preocupación por los aspectos de seguridad del proyecto. Fue testigo de lo acontecido con CAPECO y le preocupa que pudieran ocurrir accidentes. No concibe que se coloque el tubo cerca de su residencia y solicitó se evalúen otras alternativas naturales. Esta mostró preocupación por el uso de explosivos. Entiende que los gasoductos explotan.
17. **José Meléndez** - El señor Meléndez expresó su oposición sobre el proyecto propuesto.
18. **Ana Rivera** - Ella entiende que esta acción será en detrimento de recursos naturales valiosos y sobre todo de la salud, la seguridad y el bienestar de los actuales y futuros habitantes de puertorriqueños, cuyas viviendas pudieran ser expropiadas o que tendrían que vivir todos los días con el miedo de lo que pudiera pasarles a sus familias y propiedades de ocurrir un accidente.

La prioridad debe ser proteger la vida y propiedad de aquellos que viven, trabajan o juegan cerca de la ruta propuesta del gasoducto con el propósito de reducir al mínimo el número de víctimas potenciales como resultado de un accidente. La construcción del gasoducto impactará, de forma negativa, más de 50 comunidades.

Los usos de terrenos a través de la ruta no son homogéneos; identificó usos de conservación y preservación de recursos naturales, agrícolas, residenciales, comerciales e industriales. La ruta propuesta del gasoducto cruzará los dos sistemas de grandes fallas sísmicas de mayor extensión en Puerto Rico, terrenos propensos a deslizamientos y predios donde operan actividades industriales, comerciales y de vivienda, cuyos impactos acumulativos potenciales en caso de un accidente han sido ignorados. De ocurrir un accidente, el impacto potencial sobre la seguridad pública dependerá del uso de los terrenos en el área y de la densidad poblacional, así como de la capacidad de respuesta necesaria para enfrentarlo. Las consecuencias de accidentes que involucran gasoductos de líneas de transmisión de alta presión y gran diámetro son muy significativas. Mencionó sobre un accidente en San Bernardino California, en septiembre de este año, en el cual murieron 8 personas. La explosión creó un cráter de 51 metros de largo y 8 metros de ancho.



La reglamentación federal presenta un método empírico desarrollado para determinar el radio de impacto potencial del riesgo sobre las personas y propiedades de ocurrir una ruptura y fuego en un gasoducto de gas natural que resulte en una explosión. En el caso de Puerto Rico, si el diámetro del tubo es de 24 pulgadas y el gas discurriera a una presión de 650 libras por pulgada cuadrada, el radio de impacto potencial de éste debe observar una distancia de más de 128 metros a ambos lados del tubo. Sin embargo, esa no es la distancia a la que se propone ubicar el gasoducto a viviendas, escuelas, iglesias, aéreas recreativas, comercios, actividades agrícolas, reservas naturales, bosques, parque industriales y otros.

La AEE ha delimitado tan solo 22.86 metros (75 pies) como servidumbre de mantenimiento y no permitirán estructuras dentro de 7.62 metros (25 pies) a cada lado de la tubería. Es decir, que expropiarán terrenos y estructuras que ubiquen en esa área. Todas las personas que vivan en propiedades que ubiquen a una distancia a 7.63 metros de distancia o más tendrán que vivir con la angustia permanente de no sentirse seguros en su propio hogar.

Además, el tubo del gasoducto tendría la capacidad para operar con una presión máxima de 1,450 libras por pulgada cuadrada. De aumentarse la presión a esa capacidad el radio de impacto potencial en caso de un accidente aumenta de forma significativa (a 174.4 metros). Entiende que este asunto no ha sido estudiado.

De aprobar la consulta de ubicación, la Junta de Planificación estaría incumpliendo su deber ministerial. El proyecto objeto de consulta no cumple con las disposiciones del Plan Integral de Desarrollo Estratégico Sostenible ni con los Objetivos y Políticas Públicas del Plan de Uso de Terrenos.

El Plan Integral de Desarrollo Estratégico Sustentable de 16 de agosto de 2010, tiene el propósito de guiar a los organismos gubernamentales en la formulación de sus planes, programas y proyectos. La JP identifica al sector de energía como uno que ofrece la oportunidad estratégica para fomentar el desarrollo de una industria de energía y el desarrollo de métodos alternos, ambos basados en la utilización de fuentes renovables. También, idéntica la infraestructura física como un eje de competitividad en el país y se compromete con la misión de lograr independizar a Puerto Rico de los combustibles fósiles para mantenernos competitivos en los mercados nacionales e internacionales generando energía por medios costo efectivos y de forma ambientalmente sostenible. El acceso a recursos confiables de energía a costos competitivos y de manera sustentable es una preocupación fundamental en todo el mundo. La energía es vital para el desarrollo social económico, apoyando la capacidad productiva y la cohesión social. Es imprescindible desarrollar alternativas y estrategias dirigidas a fomentar la reducción en consumo energético, particularmente aquel consumo proveniente de combustibles fósiles.

Toda estrategia, proyecto y programa debe estar alineado con las metas fundamentales que lograrán alcanzar la visión establecida de:

- Colocar a Puerto Rico como líder en el desarrollo y utilización de fuentes de energías y tecnologías innovadoras y limpias en armonía con el ambiente, que promuevan el acceso confiable a servicios y recursos energéticos, económicamente viables, socialmente aceptables, ambientalmente saludables y suficientes para alcanzar las metas de desarrollo sostenible y

- Lograr convertir nuestras instituciones en modelos de conservación de energía y propulsores principales de la utilización de fuentes renovables de energía.

Es de la opinión que el proyecto objeto de consulta no cumple con la nueva visión de Puerto Rico y las metas esbozadas para el sector de energía en el PIDES. Que el proyecto tampoco cumple con la mayoría de las estrategias de la Política Pública para Infraestructura de Energía Eléctrica del documento Objetivos y Políticas Públicas del Plan de Usos de Terrenos de Puerto Rico, de 31 de octubre de 1995.

Entiende que la construcción del gasoducto no cumple con el asegurar los abastos energéticos aumentando la confiabilidad en el sistema y reduciendo la dependencia del petróleo como fuente primaria de combustible que solo sustituirá la dependencia de un combustible fósil por otro. El proyecto no cumple con el minimizar los riesgos que surgen como consecuencia de crisis internacionales, factores económicos y costos de combustibles. El gas natural como mercancía, obedece a las fluctuaciones de oferta y demanda del mercado mundial. Al igual que el petróleo, el gas natural está sujeto a factores sociales o naturales (como guerras, inestabilidad social, desastres naturales, entre otros) que tendrán un impacto sobre su precio y disponibilidad.

Argumenta que el gasoducto tampoco cumple con la estrategia de promover que los usos de la infraestructura de energía eléctrica que requieran una ubicación especial, sean cónsonos con el entorno donde ubiquen promoviendo así la protección, conservación y mejoramiento del medio ambiente. Los usos de la mayoría de los terrenos por donde discurriría la ruta propuesta gasoducto no son cónsonos con este tipo de proyecto, no promueven la protección del ambiente natural ni la seguridad pública de las familias que viven a lo largo de dicha ruta. Además, no cumplen con promover el desarrollo de proyectos pilotos de energía con fuentes renovables y fuentes alternas. Todo lo contrario, con la dependencia en otro combustible fósil continuamos posponiendo nuestra responsabilidad histórica de fomentar el uso de fuentes renovables de energía, las cuales abundan en Puerto Rico, tales como el viento, el sol y las olas, entre otras. Ni cumple con promover un mejor uso de los recursos energéticos para propicia y estimular una reducción razonable en el continuo aumento de la demanda energética en el país. Este proyecto no contempla una reducción en el aumento de la demanda de energía.

Con la construcción del gasoducto se estaría sustituyendo la dependencia de un combustible fósil, el petróleo, por el gas natural con las consecuencias económicas y de ineficiencia en establecer una política energética coherente para Puerto Rico. Hoy la dependencia es de un 69% de petróleo para la producción de energía eléctrica y mañana sería de 71% de gas natural por los 25 años.

Entiende que de aprobarse la consulta de ubicación la Junta de Planificación estaría incumpliendo su deber ministerial dispuesto en su ley orgánica, Ley Número 75 de 24 de junio de 1975, el Plan Integral de Desarrollo Estratégico Sostenible y los Objetivos y Políticas Públicas del Plan de Uso de Terrenos.

La supuesta emergencia, declarada mediante la Orden Ejecutiva Núm. 2010-034, tiene el propósito de justificar, sin fundamento alguno, la dispensa del cumplimiento con las disposiciones establecida en las leyes aplicables, y emplear un proceso expedito para la concesión de permisos, endosos, consultas y certificaciones relacionadas a ésta y otras obras.

Entiende que son muchos los factores que inciden en la seguridad pública de un gasoducto, entre éstos: la selección de la ruta, los usos de terrenos aledaños, el diseño, los materiales utilizados en la construcción, la operación y el mantenimiento de la infraestructura, y la comunicación con la comunidad.

19. **Joanna G. Santana** - Residente de Toa Baja. Comenzó su ponencia diciendo que era necesario proteger la vida silvestre, el agua y los recursos naturales. No quiere que se pierdan vida como resultado del proyecto. No quiere el proyecto en las cercanías de su residencia. La señora Santana se opone al proyecto propuesto

20. **Misión Industrial**, representado por **Juan Rosario**. El señor Rosario preguntó si el proyecto que se presentó ante la Junta de Calidad Ambiental era el mismo que el presentado en la Junta. La licenciada Mercado indicó que era el mismo y que lo que se había presentado ante la JCA era una DIA-P. El señor Rosario expresó que conoce del proyecto propuesto. Indagó sobre los beneficios entre ellos que el proyecto es ambientalmente amigable y la reducción de las emisiones. El señor Rosario expresó que en 11 años el petróleo ha sido más caro que el gas natural. Que la diferencia entre el petróleo y el gas ha sido tan insignificante que no amerita un cambio de combustible. Reconoce que se debe dar un cambio pero que el proceso debe darse de manera más democrática.

Entiende que EcoEléctrica tiene capacidad, permiso para llenar el tanque mensualmente y que EcoEléctrica tiene la capacidad para traer más capacidad para suplir todo el gas del norte. Que la AEE tiene la capacidad de un 25%. Este preguntó cuántos megavatios se pueden suplir. El señor Rosario indicó que en la DIA-P se indica que en el proyecto de conversión Cambalache tiene unos parámetros, al igual que San Juan y Palo Seco. Le preocupa que Cambalache tenga 500% de flujo de gas más grande que San Juan siendo la planta más pequeña. Entiende que no se ha hecho una evaluación responsable con el documento ambiental presentado. Se trata de explicar la reducción de las emisiones pero entiende que el proyecto está mal concebido. Que conforme a datos que surgen del documento ambiental, Cambalache utiliza residual #6 y entiende que es erróneo. Que con el combustible más limpio de Puerto Rico solamente produce 2/3 partes de lo mismo que produce la Central de Palo Seco. Entiende que esos datos están erróneos.

Los representantes de la AEE indicaron que los datos del documento ambiental se están discutiendo (evaluando) y que la DIA-P es un instrumento de trabajo. Además aclararon que el contrato con EcoEléctrica es de 507 megavatios. El señor Rosario indica que el gas natural podría ser considerado como un proceso de transición, pero, para poder dar eso se requiere un proceso de consulta para que se evaluara el mismo y discutir el mismo en conjunto con la comunidad para evaluar alternativas. Solicitó que se retire la DIA-P.

21. **Juan De Jesús** - El señor De Jesús hasta hace poco desconocía del proyecto. Se expresó por deficiencias que surgieron como resultado de otros proyectos como el Súper Tubo. Se cuestionó si vale la pena los aspectos de seguridad cuando lo que se podría tener es un ahorro ínfimo. Considerando las consecuencias del proyecto, el señor De Jesús se opone al proyecto propuesto.

22. **Christian Rosario** - El señor Rosario entiende que no se debe invertir en un proyecto para luego abandonarlo. En colindancia con Vega Baja y Dorado el proyecto discurrirá por áreas con vegetación costera. Los terrenos están clasificados Conservación de Recursos, Comercial

Turístico y terrenos Públicos, por lo que las calificaciones de Vega Baja no son cónsonas con la naturaleza del proyecto. Los humedales del área del Cocal se removerán fragmentando este recurso. Le preocupa que el sistema del Gasoducto provoque explosiones. El proyecto resulta ser una amenaza al ambiente y un peligro para los ciudadanos.

23. **Myrna Conty** - La señora Conty es vecina de Guaynabo. Entiende que en el proceso no hubo participación ciudadana. Que las vistas se debieron celebrar en varios días distintos en ánimo de promover la participación ciudadana. Indagó si se evaluó el impacto a los cuerpos de agua. El área central, indicó es bien montañoso. Además mostró preocupación por la ruta propuesta. Siendo Puerto Rico una isla, se debería aprovechar la oportunidad de considerar hacer un puerto en el Sur o en el Norte. Con relación a las expropiaciones los titulares no debieron ser notificados mediante la publicación de un aviso en un periódico. Mostró preocupación por lo que acontecería en caso de una emergencia. Con relación a los 150 pies de la servidumbre, le preocupa el factor de la supervisión en áreas como la Cordillera. La señora Conty mostró preocupación por los problemas de erosión y mantenimiento de la tubería la cual va a pasar por montañas. Solicitó a la Junta que el proceso no se realice a la ligera. Que se evalué el proyecto y atiendan las preocupaciones de la ciudadanía. Solicitó que se verifique la naturaleza de los suelos pues existen suelos erosionables.

El personal de la AEE indicó que se utiliza una técnica de HDD lo que implica que el tubo pasará por debajo del lecho del agua. Que en la DIA-P se consideraron varias alternativas. Indicaron que la ley requiere que se preparen unos planes de emergencias y que se realizará un Plan de Información. En el área costera, los suelos son más compactados (suelos arenosos) que evitan problemas de licuefacción. La tubería va a tener protección para evitar la corrosión como resultado del agua. En cuanto a los aspectos de mantenimiento el personal de la AEE indicó que se realizará un proceso de patrullaje en la etapa de operación para evaluar actividades que pudieran afectar la integridad de la tubería; inspecciones de mantenimiento.

El Ing. Daniel Pagán aclaró que la ley federal establece el tipo de mantenimiento y la frecuencia de mantenimiento. Que se contará con un robot dentro de la tubería que estará monitoreando la operación de la tubería. El 64% de los gasoductos carecen de esta medida de seguridad. El ingeniero Pagán explicó que el sistema del robot, consiste en una bala que transcurrirá junto con el gas de forma interna (por el tubo) y recogerá capas de información sobre el funcionamiento de la tubería.

24. **Miguel Rivera** - El señor Rivera es Presidente de la Comisión Pro Desarrollo Sustentable y vino a instruirse sobre el proyecto. Está relacionado con la protección ambiental. Al inicio endosaba el proyecto originalmente propuesto. No obstante, entiende que el proyecto no debe realizarse de la forma en que se está realizando. Se opone al proyecto propuesto al examinar los documentos de la AEE y evaluar la forma en que se ha desarrollado el proceso.
25. **José Caide** - El señor Caide es residente de Toa Baja y mostró preocupación por los riesgos que representa el proyecto, los aspectos de seguridad (posibles explosiones) y medidas que se han de tomar para con el proyecto. Expresó que se han comenzado con ciertas fases del proyecto y aún no se tienen los permisos y la posibilidad de que no se concluya el proyecto. Mostró preocupación por el destino de los titulares que se les expropiarán sus residencias. Solicitó que se consideren otras alternativas.

26. **Dr. Ángel González Carrasquillo** - El doctor González es residente de Guaynabo y compareció en representación de la Alianza Pro Salud por el Medio Ambiente (ASMA). Este criticó la limitación de la participación ciudadana como resultado del procedimiento expedito. Entiende que el proceso expedito impide que se evalúe el proyecto al cual identificó como de carácter voluminoso. Entiende que las aseveraciones realizadas sobre el proyecto deben estar sustentadas por evidencia científica. ASMA apoya el uso del gas natural. No apoyan el gasoducto en sí. Puerto Rico es uno de los territorios con problemas respiratorios. En casos de emergencia se podrían tener una situación para responder a la emergencia. El doctor González se opone al proyecto propuesto.

La licenciada Mercado en representación de la AEE expresó que el proyecto precisamente propone reducir el problema de las emisiones.

27. **Rev. Ricky Rosado, miembro del Concilio de Iglesias Fuente de Agua Viva** - Comenzó su ponencia indicando que las iglesias Fuente de Agua Viva son unas comunidades de fe que integran miles de miembros y algunos están localizados en esta región especialmente los pueblos de San Juan, Cataño, Toa Baja, Dorado, Vega Alta y Vega Baja. Que han revisado los artículos publicados en prensa escrita sobre este particular y para ampliar nuestra base de información y datos, se dieron a la tarea de entrevistar al Ing. Miguel Cordero. Los beneficios ambientales y de salud que se alcanzarán en el pueblo como resultado de la reducción significativa de emisiones al medio ambiente. Esto mejorará la salud de nuestro pueblo a la vez que dará una nueva oportunidad de mejorar la calidad de vida de las comunidades y conciudadanos.

El Concilio Fuente de Agua Viva endosa el desarrollo del Proyecto Vía Verde.

28. **Asociación de Constructores de Hogares de Puerto Rico** - Estos presentaron carta de 6 de noviembre de 2010, suscrita por Hans Moll-Stubbe Presidente, en la cual expresaron que endosan los objetivos y razones que promueven el proyecto. Diversos sectores empresariales, cívicos y sociales han reclamado reiteradamente que se reduzcan los costos energéticos, con la finalidad de disminuir los costos de negocios y aliviar la carga que entidades y familias asumen en el pago mensual de sus facturas de electricidad. El Proyecto Vía Verde, es un paso en la dirección correcta, al intensificar el uso de gas natural, como una opción a corto plazo para generar electricidad en forma más económica que el petróleo. Su respaldo está atado a que las reducciones en el costo de electricidad sean inmediatas para el propietario de hogar, para las corporaciones que hacen negocios en Puerto Rico y para el propio gobierno. La recesión económica no permite la posposición de estos alivios en el pago de la electricidad. Es imperativo que el Proyecto Vía Verde cumpla con todas las salvaguardas ambientales y estructurales que aseguren que la infraestructura construida sea segura, ambientalmente adecuada y conforme a los requerimientos legales y reglamentarios.

En el proceso actual de revisión de códigos de construcción, la adopción de nuevos parámetros de eficiencia energética en la construcción de hogares y otras edificaciones, tiene que tener un rendimiento inmediato de ahorro económico que compense totalmente o supere el costo de la aplicación de dichos parámetros. Si ello no se logra, no deben adoptarse dichos parámetros hasta que la fórmula de costo-efectividad sea alcanzada en los anteriores términos. Hacer lo contrario en el proceso revisor de códigos de construcción, es cancelar el efecto que tenga la adopción del Proyecto de Vía Verde. Solicitaron que se establezcan parámetros claros y razonables que produzcan un ahorro inmediato y que no encarezcan irrazonablemente el costo de construcción de vivienda en Puerto Rico.

Aunque Vía Verde sea considerado una herramienta de transición hacia la adopción de mecanismos de generación de energía renovable, la realidad es que la adopción de fuentes de energía renovables en el sistema de distribución eléctrica de Puerto Rico, implica costos significativos para el erario y por ende para el pueblo, que requiere de una economía colectiva y personal robusta y de un gobierno financieramente sólido, elementos de los que se carecen actualmente. Es por lo tanto, que una transición al gas natural, que signifique ahorro al consumidor y rápido repago a la inversión gubernamental, tiene tanto sentido en este momento.

Durante la vista solicitaron tiempo adicional para someter comentarios y sugerencias en cuanto al asunto de referencia. La Junta debe ponderar la solicitud de la Asociación de término adicional.

29. Sr. Manolo Díaz - El señor Díaz remitió email a la Junta con fecha de 26 de octubre de 2010, en la que indica que Morovis no era uno de los pueblos afectados por lo que le sorprende no se celebre vistas en Peñuelas, Adjuntas, Utuado, Arecibo, Cataño; etc. En su comunicación este no emitió comentarios específicos sobre el proyecto propuesto.
30. Carmen Guerrero - En la vista pública celebrada en Toa Baja, la señora Guerrero expresó que la AEE debía incluir evidencia de que el promovente era dueño de la propiedad por donde discurre el proyecto o tiene autorización de que los titulares de las propiedades por donde discurrirá el gasoducto autorizaron el proyecto propuesto por sus propiedades. Que dicha evidencia no fue presentada. Esta preguntó si la AEE tenía la evidencia de la autorización concedida por los titulares. La Lcda. Mercado aclaró que se contactaron algunos de los propietarios de terrenos y se emitieron comunicaciones a esos fines. Que los que no pudieron ser contactados por correo, los mismos fueron notificados mediante un método alterno de notificación.
31. Iniciativa para un Desarrollo Sustentable - Compareció representada por la Sra. Carmen Guerrero, quien también presentó comentarios post-vista mediante una "Moción para Invalidar la celebración de Vistas Pública por Incumplimiento con la Resolución JPE-2010-067 y para Solicitar el Cumplimiento con los Documentos Requeridos para una Pre-Consulta y una vez se evidencie cumplimiento coordinar la celebración de nuevas vistas pública".

Iniciativa para un Desarrollo Sustentable (IDS) es una organización privada, sin fines de lucro, incorporada el 1 de octubre de 2002 que se dedica a promover el desarrollo sustentable en Puerto Rico. IDS además es cliente de la Clínica Ambiental de la Escuela de Derecho de la Universidad de Puerto Rico en Río Piedras.

Comentaron que el proyecto propuesto, se llevará a cabo a través de una alianza público privada, convirtiéndose así en una empresa con fines comerciales tanto en su fase de construcción, pero sobre todo, en su operación. Que la tubería propuesta como parte del proyecto atravesaría la Isla de sur a norte, a través de los municipios de Peñuelas, Adjuntas, Utuado, Arecibo, Barceloneta, Manatí, Vega Baja, Vega Alta, Dorado, Toa Baja, Cataño, Bayamón y Guaynabo.

Estos denuncian que el procedimiento que ha dispuesto la Junta de Planificación con relación a la Pre-Consulta de Ubicación del proyecto del gasoducto, es uno nulo e ilegal. La JP ha impuesto un procedimiento sumario en virtud de su resolución núm. JPE-2010-067 del 19 de agosto de 2010, que entienden es nulo radicalmente pues se basaba su vez en la Orden Ejecutiva 2010-034 que decreta

injustificadamente en un estado de emergencia en el sistema eléctrico de Puerto Rico. Ello es así ya que dicha orden, alegan, emitida por el Gobernador Luis Fortuño el 19 de julio de 2010, invoca ilegalmente una emergencia sin justificación. La declaración del estado de emergencia activó a su vez la utilización de un procedimiento expedito al amparo de la Ley Núm. 76 de 2000 para desarrollar proyectos de infraestructura de generación energética.

En virtud de la Ley Orgánica de la Junta de Planificación y el mandato constitucional a la protección de los recursos naturales, se debe aplicar un escrutinio estricto en determinar si la construcción de este proyecto, bajo el procedimiento expedito responde a “la más eficaz conservación de los recursos naturales” en Puerto Rico.

Se incumple con el requisito establecido en el Artículo 12 de la Ley 76 de establecer un término de vigencia no mayor de 6 meses, dentro del cual la Asamblea Legislativa pasará juicio sobre el contenido de la misma pudiendo delimitar su alcance mediante Resolución concurrente. Por tanto la validez de esta orden está subordinada a la revisión y aval legislativo, no obstante, al día de hoy la misma no ha sido enviada a la legislatura, por lo que no cumple con los requisitos de la ley.

La Orden establece que “los proyectos de energía incluyen, pero no se limitan, a proyectos nuevos de generación y conversiones a gas natural, y proyecto de energía renovable sostenible y de energía renovable alterna tales como energía eólica, energía solar, biomasa, marina e hídrica”. De esta manera, según se define “energía renovable” en la Ley 82 de 2010 sobre la Política Pública de Diversificación Energética, se abre la posibilidad de la utilización de un procedimiento expedito para la aprobación de permisos a Incineradores de basura, tipo “Waste to Energy”, que tendrían un efecto igual o más nocivo en la salud y el medio ambiente, que la quema de combustibles derivados del petróleo. Entienden que no se justifica la declaración de un Estado de Emergencia sobre la infraestructura de generación de energía eléctrica. La orden ejecutiva no fundamenta el alegado “estado de emergencia” ni con informes, estudios, ni ningún material científico que demuestre su real existencia. Todo esto trae el peligro de que se esté manipulando la situación para obtener ventajas de las facultades que se reconocen bajo un estado de emergencia. Además en la medida que suspende y deja sin efecto numerosas leyes y reglamentos, es una extraordinaria que carece de base legal alguna. Sostienen que es ilegal tanto la resolución de esta Junta de Planificación, como la de la Junta de Calidad Ambiental, interpretando la orden ejecutiva. Entienden que el proceso está viciado, es ilegal y nulo en derecho. La designación de un Estado de Emergencia Energética tan solo tiene el objetivo de coartar la participación ciudadana y de obviar un análisis serio y ponderado de esta consulta de ubicación tanto por el público en general como por todas las agencias gubernamentales concernientes.

Aunque no reconocen la validez ni la legalidad de la Resolución JPE-2010-067 de la Junta de Planificación, resaltan que la AEE incumple con los propios requisitos de esta resolución. Específicamente, la AEE no ha presentado los documentos requeridos por esta Resolución en su Sección III, Punto 3 para poder tramitar una pre-consulta de ubicación (Proyectos de Energía que se Presentan Sólo con Evidencia de que se circuló Documento Ambiental):

“Deberá incluirse evidencia fehaciente de que el promovente es el dueño de la propiedad objeto de solicitud, o en su defecto ha sido debidamente autorizado por el dueño a someter la misma.”

Además, el Punto 7 de la Sección III de la Resolución también establece que:

“Cuando se trate de mejoras públicas en terrenos de propiedad privada, el proponente someterá evidencia fehaciente de que notificó al titular del predio, tales como carta enviada a través del correo postal, notificación directa o aviso público en un periódico de circulación general el cual incluya el número de catastro, dirección físico y nombre del titular, de tenerlo disponible”.

Sostienen que en vistas públicas de la JP celebradas en Toa Baja el 6 de noviembre de 2010, la AEE admitió públicamente que no ha presentado la carta de intención de expropiación a todos los dueños de terrenos afectados por el proyecto “Vía Verde”, ni cuenta con la autorización de los propietarios para presentar esta pre-consulta de ubicación, tal como lo requiere la Resolución de la JP.

La AEE tampoco proveyó evidencia fehaciente de que “publicó un aviso público en un periódico de circulación general el cual incluye en número de catastro, dirección física y nombre del titular, de tenerlo disponible”. La AEE tan solo se limitó a presentar el anuncio que publicó en el Puerto Rico Daily News el 16 de octubre de 2010, el cual no incluye el número de catastro, la dirección física, ni el nombre de los titulares afectados por la alineación del gasoducto.

Dado el cumplimiento con los requisitos básicos de la Resolución de la JP, solicitaron a la Junta de Planificación que declare inválida la celebración de vistas públicas el 6 de noviembre de 2010, ya que los dueños de terrenos privados afectados por el proyecto y su servidumbre de operación y mantenimiento no han sido debidamente notificados, ni han emitido autorización para tramitar esta pre-consulta de ubicación.

Alegó que las vistas públicas del 6 de noviembre de 2010 se celebraron de forma prematura, en claro incumplimiento y menosprecio de la Ley Orgánica de la Junta de Planificación, sus reglamentos y la propia Resolución JPE-2010-067. Solicitaron que se vuelvan a celebrar vistas públicas una vez la AEE haya cumplido con todos los requisitos de la Resolución JPE-2010-067 y muestre evidencia de que ha notificado debidamente a todas las partes afectadas.

Señaló que de no acoger esta moción, la Junta de Planificación estaría incumpliendo con la Sección 62v (sobre Participación ciudadana e iniciativa de la Junta) de su propia Ley Orgánica (Ley Núm. 75 del 24 de junio de 1975, según enmendada), la cual “declara que es política pública del Estado Libre Asociado de Puerto Rico fomentar la participación de la ciudadanía en el proceso de planificación de Puerto Rico”. A su vez, establece que “la Junta deberá promover la comprensión pública de dicho proceso, empleando aquellos medios de información que considere adecuados. Asimismo la Junta proveerá a la ciudadanía de toda aquella información necesaria que coloque a todo ciudadano en una posición de igualdad para su participación efectiva en los procesos de planificación”. Además será deber de la Junta “ofrecer el máximo de participación posible a la ciudadanía en el proceso de planificación”. Debido a la falta de notificación adecuada a los dueños de terrenos privados afectados por la propuesta construcción y operación del gasoducto, la Junta no ha colocado a estos ciudadanos en una posición de igualdad para su participación efectiva en los procesos de planificación.



Según el anuncio publicado por la JP en el periódico *Puerto Rico Daily Sun* el 16 de octubre de 2010, "el proyecto propuesto no conlleva cambio de zonificación o calificación alguna". Por otra parte, la DIA-P presentada ante la JCA, en su página 6-34, establece que: "la acción propuesta no contempla prohibir cambios en usos de terrenos en el área que ocupa; es decir, la acción persigue que los usos agrícolas así como las áreas libres de desarrollo cubiertas con vegetación arborescente y humedales, permanezcan de esta forma, pues así se mantienen las poblaciones humanas distantes de la alineación. Sólo se establecerá por medio de la constitución de una servidumbre de operación a favor de la AEE, en la cual no se permitirá la siembra de árboles de raíces profundas, ni la construcción de estructura alguna."

Un proyecto de esta magnitud, de índole industrial, requiere de la solicitud de un cambio en la zonificación y/o calificación de los predios afectados por la alineación mediante una consulta de ubicación, además de una justificación para solicitar una variación o excepción a la luz de las disposiciones reglamentarias aplicables (tal como lo requiere la Resolución JPE-2010-067 en su Sección III, Punto A.6.c.). Entiende que la AEE trata de evadir los procesos administrativos de cambio de zonificación y/o calificación al indicar que el proyecto "no conlleva cambio de zonificación o calificación alguna." Sin embargo, la naturaleza de la construcción y operación del proyecto resultarán en un cambio de uso de suelo, para el cual se requiere la solicitud de un cambio de zonificación y/o calificación. La alineación del gasoducto transcurrirá por zonas residenciales, bosques estatales, reservas naturales, zonas de amortiguamiento de áreas naturales protegidas, Áreas con Prioridad de Conservación según el DRNA (Cordillera Central, Carso del Norte, Ciénaga San Pedro y Sector el Caracol, y Ciénaga Las Cucharillas), áreas boscosas no protegidas, humedales, terrenos anegados e inundables, cuerpos de agua, terrenos agrícolas y la propia zona marítimo terrestre que ostenta distritos de zonificación y/o calificación tales como: "Residencial Intermedio" (R-I), "Residencial Alta Densidad" (R-A), "Bosques" (B-Q), "Conservación de Recursos" (CR), "Playas Públicas" (PP), y agrícolas (A-P, A-G), entre otros.

Según el Reglamento de Calificación de Puerto Rico (Sección 1.03 del Reglamento 4 de la Junta de Planificación del 11 de enero de 2009, la zonificación y/o calificación tiene el propósito de "guiar y controlar el uso y desarrollo de los terrenos en Puerto Rico con el fin de contribuir a la seguridad, el orden, la convivencia, la solidez económica y el bienestar general de los actuales y futuros habitantes". Es innegable que construcción y operación de un gasoducto de índole industrial conllevará un cambio en el uso de suelos y en las zonificaciones y/o calificaciones establecidas tanto por la Junta de Planificación, como por los municipios que hayan culminado el proceso de ordenamiento territorial. Los usos a permitirse en estos distritos deberán ser compatibles con los propósitos de los mismos y las disposiciones del Reglamento 4 de la Junta de Planificación.

Solicitaron que la Junta de Planificación exija a la AEE a solicitar un cambio de zonificación y/o calificación en todos los distritos por donde discurrirá la alineación del proyecto "Vía Verde". De no hacerlo, la Junta estaría actuando de forma arbitraria, caprichosa y sumamente irresponsable al no asegurar la designación de estos terrenos bajo el uso industrial que tendrán en el futuro.

Recomendaron que la alineación y la servidumbre de operación y mantenimiento del proyecto "Vía Verde" utilicen una calificación de Distrito Industrial Pesado (I-P). Según el Reglamento 4, este "distrito se establece para clasificar áreas industriales pesadas, desarrolladas o a desarrollarse por proyectos específicos que por su naturaleza e

intensidad requieren de una ubicación especial...". "La determinación de la extensión de terrenos para industrias pesadas estará basada en las potencialidades del área para el desarrollo de industrias pesadas, la dirección de los vientos, efectos detrimentales de las industrias pesadas sobre el aire, agua u otros tales como olores, ruidos, vibraciones y reflejos de luces; de las implicaciones del tránsito generado por estas industrias en el sistema de transportación; y de la mejor organización del uso de terrenos. Como objetivo se persigue que los terrenos a clasificarse para industrias pesadas se dediquen a tales fines, excluyendo en este distrito los usos residenciales, comerciales e industrias livianas". Este tipo de exclusión de usos residenciales, comerciales e industrias livianas, es como la que propone el proyecto Vía Verde dentro de la servidumbre de operación a favor de la AEE "en la cual no se permitirá la siembra de árboles de raíces profundas, ni la construcción de estructura alguna".

Dentro de los usos a permitirse en el Distrito I-P, se encuentran "actividades industriales que no requieran por su naturaleza una ubicación exclusiva y en cuya operación son incidentales cierto grado de molestias, ruidos, vibraciones, olores, deslumbramiento, humo y emisiones particuladas o gaseosas", actividades similares a la construcción y operación del proyecto "Vía Verde".

El factor de seguridad pública, como mínimo, debería ser la razón primordial para que la Junta de Planificación requiera un cambio de zonificación y/o calificación hacia un uso de suelos compatible con lo que será la construcción, operación y mantenimiento de un gasoducto. De no hacerlo, la Junta estaría actuando de forma arbitraria, caprichosa e irresponsable, en contra de su propia Ley Orgánica y sus reglamentos, al no "guiar y controlar el uso y desarrollo de los terrenos en Puerto Rico con el fin de contribuir a la seguridad, el orden, la convivencia, la solidez económica y el bienestar general de los actuales y futuros habitantes".

Según los comentarios presentados por el Departamento de Recursos Naturales y Ambientales ante la JCA sobre el documento ambiental (DIA-P) del gasoducto: "parte de las líneas a ser utilizadas para el transporte y distribución de gas natural, discurren por Bosques Estatales y Reservas Naturales. Debido a esto, resulta necesario cumplir con las disposiciones estatutarias que establecen los procedimientos a seguir en aquellos casos en que resulta imperioso utilizar, para algún fin público, terrenos forestales o que formen parte de una Reserva Natural.

Solicitaron que la Junta de Planificación no apruebe esta pre-consulta de ubicación hasta tanto la AEE haya cumplido con los requisitos de la Ley de Bosques de Puerto Rico y la lista de pasos que establece el propio DRNA en sus comentarios ante la JCA, a saber:

1. El proponente deberá identificar con exactitud aquellas porciones de terrenos forestales por las que discurrirán las líneas del Proyecto.
2. Una vez identificadas, el Secretario del DRNA y el Presidente de la Junta de Calidad Ambiental deberán recomendar al Gobernador que revoque la designación de Bosque de aquellas partes de terrenos forestales que serán parte del Proyecto.
3. El Gobernador deberá ordenar la celebración de Vistas Públicas para, luego de éstas, tomar una determinación sobre la designación de Bosque de los terrenos antes mencionados.
4. La agencia proponente, Autoridad de Energía Eléctrica (AEE), deberá ceder al DRNA terrenos de igual o mayor valor ecológico a los

utilizados o en su defecto, compensar económicamente por los mismos”.

Solicitaron que la AEE reconozca en su documento ambiental y otros documentos relacionados, el impacto y el cambio de uso suelos que representará la construcción y operación de un gasoducto sobre varias Reservas Naturales y sus zonas de amortiguamiento al igual que balnearios públicos, específicamente la Reserva Natural Caño Tiburones, la Reserva Natural Hacienda La Esperanza, la Reserva Natural Ciénaga Las Cucharillas y el Balneario Público y Parque Nacional Punta Salinas.

El proyecto “Vía Verde” no está conforme con el Plan de Usos de Terrenos de Puerto Rico, los Planes Territoriales de varios municipios, ni con el documento Objetivos y Políticas Públicas del Plan de Usos de Terrenos de Puerto Rico (en los municipios que no cuentan con un Plan Territorial aprobado), tal como lo requiere la Sección 57.03 del Reglamento 4 de la Junta de Planificación.

Alega que el proyecto “Vía Verde” no cumple con los Objetivos y Políticas Públicas del Plan de Usos de Terrenos de Puerto Rico de 1995 (OPPUT) de la Junta de Planificación, incluyendo:

- Metas y objetivos de política pública de desarrollo urbano
- Metas y objetivos de política pública del desarrollo industrial
- Metas y objetivos de política pública de desarrollo agrícola
- Metas y objetivos de política pública de turismo
- Metas generales sobre los usos de terrenos
- Políticas Públicas para la infraestructura (22.00)
- Políticas Públicas sobre riesgos naturales (15.00, 15.02 y 1700)
- Metas y Objetivos de política pública de áreas de recursos naturales, ambientales y culturales (29.00, 30.00, 30.01, 30.02, 30.03, 30.04, 30.05, 30.07, 30.08, 30.09, 31.00, 33.00)

Mencionaron algunas de las metas y objetivos de políticas públicas del OPPER más relevantes:

- Las diversas metas generales sobre los usos de terreno.
- Las diversas políticas públicas para infraestructura, tales como: 22.00.
- Las metas y objetivos de política pública sobre riesgos naturales del OPPER, en donde se establece como meta:

Reducir a un mínimo el peligro de pérdida de vida y los daños materiales en el país como consecuencia de las inundaciones, terrenos susceptibles a deslizamientos, fallas geológicas, las marejadas y otros riesgos naturales y a la vez reconocer y fomentar aquellos usos del terreno y aquellas actividades que no son compatibles con estas condiciones.

- Las diversas políticas públicas sobre riesgos naturales, tales como: 15.00, 15.02 y 17.00.
- Las Metas y objetivos de política pública de áreas de recursos naturales, ambientales y culturales.
- Las diversas políticas públicas de áreas de recursos naturales, ambientales y culturales, tales como: 29.00, 30.00, 30.01, 30.02, 30.03, 30.04, 30.05, 30.07, 30.08, 30.09, 31.00 y 33.00

Al no reconocer la validez y legalidad de la Resolución JPE-2010-067, exigieron el cumplimiento con los procedimientos administrativos establecidos en el Reglamento de Calificación de la Junta de Planificación, Reglamento 4 del 11 de enero de 2009, para consultas de ubicación:

“1. Cuando sea a iniciativa propia, la Junta celebrará vistas públicas luego de dar aviso al público, de la fecha, sitio y naturaleza de dichas vistas, mediante publicación de un aviso en uno de los periódicos de circulación general en Puerto Rico, en un periódico regional (de existir) *con no menos de 30 días de anticipación a la fecha de la vista y estará disponible en la página de Internet de la Junta [www.jp.gobierno.pr](http://www.jp.gobierno.pr)*. La Junta podrá dar aviso de las vistas en cualquier otra forma que estime necesario y deberá poner a disposición de la ciudadanía, la información disponible y pertinente para lograr su participación efectiva”. (Requisitos para cambios de Calificación, página 33).

Es necesario cuestionar la objetividad y pureza con que se ha llevado a cabo el proceso de análisis de esta Pre-Consulta de Ubicación.

El Gobernador de Puerto Rico, Luis E. Fortuño, el Director Ejecutivo de la AEE, Ing. Miguel Cordero, entre otros funcionarios gubernamentales, han hecho múltiples expresiones públicas asegurando la construcción de este gasoducto durante el próximo año, sin que se haya validado su viabilidad económica, social y ambiental, y en ausencia de un solo permiso gubernamental que autorice esta obra. La AEE inició el proceso de expropiación de terrenos y estructuras que resultarían afectadas por la alineación de la tubería propuesta, sin que ni tan siquiera se hubiese presentado o anunciado la Declaración de Impacto Ambiental-Preliminar ni esta Pre-Consulta de Ubicación para comentario público.

De igual manera, han comenzado a solicitar la aprobación de permisos federales, tales como el permiso para impactar humedales y aguas navegables ante el Cuerpo de Ingenieros de los Estados Unidos (“USACE”, por sus siglas en inglés) bajo la Sección 404 de la Ley de Aguas Limpias Federal.

Se han realizado esfuerzos y comprometido recursos económicos públicos significativos sin que se haya determinado el cumplimiento ambiental y de planificación de usos de terrenos de la acción propuesta. Estas actuaciones resultan en una afrenta al proceso de planificación establecido en la Ley de Política Pública Ambiental y la Ley Orgánica de la Junta de Planificación de Puerto Rico, menoscabando seriamente la confianza en la integridad de las instituciones de gobierno y los funcionarios que se suponen hagan respetar el mandato de ley, y con ello, el bienestar e interés público.

Esperan y reclaman, con todo el respeto, que las actuaciones de este distinguido panel examinador no se hagan eco de la manera en que los procesos se han llevado a cabo hasta el presente para el proyecto propuesto, y en cambio, hagan honor a su deber y a la confianza que ha depositado en ustedes el Pueblo de Puerto Rico, como servidores públicos en defensa del porvenir de todos los aquí presentes, el de nuestras familias, así como el de las generaciones futuras de puertorriqueños.

Solicitaron a la Honorable Junta de Planificación a rechazar y denegar la aprobación de la Pre-Consulta de Ubicación para el Proyecto Vía Verde o Gasoducto del Norte, sometido por la AEE. Su ponencia vino acompañada con copia de escrito preparado por el Lcdo. Pedro Saade de la Clínica de Asistencia Legal de la Escuela de Derecho de la Universidad de Puerto Rico y la Planificadora Carmen Guerrero ante la Junta de Calidad Ambiental y en torno al contenido del documento ambiental.

Los procedimientos de consulta de ubicación y evaluación de los documentos ambientales son paralelos pero distintos. Los mismos se atienden en el foro correspondiente.

32. Ciudadanos del Karso, Inc. (CDK), por conducto de Abel Vale, su Presidente. La organización CDK es una organización no gubernamental y sin fines de lucro, creada bajo las leyes del Estado Libre Asociado de Puerto Rico. La misión de CDK es proteger y conservar los sistemas naturales, principalmente los del Karso puertorriqueño, mediante el fomento y el desarrollo de acciones que ilustren como la organización social y la naturaleza pueden y deben ser compatibles.

El Karso cubre cerca de una cuarta parte de la extensión de Puerto Rico, extendiéndose en una franja continua desde Aguadilla hasta Loíza en el Norte, de forma discontinua en el Sur, y en varios bolsillos en el interior de la Isla. El Karso ha sido reconocido por agencias federales, estatales y organizaciones conservacionistas como un área de gran valor social y ecológico para la sociedad puertorriqueña.

El proyecto del Gasoducto impactaría aproximadamente 0.08 mi<sup>2</sup> de terrenos identificados y delimitados como Área del Karso con Prioridad de Conservación (AKPC) según el Estudio del Karso, equivalente a 52.7 cuerdas, mediante la deforestación y remoción de otros componentes de la cubierta vegetal como resultado de la excavación de materiales de la corteza terrestre, especialmente durante la fase de construcción, para abrir una trinchera y soterrar la tubería propuesta, así como para el desarrollo de caminos o accesos necesarios para las labores de mantenimiento. Ocasionaría también la deforestación permanente de una parte sustancial de estos terrenos para evitar la penetración o acceso de raíces hasta la tubería que se instalaría de forma soterrada, afectando así a múltiples especies de flora y fauna.

El Gasoducto contribuiría a la fragmentación del karso, sus bosques y la vida silvestre que habita esta zona, afectando de forma directa la integridad natural de terrenos designados como AKPC. Como consecuencia, se impactarían negativamente, y de forma significativa e irreversible los valores ecológicos, hidrológicos y geológicos identificados en dicha área.

El Gasoducto es contrario, al mandato expreso, no discrecional y aplicable a todas las dependencias del Estado Libre Asociado de Puerto Rico, incluyendo a la JP, de promover y salvaguardar los valores ecológicos, hidrológicos y geológicos identificados en aquellos terrenos designados como AKPC, según ordena específicamente la Ley del Karso, y de forma general, el Artículo 4 de la Ley sobre Política Pública Ambiental, la Ley de Bosques, la Ley de Vida Silvestre, incluyendo las metas y objetivos 1.01, 5.00, 22.00, 30.02, 30.03, 31.00 y 33.00 contenidas en el documento sobre Objetivos y Políticas Públicas del Plan de Usos de Terrenos de Puerto Rico.

La JP está impedida de autorizar cualquier permiso o endoso para el Gasoducto, ya que la agencia tiene el deber, responsabilidad y obligación de promover y garantizar la conservación de aquellos terrenos que forman parte de las AKPC utilizando efectivamente todas las facultades que le asisten o que fueron delegadas relacionadas a decisiones sobre el uso de los terrenos en Puerto Rico. Actuar de otra manera no solo sería en violación a las leyes y disposiciones mencionadas anteriormente, sino que también constituiría un desafío a la sentencia emitida por el Tribunal de Primera Instancia de San Juan en el Caso Civil Núm. KPE-2001-2448 (907), de enero de 2009.

La consideración de la Pre Consulta para el Gasoducto, en ausencia de que se haya completado el proceso de análisis ambiental, violenta el mandato requerido en la Ley sobre Política Pública Ambiental, especialmente en lo referente al principio de precaución. La acción propuesta en la consulta contempla la utilización de tecnología nunca antes utilizada en la Isla, y en un área ecológicamente sensitiva, por lo que es más que razonable que se actúe con precaución en cuanto a la consideración y evaluación de la misma.

Es necesario cuestionar la objetividad, independencia y pureza con que el presente proceso de evaluación de la Pre Consulta del Gasoducto se llevará a cabo. El Gobernador de Puerto Rico, Luis E. Fortuño, el Director Ejecutivo de la AEE, Ing. Miguel Cordero, entre otros funcionarios gubernamentales, han hecho múltiples expresiones públicas asegurando la construcción del Gasoducto, sin que se haya validado su viabilidad económica, social y ambiental, y en ausencia de un solo permiso gubernamental que autorice esta obra. La AEE inició el proceso de expropiación de terrenos y estructuras que resultarían afectadas por la alineación de la tubería propuesta, sin que ni tan siquiera se hubiese presentado o anunciado la DIA-P para comentario público. De igual manera, han comenzado a solicitar la aprobación de permisos federales, tales como el permiso para impactar humedales y aguas navegables ante el Cuerpo de Ingenieros de los Estados Unidos ("USACE", por sus siglas en inglés) bajo la Sección 404 de la Ley de Aguas Limpias Federal. Es decir, se han realizado esfuerzos y comprometido recursos económicos públicos significativos sin que se haya determinado el cumplimiento ambiental de la acción propuesta. Estas actuaciones resultan en una afrenta al proceso de planificación establecido en la Ley de Política Pública Ambiental y en la Ley Orgánica de la JP, menoscabando seriamente la confianza en la integridad de las instituciones de gobierno y los funcionarios que se suponen hagan respetar el mandato de ley, y con ello, el bienestar e interés público. Esperamos y reclamamos, con todo el respeto, que las actuaciones de este panel examinador no se hagan eco de la manera en que los procesos se han llevado a cabo hasta el presente para el proyecto propuesto, y en cambio, hagan honor a su deber y a la confianza que ha depositado en ustedes el Pueblo de Puerto Rico, como servidores públicos en defensa del porvenir de todos los aquí presentes, el de nuestras familias, así como el de las generaciones futuras de puertorriqueños.

Solicitaron a la Junta a rechazar y denegar la aprobación de la Pre-Consulta Núm. 2010-62-0210-JGE-T-PRE para el Proyecto Vía Verde.

Luego de resumir los comentarios de los ciudadanos presentados durante las vistas públicas, y considerando las preocupaciones expresadas, procedemos a discutir las mismas.

Los participantes en las vistas públicas mostraron preocupación por: el impacto ambiental; los aspectos de seguridad del gasoducto y pérdida de vidas humanas; el mantenimiento e integridad de la tubería; las posibles alternativas de rutas evaluadas; la necesidad del proyecto; el impacto a la zona marítimo terrestre y áreas costaneras, bosques, humedales, terrenos protegidos, zonas inundables; los aspectos de notificación, tanto de la consulta de transacción como de la pre-consulta; y los aspectos de titularidad. Procederemos a discutir dichas preocupaciones, las cuales también han sido discutidas como parte del presente informe.

Como parte del desarrollo propuesto el Departamento de Recursos Naturales (DRNA) tuvo la oportunidad de evaluar el impacto a los recursos naturales existentes por donde discurrirá la alineación propuesta.

En cuanto al Bosque Seco y Bosque Húmedo Subtropical sobre colinas calizas en los barrios Tallaboa Saliente y Tallaboa Alta de Peñuelas, el DRNA expresó que estas

colinas calizas constituyen hábitat de varias especies raras, vulnerables o en peligro de extinción como el guabairo pequeño de Puerto Rico, *caprimulgus noctitherus*. Hacia el Sur del proyecto, se encuentra la isla del diablito de tres cuernos, *Buxus vahlii*. Además se identifican varias plantas en la Lista de Elementos Críticos de la División Patrimonio Natural, el palo de vaca (*Bourreria virgata*), el jayajabico (*Erithalis fruticosa*), el guayacán blanco (*Guaiacum sanctum*), el corcho blanco (*Guapira obtusata*), pasionaria (*Passiflora bilobata*), el palo de violeta (*Polygala cowellii*) y *Rocheportia acanthophora*. El DRNA requirió una mitigación equivalente a 10:1; se adquieran terrenos en la porción norte de estas colinas calizas donde se encuentra el hábitat para el guabairo pequeño de Puerto Rico o en aquellas otras áreas en las cercanías del proyecto que sus características geológicas y de hábitat sean superiores y que viabilice la procreación de la especie. La posible adquisición de más terrenos en el lugar consolidaría un área de hábitat como refugio para el guabairo pequeño de Puerto Rico.

En cuanto al Bosque Húmedo Subtropical, Bosque Muy Húmedo Subtropical y Bosque Muy Húmedo Montañoso Bajo Subtropical en los Municipios de Peñuelas, Adjuntas y Utuado expresaron que el Banco de Datos de la División de Patrimonio Natural ha identificado las Áreas con Prioridad de Conservación en Puerto Rico. Entre éstas el Área con Prioridad de Conservación (APC) de la Cordillera Central. Esta incluye los bosques estatales de Maricao, Susua, Monte Guilarte, Toro Negro y Bosque del Pueblo, y las áreas boscosas que sirven de corredores entre ellos. La alineación propuesta discurre de norte a sur por áreas boscosas maduras entre el Bosque Estatal Monte Guilarte y el Bosque del Pueblo, pero fuera de la huella de ambos Bosques. Recomendó que las áreas boscosas maduras dentro del APC de la Cordillera Central deben ser mitigadas en proporción no menor de 2:1.

En cuanto a los Humedales y terrenos asociados en el Área con Prioridad de Conservación y Reserva Natural Caño Tiburones, expresaron que la alineación discurre al sur de la Reserva Natural Caño Tiburones y en terrenos del Área con Prioridad de Conservación. Recomendaron que la alineación, de ser posible, se aleje lo suficiente de los límites de la Reserva Natural y su zona de amortiguamiento para que los límites de la Servidumbre de Mantenimiento no incidan en éstos. Recomendaron además que los humedales intervenidos sean mitigados en proporción no menor de 3:1 por su cercanía a la Reserva Natural.

En el Área con Prioridad de Conservación Carso del Norte y Bosque de Vega, la alineación propuesta incide dentro de los límites del Área con Prioridad de Conservación (APC) del Carso del Norte y de uno de los fragmentos del Bosque Estatal de Vega. Recomendaron que se evalúe si la alineación puede ser rectificadas hacia los llanos aluviales al norte de esta APC y reducir el impacto al Bosque de Vega.

De otra parte, la Declaración de Impacto Ambiental identifica varios elementos críticos dentro de los terrenos que serán impactados por la alineación, entre otros, la palma de lluvia (*Gaussia attenuata*), el ortegón (*Coccoloba rugosa*) y el palo de violeta (*Polygala cowellii*). La boa de Puerto Rico (*Epicrates inornatus*), protegida legalmente a nivel federal y estatal se encuentra en esta área. De permanecer inalterada la alineación propuesta, recomendaron una mitigación de 3:1 por todos los terrenos que sean impactados dentro del APC o si es posible que la mitigación se realice dentro de los terrenos del Bosque Estatal de Vega.

En cuanto al Área con Prioridad de Conservación Ciénaga San Pedro y Sector El Caracol indicaron que la alineación propuesta cruza áreas de humedales estuarinos y palustres asociadas al Río Cocal, además, cruza el cauce del Río en cuatro puntos. En los puntos donde atraviesa dicho Río, los cuales se encuentran dentro del Área con Prioridad de Conservación, el proyecto pasará por áreas de humedal. No obstante, de acuerdo al documento ambiental, los ríos o áreas de humedal no serán impactados directamente ya que se pasará bajo el cauce y sus áreas de humedal asociadas. Hacia el Sur de esta área se encuentra el Hábitat Crítico Esencial del coquí llanero, (*Eleutherodactylus juanariveroi*). Recomendaron que previo a la actividad de construcción se inspeccione esta área para descartar que existan poblaciones del coquí llanero. En caso de encontrarse poblaciones de esta especie, el desarrollo del

proyecto deberá ampliar el uso de las perforaciones de terreno de forma que pase por debajo de las áreas de humedal. Como parte del desarrollo del proyecto debe tomarse en consideración que las condiciones hidrológicas existentes no deben ser alteradas de forma permanente. Recomendaron una mitigación de 3:1 para todo el trayecto del Proyecto Vía Verde que impacte humedales palustres o estuarinos dentro de los límites del Área con Prioridad de Conservación Ciénaga San Pedro y Sector El Caracol. Las áreas donde se encuentren poblaciones del coquí llanero deben ser protegidas según la reglamentación aplicable.

En cuanto al Área con Prioridad de Conservación y Reserva Natural Ciénaga Las Cucharillas expresaron que la alineación del Proyecto Vía Verde transcurre por terrenos dentro del Área con Prioridad de Conservación y Reserva Natural Ciénaga Las Cucharillas. Recomendaron una mitigación en proporción de 3:1 por el impacto a los humedales herbáceos en esta área.

El DRNA además recomendó que la AEE contrate los servicios de uno o más biólogos, hidrólogos, expertos en terrenos y geología para que inspeccionen los trabajos de construcción y que estos realicen un análisis más riguroso de la presencia o no de especies de flora o fauna no reportadas, elementos críticos, especies amenazadas o en peligro de extinción, en la medida que progresen los trabajos.

El DRNA asignará a costo de la AEE un biólogo permanente en cada segmento o fase de trabajos de Vía Verde que coordinará cualquier trabajo de relocalización de individuos listados en las especies críticas, endémicas o amenazadas, así como de cualquier especie de forma listada como crítica.

El DRNA sugirió que la mitigación bajo la Ley Núm. 241 de 15 de agosto de 1999, según enmendada, para el componente de hábitat de humedales considerados como de la jurisdicción del Cuerpo de Ingenieros del Ejército de los Estados Unidos de América (COE), sea coordinada con esta Agencia.

Para minimizar o evitar el impacto a los cuerpos de aguas se preparará un Plan para el Control de la Erosión y Sedimentación (Plan CES) para ser presentado ante la Junta de Calidad Ambiental (JCA), y un Storm Water Pollution Prevention Plan.

En cuanto a la Zona Cársica el DRNA estimó que el proyecto cruzará 0.8 millas cuadradas o 100 pies, a lo largo de 3.91 millas dentro de la zona cársica. Utilizando la herramienta para medir distancias de la aplicación "Sistema de Información Geográfica", se estimó que el proyecto cruzará aproximadamente unas 9.71 millas de la zona cársica, que se desglosan de la siguiente manera: 4.75 millas dentro de la Zona Protegida del Carso, 0.63 millas dentro de la zona cársica pero fuera de la Zona Protegida del Carso y 4.33 millas a lo largo de la Carretera PR-10, la cual está dentro de la zona protegida del carso pero que la misma fue previamente impactada durante la construcción de dicha vía. Si se ajustan las millas totales de impacto a la zona cársica restando el terreno ya impactado por la construcción de la PR-10, se observa que el impacto ajustado a la zona cársica es de 5.38 millas.

El tramo del proyecto propuesto a lo largo de la Carretera PR-10 discurre por varios sumideros que fueron impactados al momento de la construcción de la misma. En consecuencia, se llevaron a cabo obras de mitigación en dichos sumideros. No obstante, es fundamental que la construcción del proyecto propuesto no afecte las medidas de mitigación que se llevaron a cabo para la construcción de la carretera, asegurando así que se mantengan las mismas en su óptimo funcionamiento o que luego de la construcción se restablezcan las medidas de mitigación implantadas. Para las Aguas Subterráneas y Acuíferos se implantará un Plan de Control de Derrames y la presencia de un Coordinador Ambiental en el proyecto.

En ánimo de proteger Cuevas, Cavernas y Sumideros durante la construcción y a a sugerencias del DRNA, un grupo interdisciplinario deberá desarrollar toda acción necesaria para proteger cuevas, cavernas y sumideros en las regiones del Proyecto, lo anterior es de mayor relevancia en aquellos casos en que se requiera el uso de explosivos.

En cuanto al tramo en la costa por el área de Levittown, en el Municipio de Toa Baja el DRNA recomendó mitigar, ya sea con vegetación u otras obras que ayuden a mantener las dunas lo más cercano a su estado actual.

El DRNA requirió la preparación de un Inventario de Árboles en toda la ruta y la mitigación de los árboles a ser impactados. La mitigación puede realizarse con una o varias de las siguientes alternativas: 1) siembra de árboles a razón de 2:1. 2) establecimiento de servidumbres de conservación en predios de interés al DRNA 3) compra de predios de interés al DRNA y 4) compensación monetaria.

La AEE deberá cumplir con las mitigaciones requeridas o suscribir un acuerdo de cumplimiento previo a obtener del DRNA algún permiso, franquicia, autorización o concesión relacionada con la construcción del proyecto. Para las cesiones de título y las servidumbres de conservación a perpetuidad, como medida de mitigación, se deberá presentar ante el DRNA copia certificada de la escritura correspondiente en conjunto a una copia de la minuta de asiento de su presentación en el Registro de la Propiedad.

Entendemos que los posibles impactos ambientales fueron evaluados y atendidos por las agencias con peritaje en esta área, encargadas de velar por la protección y conservación de los recursos naturales y ambientales, y establecieron las medidas de mitigación necesarias para atender los mismos. El DRNA recomendó favorablemente el proyecto y la JCA certificó el cumplimiento del proyecto con la Ley sobre Política Pública Ambiental.

De otra parte, en cuanto a los aspectos de seguridad del gasoducto; el mantenimiento e integridad de la tubería; las alternativas de rutas evaluadas, el personal de la AEE indicó que la tubería será soterrada. Todas las especificaciones concernientes al diseño, construcción y operación de tuberías para transportar gas natural están reglamentadas por el Título 49 del Código de Regulaciones Federal (en adelante CFR), Sección 192, Transportation of Natural and Other Gas by Pipeline.

En cuanto al control de corrosión, la tubería se diseñará utilizando los factores contemplados en el 49 CFR 192.105, Design Formula for Steel Pipe y el 49 CFR 192.111, 107, 113 y 115, Design Factor for Steel Pipe, Yield Strength for Steel Pipe, Longitudinal Joint Factor for Steel Pipe y Temperature Derating Factor for Steel Pipe. La fabricación de la tubería seguirá el estándar 5L del American Petroleum Institute (API 5L). Los representantes de la AEE inspeccionarán el proceso de fabricación y se certificará que la tubería cumple con los requisitos del estándar API 5L. Entre las pruebas que se realizarán en la tubería están: análisis químico, pruebas de impacto, dureza, hidrostática y soldadura.

Para evitar la corrosión externa, se le aplicará un revestimiento externo a la tubería y tendrá protección catódica. El revestimiento de los tubos se aplica en la fábrica y a las soldaduras se les aplica en el sitio de la instalación. La protección catódica se instalará según lo dispone el 49 CFR 192.463, *External Corrosion Control: Cathodic Protection*. La tubería se evaluará una vez al año, sin exceder quince meses, para asegurar su cumplimiento con los requisitos establecidos en el 49 CFR 192.43.

En las áreas en donde se crucen cuerpos de agua principales y algunas carreteras (entre estas la PR-2 y PR-22), se utilizará barreno horizontal directo. En los cruces de cuerpos de agua, el barreno horizontal directo se considera como un método de cruce "seco" porque no interfiere con el flujo del cuerpo de agua, ya que la perforación se hace por debajo del lecho del cuerpo de agua. Se realizarán pruebas hidrostáticas según requerido por el Departamento de Transportación Federal (49 CFR 192.505, *Strength Test Requirements for Steel Pipeline*).

Sobre las áreas de construcción propensas a terremotos la tubería se diseñará y construirá con especificaciones para asegurar la integridad de la misma durante terremotos. De acuerdo al estudio geológico, *Overview of the Geology of the Proposed Via Verde Natural Gas Pipeline, Peñuelas to San Juan, Puerto Rico*, las fallas geológicas que hay en la zona del proyecto están consideradas como inactivas.



El proyecto cumplirá con las disposiciones del Código de Regulaciones Federal y con los estándares de seguridad establecidos.

La AEE ya implantó un plan de información pública para orientar a grupos profesionales, municipios, agencias concernidas y público en general sobre el proyecto propuesto. Esto incluye diseminación de información sobre el proyecto emisoras de radio y periódicos locales y regionales.

La reglamentación federal en el 49 CFR 192.905 contiene los parámetros de inspección y mantenimiento que aplican al proyecto propuesto. La AEE se comprometió a establecer un programa que le permita atender el manejo adecuado y eficiente de la integridad de la tubería consistente con la reglamentación aplicable. En particular, el programa debe identificar las Áreas de Alta Consecuencia (AAC). De conformidad con la reglamentación federal, la Autoridad desarrollará e implementará un Programa para el Manejo de la Integridad de la Tubería que contenga todos los elementos descritos en el 49 CFR 192.911 y que a la misma vez, discuta los riesgos específicos para cada tramo de la tubería.

En la etapa de operación del proyecto, la AEE establecerá un programa de patrullaje para observar condiciones en la servidumbre que puedan afectar la integridad de la tubería. La frecuencia no será menor a lo establecido en el 49 CFR, Parte 192, Subparte M, Sección 705, *Transmission Lines: Patrolling*.

De conformidad con la reglamentación federal aplicable se establecerá un programa que permita atender el manejo adecuado y eficiente de la integridad de la tubería y que discuta los riesgos específicos para cada tramo.

En cuanto a las posibles alternativas sobre la alineación, la AEE expresó que en la DIA-P se consideraron y discutieron varias alternativas entre ellas la no acción y la alineación propuesta bajo la presente pre-consulta y que ésta era la más indicada. Luego de esta evaluación, se determinó que la ruta propuesta es la más adecuada.

En cuanto a los aspectos de notificación se refiere, hemos tomado conocimiento de la promulgación de la Resolución de la Junta de Planificación JPE-2010-067, "Guías para Establecer el Procedimiento Expedido de Adjudicación de Proyectos Energéticos", adoptada el 19 de agosto de 2010 al Amparo de la Orden Ejecutiva OE-2010-34 y de la Ley Núm. 76 de 5 de mayo de 2010. La pre-consulta cumple con los requisitos establecidos en la Parte III de la JPE-2010-067.

Las Guías permiten presentar de forma inicial una pre-consulta cuando la parte proponente circule el documento ambiental a las agencias concernidas. En relación a este proyecto, se presentó una Declaración de Impacto Ambiental Preliminar ante la Junta de Calidad Ambiental. El documento ambiental fue circulado a las agencias concernidas.

La Resolución JPE-2010-067, establece en su Parte(A)(7), que cuando se trate de mejoras públicas en terrenos de tenencia privada, el proponente someterá evidencia fehaciente de que notificó al titular del predio, tales como una carta enviada a través del correo postal, notificación directa o aviso público en un periódico de circulación general, el cual debe incluir el número de catastro dirección física y nombre del titular, de tenerlo disponible. Conforme a la evidencia que obra en el expediente administrativo la agencia proponente, AEE, y como parte de los requisitos de notificación de la consulta de transacción, notificó mediante carta de 10 de septiembre de 2010, a los titulares de los terrenos por donde transcurrirá la alineación propuesta sobre su intención de adquirir terrenos. La agencia proponente publicó avisos de prensa en el periódico *Primera Hora* y *Puerto Rico Daily Sun*, edición de 6 de octubre de 2010, mediante la cual se notificó a varios titulares de terrenos privados que no pudieron ser notificados por correo regular de la intención de la AEE de adquirir los terrenos, según requerido en la reglamentación aplicable. Esto debido a que algunas cartas remitidas por la agencia a varios titulares fueron devueltas por el correo federal. La publicación de esta notificación (notificación alterna) fue



evidenciada por la AEE, mediante la presentación de los Afidávits 105812 y 3976, suscritas ante los notarios Alberto Bacó Bague y Orlando Piñeiro Vega, los días 6 y 7 de octubre de 2010, respectivamente, acreditando la publicación de ambos avisos de prensas en dichos rotativos.

Además, se publicaron dos avisos de vista pública en los periódicos *El Vocero* y *Puerto Rico Daily Sun*, edición de 16 de octubre de 2010, según requerido en la ley y reglamentación aplicable. De otra parte, consta en el expediente administrativo Declaración Jurada suscrita por Francisco Pérez Velázquez, Afidávit 826, mediante la cual se acreditó que se colocaron diversos rótulos notificando la celebración de la vistas pública de la pre-consulta 2010-62-0210-JGE-T-PRE que fuera presentada por la Autoridad de Energía Eléctrica ante la Junta de Planificación, relacionada al proyecto de mejora pública Vía Verde, en los lugares indicados en la Determinación de Hecho Núm. 3.

A la luz de lo anterior, concluimos que la agencia proponente cumplió con los requisitos de notificación establecidos para las consultas de transacción, pre-consultas y consultas de ubicación.

#### CONCLUSIONES DE DERECHO

1. La Ley Núm. 75 del 24 de junio de 1975, según enmendada, conocida como Ley Orgánica de la Junta de Planificación, autoriza a la Junta, en su Artículo 21, a entender y considerar toda mejora pública con excepción de aquellas de las cuales están exentas los organismos gubernamentales, incluyendo los municipios que hayan obtenido su autonomía municipal, a tenor con lo dispuesto en la Ley Núm. 81 de 30 de agosto de 1991, conocida como Ley de Municipios Autónomo de Puerto Rico, y las delegadas a la Administración de Reglamentos y Permisos, mediante resolución expresa de la Junta.
2. El Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos (Reglamento Conjunto), con vigencia de 29 de noviembre de 2010, en el Tomo I, Capítulo 4 - Definiciones, Inciso M-26, define mejora pública de la siguiente manera:

“26. Mejora u Obra Pública- Toda mejora permanente, toda nueva construcción, ampliación o reconstrucción (sin incluir reparación) de obra pública autorizada, pagada, supervisada, dirigida, emprendida o controlada por cualquier organismo gubernamental, incluyendo, entre otras, toda adquisición, venta, permuta, cesión, arrendamiento o cambio en el uso de propiedades por cualquier funcionario y organismo y las llevadas a cabo mediante contratos de obra con entidades privadas”.<sup>1</sup>
3. La Autoridad de Energía Eléctrica, en adelante la AEE, presentó el ante la Junta de Planificación consulta de ubicación y transacción para el desarrollo de una mejora pública la cual consiste en la instalación de una tubería de acero para transferir gas natural, según descrito en la Determinación de Hecho Número 1.
4. La Autoridad es una instrumentalidad del Gobierno de Puerto Rico, creada con el propósito de conservar, desarrollar y aprovechar las fuentes fluviales y de energía de Puerto Rico, en la forma económicamente más amplia. La Ley Orgánica de la AEE, Ley 83 de 2 de mayo de 1941, dispone que la misión de la

<sup>1</sup> De igual manera dispone el Glosario de Términos de los Reglamentos de Planificación, con vigencia de 11 de enero de 2009.

Autoridad es proveer un servicio de energía eléctrica eficiente, confiable y al menor costo posible. El servicio que ofrece la Autoridad debe aportar a una mejor calidad de vida e impulsar el desarrollo socioeconómico en armonía con la protección y conservación del ambiente.

La AEE tiene la responsabilidad de proveer la energía eléctrica para satisfacer las necesidades del pueblo de Puerto Rico y fomentar el desarrollo socioeconómico del país. La generación, transmisión y distribución eléctrica en Puerto Rico depende en gran medida de los combustibles derivados del petróleo.

5. La Política Pública Energética de Puerto Rico promueve la eficiencia energética, la diversificación de combustibles y el uso de fuentes renovables de energía como alternativas para ofrecer un futuro energético más económico y ambientalmente sostenible.

La Ley Núm. 76 del 5 de mayo de 2000, se promulgó con el propósito de dispensar a las agencias, corporaciones públicas e instrumentalidades gubernamentales con injerencia en la tramitación de permisos, endosos, consultas y/o certificaciones que puedan estar relacionadas con proyectos que surjan como consecuencia de estados de emergencia declarados mediante Órdenes Ejecutivas por el Gobernador de Puerto Rico o el Presidente de los Estados Unidos de América; del cumplimiento de los términos y procedimientos establecidos en la Ley Núm. 75 de 24 de junio de 1975, según enmendada, conocida como Ley Orgánica de la Junta de Planificación de Puerto Rico; Ley Núm. 76 de 24 de junio de 1975, según enmendada, conocida como Ley Orgánica de la Administración de Reglamentos y Permisos; Ley Núm. 81 de 30 de agosto de 1991, según enmendada, conocida como Ley de Municipios Autónomos del Estado Libre Asociado de Puerto Rico y la Ley Núm. 170 de 12 de agosto de 1988, según enmendada, conocida como Ley de Procedimiento Administrativo Uniforme del Estado Libre Asociado de Puerto Rico. Para establecer disposiciones especiales para atender los procedimientos ante la Junta de Planificación, la Administración de Reglamentos y Permisos y la Junta de Calidad Ambiental; adoptar el procedimiento para atender situaciones o eventos de emergencia que requieran la realización de obras, proyectos o programas que no requieran la expedición de permisos, endosos, consultas y/o certificaciones; facultar al Gobernador para promulgar, enmendar, revocar reglamentos y órdenes y rescindir o resolver convenios, contratos o parte de los mismos durante el estado de emergencia; disponer el término de vigencia de las órdenes ejecutivas emitidas en virtud de esta Ley; habilitar a las diferentes agencias gubernamentales para el trámite acelerado de los procedimientos establecidos en las mencionadas leyes y disponer para la revisión judicial.

6. El 19 de julio de 2010, el Hon. Luis Fortuño Buset, aprobó la Orden Ejecutiva OE-2010-34 con el propósito de activar las disposiciones de la Ley Núm. 76, supra. La referida Ley Núm. 76 provee para la activación de un procedimiento expedito para la realización de obras y proyectos necesarios para enfrentar situaciones críticas en la infraestructura física de prestación de servicios esenciales para la ciudadanía y situaciones que pongan en riesgo la vida, salud y seguridad de la población. Mediante la OE-2010-34, el Gobernador declaró una emergencia en cuanto a la infraestructura de generación de energía eléctrica de Puerto Rico y ordenó la utilización de un proceso expedito para el desarrollo de proyectos que fomenten una nueva infraestructura de generación

energética que use fuentes alternas a los combustibles derivados de petróleo, fuentes de energía renovable sostenible y de energía renovable alterna en Puerto Rico. Los proyectos incluyen, pero no se limitan a, proyectos nuevos de generación y conversiones a gas natural, y proyecto de energía renovable sostenible y de energía renovable alterna tales como energía eólica, energía solar, biomasa, marina e hídrica. Todas las agencias afectadas por dicha orden ejecutiva debían seguir el procedimiento expedito al momento de otorgar permisos, consultas, endosos, comentarios, recomendaciones y certificaciones para proyectos de energía en todo Puerto Rico.

7. Conforme a la OE-2010-34, el Presidente de la Junta de Planificación, el Presidente de la Junta de Calidad Ambiental, el Secretario del Departamento de Recursos Naturales y Ambientales y el director o Secretario de cualquier otra agencia concernida, debían adoptar aquellas medidas transitorias y tomar las determinaciones necesarias para cumplir con la referida orden.

La Junta de Planificación, al amparo de la OE-2010-34, promulgó la Resolución JPE-201-067 para establecer las Guías que regirán el procedimiento expedito de adjudicación de proyectos energéticos.

Surge de la Sección II-A-7 de la referida resolución, que cuando se trate de mejoras públicas en terrenos de propiedad privada, la parte proponente, en el presente caso, la Autoridad de Energía Eléctrica (AEE) debía someter evidencia de que notifico al titular del predio sobre la propuesta acción y para ello debía presentar ante la Junta evidencia de la notificación realizada ya por carta, notificación directa o aviso público en un periódico de circulación general.

Del expediente administrativo surge que la AEE cumplió con el requisito de notificar a los titulares de terrenos privados su intención de adquirir los terrenos mediante carta de 10 de septiembre de 2010. Los titulares que no fueron notificados por correo regular dado el hecho de que las comunicaciones fueron recibidas como devueltas por el correo federal, fueron notificados mediante un método alternativo de notificación, previa autorización de la Junta por lo que concluimos que se cumplió con todos los requisitos establecidos en la Orden Ejecutiva OE 2010-34 y la Resolución JPE-2010-067.

Por lo que, en el presente caso se cumplió con las disposiciones y requisitos establecidos en la OE-2010-34 y en la JPE-2010-067.

Con el propósito de notificar la fecha, hora y lugar de la celebración de las vistas públicas se publicaron dos avisos de vista pública en los periódicos *El Vocero* y *Puerto Rico Daily Sun*, edición de 16 de octubre de 2010. Se publicó además, avisos de prensa en el periódico *Primera Hora* y *Puerto Rico Daily Sun*, edición de 6 de octubre de 2010, mediante la cual se notificó a algunos titulares de terrenos privados que no pudieron ser notificados por correo certificado de su intención de adquirir los terrenos. Esto se evidenció mediante la presentación por parte de la AEE de copia de los Afidávits 105812 y 3976, suscritas ante los notarios Alberto Bacó Bague y Orlando Piñeiro Vega, los días 6 y 7 de octubre de 2010, respectivamente, acreditando la publicación de ambos avisos de prensas en dichos rotativos. Consta además, en el expediente administrativo Declaración Jurada suscrita por Francisco Pérez Velázquez, Afidávit 826, mediante la cual se acredita que se colocaron diversos rótulos en varios municipios notificando la celebración de la vista pública de la consulta 2010-62-0210-JGE-T-PRE.

La pre-consulta presentada por la AEE cumple con las disposiciones de la parte III de las Guías para Establecer el Procedimiento Expedito de Adjudicación de Proyectos Energéticos al amparo de la Orden Ejecutiva OE-2010-34 y de la Ley 76 de 5 de mayo de 2000, adoptadas por la Junta de Planificación mediante la Resolución JPE-2010-067 del 19 de agosto de 2010. Las referidas Guías permiten presentar de forma inicial una Pre-Consulta cuando la parte proponente puede evidenciar que circuló el documento ambiental para dicho proyecto a las agencias concernidas. La agencia proponente presentó una pre-consulta ante la Junta de Planificación y evidenció que circuló el documento ambiental correspondiente. La Pre-Consulta se considerará para todos los efectos como una consulta una vez la Junta reciba la evidencia de que se cumplió con el Artículo 4B(3) de la Ley Sobre Política Pública Ambiental, Ley Núm. 416 del 22 de septiembre de 2004, según enmendada Véase Resolución JPE-2010-067, III(A)(7)(E).

8. La JCA mediante Resolución R-10-45-1 del 30 de noviembre de 2010, sobre el Proyecto Vía Verde (DIA-P-JCA-10-0016 AEE), certificó el cumplimiento de la acción propuesta con lo dispuesto en el Artículo 4B de la Ley Sobre Política Pública Ambiental, Ley Núm. 416 del 22 de septiembre de 2004, según enmendada. Por lo tanto, a la luz de las disposiciones de la Resolución JPE-2010-067, emitida por la Junta de Planificación, la Junta deberá considerar la presente como una consulta de ubicación.
9. El Reglamento Conjunto, en su Tomo XIII - Procesos ante la Junta de Planificación, Capítulo 58 - Procedimientos Adjudicativos y Requisitos de Presentación, Sección 58.2.2 - Tipos de Consultas a Presentarse en la Junta, dispone que las transacciones públicas que no estén exentas por ley o resolución de la Junta, deberán ser presentadas ante la Junta<sup>2</sup>. El Proyecto Vía Verde no es una obra exenta, por lo debe cumplir con las disposiciones contenidas en dicho Reglamento.
10. Por su parte, el Reglamento Conjunto, en su Tomo XIII, Capítulo 58, Sección 58.3.3 - Consultas para Mejoras Públicas, en su Inciso E dispone:

"e. En toda mejora permanente, previo a su presentación, el proponente verificará la política pública expresada en Planes de Usos de Terrenos; Programa de Inversiones de Cuatro Años; Plan de Desarrollo Integral de Puerto Rico; Mapas de Calificación; Mapas de Áreas Especiales de Riesgo a Inundación; Planes de Ordenación Territorial, adoptados por la Junta y aprobados por el Gobernador; Planes Regionales adoptados por la Junta y aprobados por el Gobernador; reglamentos y demás documentos para asegurar la conformidad de lo propuesto con la política pública vigente. La autorización para desarrollar cualquier mejora permanente que no esté contemplada dentro del Programa de Inversiones de Cuatro Años, es una discreción del Gobernador de Puerto Rico"<sup>3</sup>.

#### 11. Ley de Municipios Autónomos de Puerto Rico

La Ley de Municipios Autónomos de Puerto Rico de 1991, Ley Núm. 81 de 30 de agosto de 1991, según enmendada, en su Artículo 13.011, requiere que los Planes de Ordenación de los municipios estén en conformidad con las políticas

<sup>2</sup> De manera similar dispone la Sección 3.03 del Reglamento de Procedimientos Adjudicativos de la Junta de Planificación, con vigencia de 11 de enero de 2009.

<sup>3</sup> De manera similar dispone la Sección 4.03 del Reglamento de Procedimientos Adjudicativos de la Junta de Planificación, con vigencia de 11 de enero de 2009.

públicas, leyes, reglamentos u otros documentos del Gobierno Central, relacionados a la ordenación territorial. El Artículo 13.012 permite a los municipios solicitar la transferencia de ciertas facultades de la Junta de Planificación y de la Administración de Reglamentos y Permisos sobre la ordenación territorial, incluyendo querellas, autorizaciones y permisos. Las transferencias se otorgan por jerarquías, por etapas secuenciales o simultáneamente. Una vez transferida la jerarquía, se transfieren los trámites incidentales correspondientes a ciertos permisos.

La alineación propuesta discurrirá por los Municipios de Peñuelas, Adjuntas, Utuado, Arecibo, Barceloneta, Manatí, Vega Baja, Vega Alta, Dorado, Toa Baja, Cataño, Bayamón y Guaynabo. El proyecto propuesto consiste en una tubería soterrada y no conlleva un cambio de calificación. En ese sentido, las calificaciones y clasificaciones que ostentan los terrenos municipales por donde discurrirá la tubería no serán objeto de recalificación. Ver Determinación de Hechos Número 6.

## 12. Plan Integral de Desarrollo Estratégico Sostenible (PIDES)

El Plan Integral de Desarrollo Estratégico Sostenible, en adelante PIDES, con vigencia de 2010, establece para el Sector de Energía la misión de fomentar el desarrollo de una industria de energía y el desarrollo de métodos alternos, ambos basados en la utilización de fuentes renovables. El PIDES establece las siguientes políticas públicas que promueven el desarrollo del sector así como:

- La utilización de alianzas público privadas para promover la implantación de energía renovable.
- El aprovechamiento de los fondos federales disponibles para el desarrollo de nuevas alternativas energéticas.
- La reingeniería del sector gubernamental en apoyo a una política pública coordinada hacia la integración de fuentes de energía renovable en la generación eléctrica de Puerto Rico.
- El desarrollo de legislación que promueva la eficiencia en el mercado de la energía, estableciendo métricas de competitividad y sostenibilidad.

En la ponencia de la AEE, se discute que la deseabilidad y necesidad de abaratar los costos del servicio de energía eléctrica en Puerto Rico. El Plan tiene como misión fomentar el desarrollo de una industria de energía y el desarrollo de métodos alternos; añade que la necesidad de invertir en nuestra infraestructura física es imperante y no debe subestimarse, pues representa uno de los indicadores más importantes para medir competitividad a nivel global.

El proyecto de autos, Vía Verde, es cónsono con la misión y políticas públicas esbozadas en el PIDES. Aunque no libera totalmente de los combustibles fósiles, si diversifica con el objetivo de ser más costo-efectivo y se reducen los impactos ambientales por emanaciones atmosféricas, así como reducción de probabilidad de derrames de petróleo e inicia la transición hacia otras fuentes de energía. Es cónsono con la visión del PIDES en la medida que el gas natural es el combustible que menor cantidad de emanaciones genera en los procesos de combustión necesarios para operar las generatrices de la AEE. La acción propuesta es económicamente viable, socialmente aceptable, ambientalmente saludable y un paso necesario para alcanzar las metas de desarrollo sostenible.

**13. Documento Objetivos y Políticas Públicas del Plan de Usos de Terrenos de Puerto Rico**

Entendemos que el proyecto propuesto cumple con la siguiente meta contenida en el Documento Objetivos y Políticas Públicas del Plan de Usos de Terreno de:

“Desarrollar la infraestructura para lograr una expansión y solidez socio-económica que estimule la relación armoniosa y la complementariedad entre las regiones del país y la proyección de este en el exterior, utilizando la programación y construcción de la Infraestructura como uno de los instrumentos que ligados a la planificación de usos de terrenos sirva para ordenar y promover el desarrollo integral del país”.

Cumple además con la Política Pública 22.00 esbozada en el referido documento. En dicho documento se establece como Objetivo 22.00 el dirigir la infraestructura sobre energía eléctrica de modo que estimule y propicie una política energética orientada hacia la cogeneración y diversificación de la producción de energía para:

- asegurar los abastos energéticos aumentando la confiabilidad en el sistema y *reduciendo la dependencia del petróleo como fuente primaria de combustible.*
- Asegurar un sistema de distribución, producción y mantenimiento para aumentar el grado de confiabilidad en el sistema.
- Promover que los usos de la infraestructura de energía eléctrica que requieren una ubicación especial, sean cónsonos con el entorno donde ubiquen promoviendo así la protección, conservación y mejoramiento del medio ambiente.

**14. Programa de Inversión de Cuatro Años (2006-2010)**

Conforme al Programa de Inversiones a Cuatro Años (PICA), la política pública energética consiste en promover un servicio de excelencia, eficiente, económico y confiable que propicie un ambiente libre de contaminación. El PICA establece que para cumplir con esta política pública deben presentarse proyectos que aumenten la capacidad generatriz y modernicen el sistema eléctrico.

El Sector Energía representa una parte importante en el desarrollo económico de Puerto Rico, por lo que es necesario mantener una estructura que propicie el mismo. La política pública energética de Puerto Rico consiste en promover un servicio de excelencia a los clientes en la forma más eficiente, económica, confiable y propiciar un ambiente libre de contaminación al pueblo de Puerto Rico. Se persigue, entre otros, la diversificación en el uso del combustible más económico y limpio como son el de carbón y el gas natural.

El proyecto Vía Verde contribuye a proveer una generación eléctrica más económica, confiable y eficiente reduciendo así los costos de generación, mantenimiento y reduciendo las emisiones de contaminantes a la atmósfera. Con el proyecto propuesto se cumple la política pública de reducir la generación y dependencia de combustible mediante el uso de un combustible derivado del petróleo. El proyecto Vía Verde surge de la necesidad de diversificar las fuentes de combustible en Puerto Rico. El mismo representa beneficios para toda la población y está a tono con la misión de la AEE de proveer al pueblo de Puerto Rico de energía eléctrica eficiente.

El Proyecto Vía Verde permitirá una generación eléctrica más eficiente y económica de fuentes confiables de abastos de combustible, reducirá los costos de generación y mantenimiento, además reducirá las emisiones de

contaminantes a la atmósfera, sin afectar la efectividad en la generación de energía. Este proyecto contribuye con la función de desarrollar y proveer un sistema adecuado y efectivo de energía eléctrica para el pueblo y los sectores comerciales, agrícolas e industriales del país, función que establece el PICA para el sector energía.

El proyecto está incluido en el documento del Programa de Mejoras Permanentes para los años fiscales 2011-2014, y en el 2012-2015.

#### 15. Planes Regionales

Los Planes Regionales esbozan varias políticas públicas y estrategias de desarrollo en ánimo de velar por el bienestar de la región y los ciudadanos residentes de los municipios.

##### Plan Regional, Región Sur

El Plan Regional, Región Sur de Puerto Rico, recoge varias políticas públicas de energía que aplican al Municipio de Peñuelas. En dicho Plan se reconoce que la política pública energética del país promueve la eficacia energética, la diversificación de combustibles y las fuentes renovables de energía como algunas de las tecnologías principales para ofrecer un futuro energético más económico y ambientalmente sostenible.

##### Plan Regional Central

El Plan Regional Central de Puerto Rico recoge varias políticas públicas de energía que aplican a los Municipios de Utuado y Adjuntas. Dicho Plan Regional recoge las siguientes políticas públicas:

- Promover un futuro energético más eficiente, menos vulnerable, más económico y ambientalmente sostenible.
- Desarrollar programas efectivos para mejorar la eficiencia de producción y distribución de energía eléctrica.
- Diversificar las fuentes de combustibles.
- Lograr la generación de energía eléctrica con fuentes renovables y fuentes alternas.

##### Plan Regional del Norte

El Plan Regional Central de Puerto Rico recoge varias políticas públicas de energía que aplican a los Municipios de Arecibo, Barceloneta y Manatí. En dicho Plan se reconoce la necesidad de evaluar distintas modalidades para generar energías y búsqueda de producción de energía a un costo más razonable posible.

##### Plan de Usos de Terreno de la Región Metropolitana de San Juan (PRMSJ)

El Plan de la Región Metropolitana de San Juan, en adelante PUTRMSJ, recoge varias políticas públicas de energía que aplican a los Municipios de Vega Baja, Vega Alta, Toa Alta, Toa Baja, Dorado, Bayamón, Cataño y Guaynabo. En dicho Plan se reconoce el problema energético existente en Puerto Rico debido a la dependencia exclusiva del petróleo, para todas las necesidades energéticas, a diferencia de otros países que utilizan el carbón o el gas natural como fuente de energía para suplir las necesidades. El PUTRMSJ, incluye una serie de metas y objetivos para reducir el gasto energético en la transportación y los usos urbanos. Dichas metas y objetivos, van dirigidos a la forma en que desarrollaría el crecimiento urbano, de forma que integrará la transportación colectiva, la

ventilación natural y otras iniciativas para reducir el consumo energético. Hace énfasis en la estrategia de estimular proyectos que utilicen fuentes alternas de energía, lo que es cónsono con el proyecto Vía Verde.

A la luz de lo anterior, concluimos que el proyecto cumple con las metas y objetivos esbozados en estos planes por las razones anteriormente discutidas.

#### 16. Mapas de Zonas Susceptibles a Inundaciones

La alineación propuesta de la tubería de acero, según los Mapas de Áreas de Riesgo a Inundación, cruzará por diferentes cuerpos de agua, ríos, quebradas y valles inundables con designación de Zona AE, dentro y fuera del Cauce Mayor y Zona VE. La alineación cruzará cuerpos de agua donde no existen estudios sobre áreas de riesgo a inundación.

Entendemos que la tubería propuesta no estará expuesta directamente al impacto por las cargas hidrodinámicas o hidrostáticas de las aguas de inundación por lo que las disposiciones del Reglamento Núm. 13 sobre Áreas Susceptibles a Inundaciones, vigente, no son aplicables. Ahora bien, recomendamos que se tome en consideración los problemas de erosión y deslizamientos que pudieran ocurrir durante eventos extraordinarios de inundación o de lluvias extremas para efectos del diseño de alguna trinchera y se preste atención al diseño e instalación de la tubería en el tramo de la tubería propuesta a localizarse al Norte de la Carretera PR-165, Levittown, la cual se identifica la Zona VE. En cuanto al tramo de la alineación de la tubería que estará cruzando el proyecto de control de inundaciones del Río de La Plata, el cual incluye la construcción de diques y la posible excavación para mejorar el acarreo hidráulico del río para bajar los niveles de inundación, recomendamos se consulte con el Cuerpo de Ingenieros de los Estados Unidos y al Departamento de Recursos Naturales y Ambientales.

La AEE deberá cumplir con las disposiciones contenidas en el Reglamento Núm. 13, Reglamento Sobre Áreas Especiales de Riesgo a Inundaciones, con vigencia de 7 de enero de 2010, que le pudieran ser aplicables.

#### 17. El Reglamento Conjunto, en su Tomo V - Disposiciones Especiales de Planificación, Capítulo 32 - Zonificación de la Zona Costanera y de Accesos a las Playas y Costas de Puerto Rico, Sección 32.2.2 - Otras Disposiciones, Inciso a - Zona de Separación, dispone:

"a. En todo proyecto para la construcción de edificios, de segregación o de urbanización de terrenos, con frente a la costa o playas de Puerto Rico, se requerirá que se dedique, para uso público, una faja de terreno de 20 metros de ancho mínimo, paralela y medida desde la zona marítimo terrestre. En adición, no se erigirán estructuras permanentes en una faja de terreno de 30 metros de ancho, contiguas a la anterior".<sup>4</sup>

Surge del expediente administrativo que parte de la alineación propuesta discurrirá por el área costera.

Mediante el proyecto propuesto se propone la instalación de una tubería soterrada para transportar gas natural, por lo que entendemos lo dispuesto en esta sección no le es de aplicabilidad.

Por su parte, el Reglamento Conjunto, Tomo V, Capítulo 32, Sección 32.2.6 - Proyectos de Construcción Gubernamental, Inciso a - Disposición General, dispone:

<sup>4</sup> De manera similar dispone la Sección 3.05 del Reglamento de Zonificación de la Zona Costanera y de Accesos a las Playas y Costas de Puerto Rico, Reglamento de Planificación Núm. 17 con vigencia de 31 de marzo de 1983.

“a. En aquellos proyectos gubernamentales, dentro de la Zona Costanera de Puerto Rico, para proveer servicios públicos esenciales y obras de infraestructura pública, tales como carreteras, descargas e instalaciones sanitarias o pluviales, líneas de acueducto, líneas eléctrica, de combustibles y telefónicas, y otros similares, se le dará consideración a evitar la erosión en la costa, evitar la contaminación de los cuerpos de agua y se le dará especial consideración al impacto de dichas obras sobre el uso del terreno”.<sup>5</sup>

La parte proponente deberá tomar las medidas necesarias para evitar la erosión en la costa y la contaminación de los cuerpos de agua.

#### 18. Cuenca Hidrográfica de la Laguna Tortuguero

El proyecto cumple con lo establecido en el Reglamento Conjunto para el área de la Cuenca Hidrográfica de la Laguna Tortuguero, Tomo V, Capítulo 36 - Zonificación Especial para la Cuenca Hidrográfica de la Laguna Tortuguero.<sup>6</sup> A través del mismo se persigue proteger y conservar el medio ambiente. Aunque Vía Verde ubicará en áreas consideradas como zonas susceptibles a inundaciones, en estas áreas la tubería será soterrada, por lo que no habrá impacto significativo en la hidrología local, ni se anticipan inconvenientes en las áreas. Lo propuesto está en armonía con las zonificaciones vigentes. Facilita el cumplimiento con la reglamentación promulgada por la Agencia Federal de Protección Ambiental. Elimina la necesidad de instalar equipos de control adicionales y a su vez extiende la vida útil de las unidades de generación eléctrica, propiedad de la AEE.

Se destaca como aspectos relevantes del proyecto que el gas natural es la fuente de energía fósil con más auge y representa la quinta parte del consumo energético mundial. Su ventaja ambiental es que las emisiones de dióxido de azufre son ínfimas y que los niveles de óxido nitroso y dióxido de carbono son menores. El gas natural es el combustible fósil más limpio y mejor para el ambiente. Para suplir el alto volumen de gas natural requerido para la operación de las centrales de la Autoridad, el mecanismo viable y más seguro es el uso de tuberías. Con este proyecto se transferirá desde la terminal de Eco Eléctrica por tubería directamente a las centrales Cambalache, Palo Seco y San Juan.

El proyecto utilizará los métodos y materiales más avanzados que existen en el mercado actual y se registrará por los Códigos del Departamento de Transportación Federal. La Autoridad realizó un análisis de riesgo que incluye los datos estadísticos de la Oficina de Seguridad de Tuberías creada por el Gobierno Federal. Este incluye las causas de incidentes y accidentes con las medidas preventivas y de control que se considerarán para evitar o minimizar cada uno de los mismos, y que se incorporarán al diseño del proyecto para garantizar la seguridad durante la operación del mismo. De conformidad con la reglamentación federal aplicable se establecerá un programa que permita atender el manejo adecuado y eficiente de la integridad de la tubería y que discuta los riesgos específicos para cada tramo.

El proyecto de autos representa un importante logro en la diversificación de combustible, necesaria para estabilizar el costo de energía eléctrica. El uso de gas natural reducirá sustancialmente las emisiones y aportará a una mayor conservación del ambiente. La conversión de gas natural a nuestras centrales fortalecerá el sistema eléctrico del país.

<sup>5</sup> De manera similar dispone la Sección 7.01 del Reglamento de Zonificación de la Zona Costanera y de Accesos a las Playas y Costas de Puerto Rico, Reglamento de Planificación Núm. 17 con vigencia de 31 de marzo de 1983.

<sup>6</sup> Plan y Reglamento Especial para la Cuenca Hidrográfica de la Laguna Tortuguero.

La propuesta de autos representa el primer paso para dirigir la infraestructura sobre energía eléctrica de modo que estimule y propicie una política energética orientada hacia la cogeneración y diversificación de la producción de la energía alterna. Representa además, la primera alternativa viable, evaluada y avalada por las agencias gubernamentales pertinentes, para utilizar el gas natural como fuente de generación de energía eléctrica en beneficio de la ciudadanía en general.

### Acuerdo

Esta consulta de transacción y ubicación ha sido examinada y analizada por esta Junta a la luz de la información suministrada por el proponente, de las disposiciones de leyes, reglamentos y normas de planificación vigente, y del resultado del estudio desde el punto de vista ambiental. También se ha dado consideración a las proyecciones poblacionales y a la disponibilidad de terrenos apropiados para la construcción de viviendas y otros usos en el área que comprende el proyecto propuesto.

Dicha consulta fue considerada por esta Junta de Planificación, quien acordó que es viable el desarrollo de los terrenos anteriormente descritos para el uso propuesto, por lo que acordó autorizar condicionado a los siguientes señalamientos y recomendaciones, los cuales habrán de tomarse en consideración al preparar y someter la próxima etapa en el trámite del proyecto, etapa que será determinada por la Oficina de Gerencia de Permisos:

1. Se acoge la solicitud de enmienda y se autoriza la consulta de ubicación y transacción del proyecto Vía Verde.
2. Se declara no ha lugar la Moción para Invalidar la celebración de Vistas Pública por incumplimiento con la Resolución JPE-2010-067 y para Solicitar el Cumplimiento con los Documentos Requeridos para una Pre-Consulta y una vez se evidencie cumplimiento coordinar la celebración de nuevas vistas pública presentada por Iniciativa para un Desarrollo Sustentable.
3. Se declara no ha lugar la solicitud de tiempo adicional solicitada por la Asociación de Constructores de Hogares mediante carta de 6 de noviembre de 2010.
4. La AEE deberá solicitar, de ser necesario, un Permiso según lo dispone la Sección 404 de la Ley Federal de Agua Limpia ("Clear Water Act").
5. La AEE deberá cumplir de manera estricta con todas las disposiciones aplicables contenidas en el Código de Regulación Federal (CFR) aplicables a la construcción, el diseño y operación de una servidumbre de la naturaleza del Gasoducto.
6. La AEE deberá presentar un "Joint Permit" al Cuerpo de Ingenieros de los Estados Unidos.
7. La AEE deberá tomar todas las medidas de seguridad establecidas en los códigos y leyes estatales y federales.
8. LA AEE deberá cumplir con las recomendaciones de las agencias estatales y federales con inherencia en el proyecto.
9. De afectarse terrenos forestales y según recomendó el Departamento de Recursos Naturales y Ambientales la parte proponente deberá identificar con exactitud aquellas porciones de terrenos forestales por las que discurrirán las líneas del proyecto. La agencia proponente, AEE, deberá

ceder al DRNA terrenos de igual o mayor valor ecológico a los utilizados o en su defecto, compensar económicamente por los mismos.

10. La AEE deberá cumplir de manera estricta con todas las recomendaciones vertidas por la Junta de Calidad Ambiental en su Resolución R-10-45-1 del 30 de noviembre de 2010.

Los señalamientos anteriores se han hecho de la información disponible en estos momentos. No obstante, la Oficina de Gerencia de Permisos podrá hacer requerimientos adicionales que sean necesarios en el futuro, bien sea por situaciones que se desconocen ahora o imprevistas que pudieran surgir durante el desarrollo del proyecto en sus distintas etapas.

A base de las Determinaciones de Hechos y Conclusiones de Derecho y tomando en consideración lo anteriormente expuesto, en virtud de las disposiciones de las leyes, reglamentos y normas de planificación vigentes, esta Junta de Planificación de Puerto Rico, **ACOGUE LA SOLICITUD DE ENMIENDA y APRUEBA** la Consulta Número 2010-62-0210-JGE-T, para la transacción de terrenos y ubicación del proyecto Vía Verde.

DISPONIÉNDOSE que: (1) esta aprobación tendrá una vigencia de cuatro (4) años a partir de la fecha de notificación de este Informe; (2) la etapa subsiguiente deberá ser sometida ante la Oficina de Gerencia de Permisos, la cual según dispuesto en la Ley 76 de 2000, supra, tendrá cinco (5) días laborables para evaluar y emitir los permisos correspondientes una vez sea radicado el proyecto; (3) de no someterse la etapa subsiguiente en la Oficina de Gerencia de Permisos dentro del término de vigencia establecido la consulta quedará **AUTOMATICAMENTE ARCHIVADA** para todos los efectos legales.

De conformidad con lo dispuesto en la Ley Número 76 del 5 de mayo de 2000 se apercibe, que cualquier parte afectada por cualquier resolución u orden emitida por alguna agencia tendrá como único remedio presentar una solicitud de revisión ante el Tribunal de Apelaciones. La solicitud de revisión judicial deberá presentarse en dicho Tribunal, dentro del término jurisdiccional de veinte (20) días naturales, contados a partir de la fecha en que se archiva en autos copia de la notificación de la resolución u orden final de la agencia. La parte recurrente notificará la presentación de la solicitud de revisión a la agencia recurrida y a todas las partes interesadas dentro del término establecido; disponiéndose, que el cumplimiento con dicha notificación será de carácter jurisdiccional.

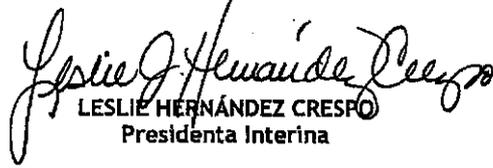
La expedición de un auto de revisión no paraliza la autorización o la realización de una obra ni la implantación de una regla, reglamento, orden, resolución, determinación, tramitación, concesión o vigencia de cualquier permiso, endoso o certificación de una agencia o funcionario; la adjudicación de una subasta o el otorgamiento de un contrato emitido o surgido en torno a los proyectos que vayan a llevarse a cabo, a menos que el Tribunal lo ordene expresamente para prevenir un daño irreparable, luego de considerar una moción en auxilio de jurisdicción a tales efectos.

Para que el Tribunal emita dicha orden, la parte recurrente deberá probar que la misma es indispensable para proteger la jurisdicción del Tribunal; que tiene una gran probabilidad de prevalecer en los méritos; que la orden de paralización no causará daño sustancial a las demás partes; que no perjudicará el interés público; que no existe una alternativa razonable para evitar los alegados daños; y que el daño no se podrá compensar mediante la concesión de un remedio monetario o cualquier otro remedio adecuado en derecho, todo ello de conformidad con lo dispuesto en el Código de Enjuiciamiento Civil de 1933, según enmendado.

Cualquier orden del Tribunal sólo podrá afectar aquel componente o componentes del proyecto que sea objeto de controversia en el caso y en donde esté envuelto un daño sustancial.

Primera Extensión a la  
Consulta Número 2010-62-0210-JGE-T

NOTIFÍQUESE: A las partes cuyos nombres y direcciones se mencionan a continuación: Autoridad de Energía Eléctrica, Apartado 364267, San Juan PR 00936-4267. Notifíquese además, copia de cortesía a todas las personas cuyos nombres y direcciones obran en el expediente administrativo.

  
LESLIE HERNÁNDEZ CRESPO  
Presidenta Interina

CERTIFICO: Que he notificado copia fiel y exacta de la presente resolución, bajo mi firma y el sello oficial de esta Junta, a todas las partes mencionadas en el Notifíquese habiendo archivado el original en autos.

En San Juan, Puerto Rico, hoy

03 DEC 2010

  
Loida Soto Noguera  
Secretaria





"LarryEvans@bcpeabody.com

"  
<LarryEvans@bcpeabody.co  
m>

12/03/2010 09:32 AM

Please respond to  
LarryEvans@bcpeabody.com

To <Marelisa\_Rivera@fws.gov>, <Rafael\_Gonzalez@fws.gov>, <edgar.w.garcia@usace.army.mil>  
cc <Derek.Hengstenberg@tetrattech.com>, <Osvaldo.Collazo@usace.army.mil>, <andrewgoetz@bcpeabody.com>

bcc

Subject Notes from call with USFWS

History: This message has been replied to.

ALCON -

Attached are notes from our call yesterday with Rafael Gonzalez, USFWS. The principal purpose of the call was for Derek Hengstenberg and Rafael to discuss Derek's proposed survey protocol regarding Hawks of interest to the USFWS along the proposed Via Verde corridor.

Next week, Mr. Hengstenberg will be in Puerto Rico to participate in a flyover of the corridor route (on Tuesday) and to meet with Marelisa Rivera, USFWS in Boqueron (Wednesday) ... time for the meeting yet to be determined. Derek will submit a final draft of the survey plan/protocol to USFWS by Dec 20 for review and comment/acceptance. Rafael agreed he can provide final comments and acceptance by Jan 3, 2011. Field work for the survey will occur on, or before, January 10, 2011.

A copy of the notes has been provided to PREPA by Danny Pagan.

Lawrence C. Evans  
503.781.7930 (cell)  
larryevans@bcpeabody.com



iyutka53@aol.com NOTES FROM CONFERENCE CALL WITH USFWS.doc

## NOTES FROM CONFERENCE CALL WITH USFWS 2 DECEMBER 2010

Call scheduled for 11:00AM – Puerto Rico

Callers included:

Rafael Gonzalez, USFWS

Derek Hengstenberg

Ken Caraccia, BCPeabody

Lawrence Evans, BCPeabody

Call opened by **L. Evans (LE)** – goals for this call were:

- 1) Discuss proposed procedures Derek will use to survey for hawks along proposed pipeline route
- 2) Set tentative timeline to submit proposal to USFWS, have review conducted and begin fieldwork
- 3) Inform Rafael of next week's schedule re: Derek's visit to Puerto Rico

After the opening remarks, the discussion was turned over to Derek and Rafael ....

**Derek (D):** He completed a desktop analysis regarding two focus areas where hawks were expected to be located. Were these the same areas USFWS was looking at?

**Rafael (R):** Agreed these were the same areas of interest to USFWS –

Adjuntas: important area for Sharp Shinned Hawk

Coastal North Karst Hills (Manati), Central Mountain Volcanic Region

(Adjuntas) and Central Karst Region: important area(s) for Broad Wing Hawk

These areas are the same as Focal Area 1 and Area 2 in Derek's initial desktop analysis.

**D:** When he participates in flyover next week (Dec 7) he will focus on these areas. Derek proposes to undertake a "presence/absence" survey later in January 2011.

January/February is the best time of the year due to birds' courtship. Derek said he will propose to identify X points within a period in January. The specific location and number of these points will be identified during the flight Tuesday. The survey proposal will be vetted with USFWS before field work begins. The survey will spot movements and territories and, ultimately, a GIS map layer will be developed.

**Ken Caraccia (KC):** Can Derek also develop a Habitat Quality Index (HQI) within the two focal areas?

**R:** A HQI would be a good tool and welcomed by USFWS. Derek's plan will address USFWS' three interests –

- 1) identify amount of habitat project will potentially impact,
- 2) develop breeding territory shape files and,
- 3) address presence/absence question

**D:** Confirmed his work will address the three USFWS actions (above). However, Derek pointed out he may not be able to identify specific nest sites (but questions the necessity

of this information for this project). Derek asked a general question – how best to model and identify specific numbers?

**KC:** Could use Derek's previous studies and incorporate the new data from the anuary survey.

**D:** The Sharp Shinned Hawk will be a challenge since no previous data exists.

**R:** USFWS understands that only the best information available can be used. If the pipeline will cross through habitat for either bird, then a simple  $R)W X$  length of crossing equation will be used to identify initial potential habitat impact. Again, only the best information available is the bar to be used. Rafael agreed Derek's proposed methodology sounded good. He asked when Derek could submit the draft proposal with the number of points, point locations and number of visits to USFWS for review?

**D:** Will provide Marelisa a tentative answer on number of points and locations after the flyover next week when we meet with USFWS on Dec 8. Derek felt he could submit a final draft of the survey proposal to USFWS for review by Dec 20. He wanted to have USFWS review and acceptance in time to begin fieldwork on or before January 10 2011.

**R:** He would like to participate in field visits in January 2011.

**D:** No problem, he will coordinate his schedule closely with Rafael and USFWS.

**D:** Expects he and his team will be using 10X40 binoculars and will also have spotting scopes and range finders, as well as GPS units. He hopes to hire local experts in Puerto Rico who he has trained in the past.

**LE:** In summary – does USFWS see any problems completing a review of the draft proposal Derek will submit on or before Dec 20 and having a final decision on accepting the protocol NLT Jan 3?

**R:** No, does not see any problem with reviewing proposal and having final agreement by January 3 (or sooner depending on when final draft is submitted by Derek).

**LE:** OK – then proposed timeline will be ...

Dec 7 - flyover of proposed pipeline route

Dec 8 - meeting with USFWS (where number of points and locations may be provided)

NLT Dec 20 - final draft of survey protocol provided to USFWS for review

NLT Jan 3 - USFWS to give acceptance of protocol so field work can begin

NLT Jan 10 – field work for survey starts

**LE:** Any last alibis? None .... Call ended at 12:00 noon.

SubjectNotes from call with USFWS

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ALCON -

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ORIGINAL

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SECRETARY OF THE  
COMMISSION

2010 DEC 10 P 2:49

FEDERAL ENERGY  
REGULATORY COMMISSION

December 3, 2010

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

Re: EcoEléctrica Terminal Modification Project, Docket No. CP95-35-001

Dear Secretary Bose:

Casa Pueblo is a community-based organization with over 30 years of service contributing towards sustainable development in Puerto Rico in areas of economy, environmental protection, educational programs, and agriculture. For the goals achieved so far, Casa Pueblo has been nationally and internationally recognized including the granting of a 2002 Goldman Prize, equivalent to the Environmental Nobel Prize, to its Director Dr. Alexis Massol-González.

Casa Pueblo has organized a Scientific and Technical Commission to study the environmental, social and economical consequences of projects being implemented by the Government of Puerto Rico to substitute petroleum dependency for natural gas, including a pipeline project known as 'Vía Verde' (*Green Way*) or 'Gasoducto del Norte' (*Northern Gas Pipeline*). This commission has been studying this project for more than six months now.

Our commission has decided to bring to the attention of FERC some important findings of our studies.

As found in a letter published by FERC (October 25, 2010), the Fish and Wildlife Service is stating that their determination to the modification to the FERC permit No. CP95-35-001 is no longer valid since the original project was cancelled on December 2008 and the current project being developed by the Government of Puerto Rico is a different one.

The current project of the Government of Puerto Rico and the Puerto Rico Electric and Power Authority (PREPA) is the Gasoducto del Norte or Vía Verde. This project is never mentioned in any public communication from EcoEléctrica to FERC. This project will be a natural gas pipeline that would cross the Island of Puerto Rico from the facilities of EcoEléctrica, in the South of Puerto Rico to the North of the Island, cutting through our central mountain range and from there to the east of the Island, cutting through our northern karst zone to supply natural gas to three PREPA power plants in the northern coast of the Island. This project is still pending approval from regulatory agencies including the US Corps of Engineers while, at the same time,

Kimberly D. Bose, Secretary  
December 3, 2010  
Page 2

great opposition from the people of Puerto Rico to this project has been expressed. We thus concur with the FWLS that the project being developed by the Government of Puerto Rico is not the same as the Gasoducto del Sur and therefore, the Order Amending Authorization Under Section 3 of the Natural Gas Act, *EcoEléctrica, L.P.*, 127 FERC ¶61,044 (2009), (April 16 Order), Docket No. CP95-35-001 granted by FERC, should no longer be valid.

Moreover, our Scientific and Technical Commission has determined that the modifications that *EcoEléctrica* is soliciting will not have the re-gasified natural gas send-out capacity required by the project being proposed by PREPA. It is interesting that our commission has pointed out this fact to both the PREPA officials as well as the *EcoEléctrica* officials, but neither body has yet responded to our findings. We urge FERC to look into this issue.

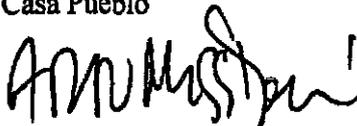
Casa Pueblo expresses its willingness to collaborate with FERC in the process of ensuring that the energy projects to be developed in Puerto Rico are done with environmental and technical soundness and in the best interests of the people of Puerto Rico.

Please feel free to contact us if you need further information.

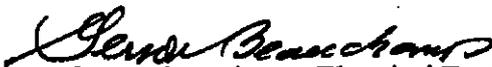
Yours Sincerely,



Dr. Alexis Massol-González, Director and Member  
Scientific and Technical Commission  
Casa Pueblo



Dr. Arturo Massol-Deyá, Biologist and Member  
Scientific and Technical Commission  
Casa Pueblo



Dr. Gerson Beauchamp, Electrical Engineer and Member  
Scientific and Technical Commission  
Casa Pueblo



United States  
Department of  
Agriculture

Forest  
Service

International Institute of  
Tropical Forestry

Tel: (787) 766-5335

Jardín Botánico Sur  
1201 Calle Ceiba  
San Juan PR 00926-1115  
Fax: (787) 766-6302

File Code: 2530

Date: December 3, 2010

Sindulfo Castillo  
Section Chief  
US Corps of Engineers  
Stop 7-1/2 Antilles Office  
400 Fernandez Juncos Avenue  
San Juan, PR 00901-3223

Dear Mr. Castillo:

RE: Permit Application No. SAJ-2010-02881 (IP-EWG)

In the many years that we have been examining permits for activities that affect the Waters of the United States in Puerto Rico, we have never seen one with such a broad scale of effects. Crossing 235 rivers and wetlands is quite a level of impact that transcends the estimated 369 acres. The reason is that the estimate of the affected acreage includes only the actual area on which the pipeline stands, while ignoring the down and upstream effects of the construction and operating activities on wetland and riverine systems that are open systems through which nutrients, sediments, and organisms move. Moreover, while reading the material provided by the applicant, one gets the notion that the proposal has no environmental effects other than minor transitory effects, the project having been designed to avoid permanent effects. These statements are not consistent with what one sees on the Island when heavy equipment is used in wetland environments. Usually sediment compaction and changes in hydroperiod occur, both of which affect the habitat and wetland conditions. The construction methods are nicely illustrated and one is led to believe that these are fail-proof techniques with no effects on the wetland systems. However, it is impossible to reach conclusions about construction effects of this large project without adequate information about how these interventions will affect hydroperiods (including up and downstream fluxes of water and materials), sediment compaction, and species composition.

We could not find adequate discussion of the wetlands effects of the project in the State EIS, and suggest that these issues be fully disclosed for the Waters of the United States.

Sincerely,

ARIEL E. LUGO  
Director



Marelisa Rivera/R4/FWS/DOI  
12/08/2010 04:26 PM

To Dave Flemming/R4/FWS/DOI@FWS  
cc Edwin Muniz/R4/FWS/DOI@FWS, Felix  
Lopez/R4/FWS/DOI@FWS  
bcc  
Subject draft letter via verde project

# 10

Dave:

Edwin has called EPA and they have mentioned that they are planning a very strong letter but not an elevation process (3a / 3b). Please give us your feedback. The due date is December 17, 2010. Our call is the 15th since we have the roadshow the 16th. Thanks



2010\_12\_07\_ltr\_PN\_viaverde\_finaldraft to RO.doc

Marelisa Rivera  
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U.S. Fish and Wildlife Service  
Ecological Services Caribbean Field Office  
P.O. Box 491  
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marelisa\_rivera@fws.gov

There are three constants in life...change, choice and principles.  
Stephen R. Covey

Mr. Sindulfo Castillo  
Chief, Regulatory Section  
US Army Corps of Engineers  
400 Fernandez Juncos Ave.  
San Juan, Puerto Rico 00901 – 3299

Re: SAJ 2010-02881 (IP-EWG), Via Verde  
Pipeline Project.

Dear Mr. Castillo:

The U.S. Fish and Wildlife Service (the Service) has received a copy of the above referenced Public Notice (PN) dated November 19, 2010, for the construction of a natural gas pipeline from EcoEléctrica to the PR Electric Power Authority (PREPA) power plants on the north coast of Puerto Rico. The proposed project has been publicly named by the proponent as Via Verde. Our comments are issued in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.) and the Endangered Species Act (ESA) (16 U.S.C. 1531 et. seq. as amended).

The applicant is requesting a permit to construct an approximate 92 mile long pipeline covering about 1,672 acres, crossing 235 rivers and wetlands covering 369 acres of jurisdictional wetlands. The Caribbean Ecological Services Field Office has been involved in providing technical assistance to PREPA and its consultants on the current proposal. We have provided preliminary comments to the Corps in October 2010, based on the information submitted with the applicant's Joint Permit Application. We also provided technical assistance to the applicant regarding appropriate methodologies to conduct surveys of listed species.

The following comments and recommendations are based on the information provided in the PN and information we have in our files.

**Purpose of the Project, Single and Complete Project, Federal Involvement and compliance with the National Environmental Policy Act (NEPA):**

The public notice states that the overall proposed purpose is to deliver an alternate fuel source to three existing electric power generating facilities located in Arecibo, Toa Baja and Palo Seco operated by PREPA. EcoEléctrica was the first and remains the only source of natural gas in

Puerto Rico. Although the project as presented appears to presents all the elements necessary to meet this purpose, the reality may be other.

Based on the information in our files and recent discussions with EcoEléctrica's consultant, it is our understanding that the only authorized source of natural gas facility in Puerto Rico needs to be upgraded in order to supply the additional gas needed to supply the gas for the proposed pipeline. In May 1996, the Federal Energy Regulatory Commission (FERC) authorized EcoEléctrica to site, construct, and operate LNG import terminal facilities in Peñuelas, Puerto Rico. Environmental Condition No.11 of the May 1996 Order specified that "EcoEléctrica shall commence construction on its LNG facilities within 3 years of the date of this Order, or file a motion to extend the deadline, with the specific reasons why additional time is necessary". Based on the information we have available, the authorizations with respect to the construction of the second authorized storage tank and four of the six authorized vaporizers have lapsed. Accordingly, FERC has established that should EcoEléctrica seek to build another LNG storage tank, or other related facilities, it must obtain prior FERC authorization.<sup>1</sup>

In its July 19, 2010 semiannual report<sup>2</sup> to FERC, EcoEléctrica indicated that the construction of the second LNG Storage tank to supply natural gas fuel to the Commonwealth remains one of EcoEléctrica's considerations for a future expansion. It should also be noted that in the report, EcoEléctrica only addresses the Terminal Modification project to delivery of natural gas to Costa Sur as previously permitted by FERC. By letter dated November 15, 2010, EcoEléctrica indicated to the Service that the current modification to their facilities are not part of PREPA's recently announced Via Verde pipeline project and that they would need to request FERC's approval for any physical or operational modifications that might be necessary in their facilities as a function of the newly proposed pipeline project.

The PN fails to discuss necessary changes to the currently authorized EcoEléctrica's facilities and operation to supply the natural gas for the conversion of the three PREPA's facilities in the north. The original development of the EcoEléctrica facility is subject to a Service's Biological Opinion under Section 7 of the Endangered Species Act. This issue will be addressed further into this document.

Based on the information presented above, the proposed construction of the pipeline and any required additional storage and modifications to the EcoEléctrica terminal are interrelated and should be viewed as one single and complete project. As it appears to us, the proposed pipeline does not have a source that has been approved by the Federal Government to supply gas to Via Verde. In essence the Corps would be permitting a fragment of the project and such approval would be allowing impacts to resources that could be irreversible or irretrievable should EcoEléctrica fail to obtain authorization to realize the physical and/or operational modifications that might be necessary to the facilities as a function of the newly proposed pipeline project. A pipeline without a source does not have any use.

<sup>1</sup> FERC, Order Amending Authorization Under Section 3 of the Natural Gas Act, April 16, 2009, Footnote #3.

<sup>2</sup> EcoEléctrica, L.P. LNG Import Terminal and Cogeneration Project Docket Number CP-95-35-000, Semi Annual Report LNG Operating Report, July 19, 2010.

In addition, this project should be evaluated as a major construction activity since it is estimated to impact about 1,672 acres of land, including about 369 acres of wetlands, would impact several Commonwealth Forests or Reserves, forested mountain and karst areas and known habitat for more than 30 federally listed threatened or endangered species. Only when the project enters the San Juan metropolitan area do the environmental impacts drop significantly. We believe that the Corps has sufficient control and responsibility to warrant Federal Review over the entire project from the EcoEléctrica terminal to the end of the pipeline, and therefore a Federal EIS for this project should be required.

#### **Alternatives Analysis:**

The applicant's alternative analysis does not include PREPA's original plan to build a new natural gas combined cycle power plant close to the existing Costa Sur facility, and to retro fit both Costa Sur and Aguirre power plants to use natural gas. This was the preferred alternative that EcoEléctrica was designing for as of August 2010. This alternative is not even mentioned in the applicant's alternatives analysis. We believe that this alternative is reasonable and practicable, as it is already permitted, would have lower environmental impacts, and would be more secure and easier to maintain than the currently proposed gas pipeline.

#### **Habitat Impacts:**

The project will cut through the southern karst, central mountains and northern karst regions of Puerto Rico. Many of these areas are currently isolated and not subject to developmental pressures. These include the Rio Abajo Commonwealth forest and the Vega Commonwealth forest, the DNER designated north karst Priority Conservation Area (PCA), the Caño Tiburones PCA, and the San Pedro Swamp Critical Wildlife Area.

The construction right of way (ROW) ranges from 100 to 150 feet, with additional area if needed with a final permanent ROW of 50 feet. The DEIS states that all vegetation within the construction ROW will be cut and that the permanent 50 foot ROW will be maintained as a no root zone with no woody vegetation to avoid deep roots from impacting the pipeline. There is no mention of how impacts to previously undisturbed forested areas will be compensated by this long corridor which creates an avenue for invasive and noxious species to enter into what are now unreachable areas of wildlife habitat. Nor is there any mention of exactly how this 92 mile 50 foot wide no root zone corridor will be maintained through karst and mountain topography.

The Service is concerned that the clearing of all vegetation in the 150 foot ROW as stated in the DEIS, in areas of highly erodible or unstable lands will cause excessive erosion and sedimentation that could adversely impact adjacent water bodies increasing sediment loads and sediment transport in these. This would impact water quality in many of the streams and rivers along the route. In addition there are some areas that are extremely steep in which trenching may not be possible; there is no discussion of how these areas will be traversed. However standard engineering techniques in karst areas are to make vertical cuts down to grade impacting a much larger area since the side slopes need to be set back.

Since the construction ROW varies in width, we believe that all project impacts should be based on the worst case scenario of a 150 foot wide ROW. Generalized drawings as seen on sheet 2 of the PN do not clearly represent what is written in the DEIS. The proposed permanent 50 foot ROW and its associated no root zone will have to be maintained by either mechanical or chemical means, implying that a permanent maintenance road with associated stream crossings will have to exist along most if not the entire ROW. This is not addressed anywhere in the documents. Utilizing the full estimate of ROW impacts should also help account for staging areas along the project route.

Karst by its nature tends to have void spaces in the rock matrix, sometimes these spaces lead directly to the aquifer, bypassing the natural filtration found in a porous aquifer. A frac-out in this type of terrain and geology could simply disappear. The discharge of drilling muds could result in the contamination of underground waters (stream, aquifers), and could adversely affect humans, unique subterranean fauna, and commerce.

#### **Endangered Species:**

The Service concurs with the Corps' list of determination that the proposed project may affect the following 32 listed species: Puerto Rican nightjar (*Caprimulgus noctitherus*); Puerto Rican parrot (*Amazona vittata vittata*); Puerto Rican crested toad (*Peltophryne lemur*); Puerto Rican boa (*Epicrates inornatus*); Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*); Puerto Rican broad-winged hawk (*Buteo platypterus brunnescens*); Puerto Rican plain pigeon (*Patagioenas inornata wetmorei*); and the listed plant species *Auerodendron pauciflorum*, palo de Ramón (*Banara vanderbiltii*), diablito de tres cuernos (*Buxus valhii*), *Cordia bellonis*, *Daphnopsis helleriana*, palo de rosa (*Ottoschulzia rhodoxylon*), *Myrcia paganii*, chupacallos (*Pleodendron macranthum*), *Shoepfia arenaria*, erubia (*Solanum drymophilum*), *Tectarea estremarana*, *Thelypteris inabonensis*, *Thelypteris verecunda*, *Thelypteris yaucoensis*, *Chamaecrista glandulosa*, cobana negra (*Stahlia monosperma*), *Polystichum calderoense*, nogal (*Juglans jamalcensis*), *Mitracarpus maxwelliae*, *Mitracarpus polycladus*, *Cordia rupicola*, *Catesbaea melanocarpa*, *Eugenia woodburyana*, bariaco (*Trichilia triacantha*), and St. Thomas prickly ash (*Zanthoxylum thomasianum*). No designated critical habitat is present along the proposed route for the project. In addition, the Service continues recommending surveys of the petitioned species coqui llanero (*Eleutherodactylus juanariveroi*) in the wetlands to be affected in Toa Baja.

In addition to the species listed above, the Corps also needs to consider and make a determination with regards to the endangered Antillean manatee (*Trichechus manatus*). As we mentioned earlier in this letter, when EcoEléctrica was originally authorized, formal consultation under Section 7 of the ESA was concluded for the species. Since that time, the Environmental Baseline of the area and the species has changed. Therefore the biological assessment should also include an analysis of any necessary changes to current facilities and operation of the EcoEléctrica LNG terminal need to be considered as this facility is subject to a previous Biological Opinion under Section 7 for the Antillean manatee (*Trichechus manatus*).

On October 18, 2010, the Service provided technical assistance to the Corps regarding the information included in the draft Biological Evaluation for the project. We concluded that the biological evaluation provided by the applicant failed to appropriately design survey methodologies to maximize detection of federally-listed plants, did not include site-specific habitat characterization, and did not include appropriate survey methods to collect data on listed species (e.g. survey methods, season of surveys, time of the day for surveys, frequency of surveys, size of sampling, site-specific habitat characterization). Therefore, the Service could not concur with the determinations of the biological evaluation since the determination of effects for listed species were not supported by the best information. We recommended that surveys for listed species be appropriately designed and conducted. We also recommended the development of a Biological Assessment since we considered the project a major construction activity under NEPA. On November 10, 2010, the Service provided additional technical assistance to the project applicant regarding the appropriate methods to surveys for listed species along the proposed route.

At present time, we continue to recommend that appropriate site-specific surveys be conducted along the proposed route to determine presence/absence of the species within the project area, the amount of suitable habitat and the behaviors to be affected by the project, and the site-specific measures to avoid or minimize possible adverse effects. Survey methodologies should be developed and surveys conducted by experienced and qualified personnel, and in close coordination with the Service. The Biological Assessment should include the results of such surveys.

Federal regulation at 50 CFR 402.12 provides guidance regarding Biological Assessments. A biological assessment shall evaluate the potential effects of the action on listed species and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action and is used in determining whether formal consultation or a conference is necessary. Be aware that based on the regulation, the biological assessment shall be completed before any contract for construction is entered into and before construction is begun (50 CFR 402.12(b)(2)). The regulation also describes the information should be considered for inclusion in the Biological Assessment (see 50 CFR 402.12(f)). The regulation recommends the following:

- (1) The results of an on-site inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally.
- (2) The views of recognized experts on the species at issue.
- (3) A review of the literature and other information.
- (4) An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies
- (5) An analysis of alternate actions considered by the Federal agency for the proposed action.

Based on the regulation at 50 CFR 402.12(i), the Federal agency or the designated non-Federal representative shall complete the biological assessment within 180 days after its initiation

(receipt of or concurrence with the species list) unless a different period of time is agreed to by the Service and the Federal agency. If a permit or license applicant is involved, the 180-day period may not be extended unless the agency provides the applicant, before the close of the 180-day period, with a written statement setting forth the estimated length of the proposed extension and the reasons why such an extension is necessary. Once the Service reviews the Biological Assessment and concurs in writing with the Corps's initiation letter, a biological opinion is provided to the Corps within 135 days.

#### **Impacts to Landowner Incentive Programs:**

The present project goes throughout properties under the Service's Partners for Fish and Wildlife Program (PFWP). We have identified that at least three properties under a current Conservation Agreement with the Service may be adversely affected by the proposed project: Hacienda Pellejas in Adjuntas, Hacienda Esperanza in Manatí, and the US Navy Radio Station in Toa Baja. Current efforts at these highly ecologically valued properties include restoration of forest, riparian habitat and restoration of wetland areas. The Service has invested close to \$180,000.00 of federal funds on restoration activities. There is no mention in the EIS or JPA of how the Service's investment in conservation with the land owners will be compensated. We recommend that the project is modified to avoid impacts to restoration areas.

#### **Wetland Impacts:**

Temporary wetland impacts in the JPA were calculated using a 50 foot width, even though the ROW is 150 feet. As stated above, we recommend that the 150 foot construction corridor be used to estimate temporary impacts.

The applicant states that all wetland impacts will be temporary. However the project envisions approximately 235 separate wetland and river crossings which could be permanently impacted by poor construction techniques or contractors may or may not remove all matting, excess fill, temporary fill or other ground disturbance from the area. This makes calculating wetland and habitat impacts difficult since impacts to wetlands and streams depend largely on the construction technique the contractor will use and does not take into account operation and maintenance of the pipeline.

The wetlands to be impacted include but are not limited to areas designated as Natural Reserves and/or Critical Wildlife Areas. The project would impact wetlands within the Cucharillas Marsh PCA, San Pedro Swamp PCA, Caño Tiburones Natural Reserve, and Hacienda la Esperanza Natural Reserve. These areas lie within the northern karst, an area known for its underground streams, springs and shallow water aquifer.

Directional drilling is being proposed to minimize impacts on larger rivers and streams, wetlands, roads and other areas. The process of directional drilling will consist of an initial bore, plus back reaming to enlarge the bore hole to the desired size of the pipeline. This involves the use of bentonite clay and other substances usually referred to as drilling mud, to lubricate and

stabilize the borehole. While bentonite is a naturally occurring substance and usually considered non toxic, micro particles of the clay can clog the gills of aquatic organisms. While there is a discussion regarding steps to take in the event of a frac-out, the Service is concerned with the use of this method in karst topography.

There will be multiple low order stream crossings in the mountainous areas. These streams form the headwaters for larger rivers and support native stream fauna. This marine derived fauna composed mainly of freshwater shrimp, crabs and gobies is diverse and sensitive to disturbance, increased turbidity during construction, alteration of the stream channel dimensions and future maintenance of the ROW can cause long term or permanent impacts to these important wildlife areas.

Directional drilling is also being proposed to avoid impacts to forested wetland areas. This includes an approximately one mile long crossing under the mangrove wetlands and the Rio Cocal in Toa Baja. However, all project drawings showing wetland crossings, show the 150 foot ROW and the permanent 50 foot no root zone. It is not clear if the 50 foot permanent ROW in forested wetlands could be used to access the pipeline in the future. If so, then this should be considered a permanent wetland impact. Because of the muck soils associated with some of these wetland types additional staging areas will be needed for the drill rig, pipe etc. There is no mention of how drilling mud will be managed, since there will be a need for sumps and other terrain altering modifications at the drill site to store drill muds.

#### **Mitigation:**

The jurisdictional determination by the applicant has not been verified by the Corps, yet the applicant is offering a .01 to 1 mitigation in the event that any compensatory mitigation measures are needed. We believe that the proposed 4 acres of compensatory mitigation for an estimated 369 acres of "temporary" wetland impacts is completely inappropriate and unacceptable. The current proposal does not take into consideration the temporal loss of functions and values of the wetlands to be impacted as well as possible contractor errors. In addition, the impacted wetland areas may be subject to habitat alteration by fast growing invasive species such as cattails. These plants readily invade disturbed wetland areas and out compete with more beneficial wetland plants.

The applicant should develop an adequate mitigation plan after the appropriate efforts have been at avoidance and minimization. In addition we recommend that the Corps impose a performance bond to assure proper compliance with the mitigation and minimization measures.

The area selected for the mitigation of the Gasoducto del Sur was not avoided by this new project even after repeated requests from the Service during the technical assistance process to avoid impacting the area. This area was selected as mitigation because of the amount of undisturbed, quality habitat available. These impacts to previously agreed upon mitigation needs to be carefully analyzed by the Corps. Compliance with the previous permit conditions should

be assured prior to considering this new permit action. Impacts to the established mitigation area for the Gasoducto del Sur shall be avoided.

**Summary and Conclusion:**

This project is one of the largest infrastructure projects being undertaken in Puerto Rico in decades, the expansion of a major LNG facility and a corridor of permanent and temporary impacts along the 92 mile route will cross karst, mountain, and coastal habitats, a number of these recognized in the Puerto Rico Comprehensive Wildlife Conservation Strategy as Critical Wildlife Areas important to conservation. The project also may affect suitable habitat of more than thirty federally-listed species and one petitioned species. Impacts to fauna and flora are not well documented and there remain several concerns regarding how sensitive areas will be maintained after construction.

The fish and wildlife resources within and adjacent to the proposed pipeline route, are numerous; migratory bird, amphidromous fish, endangered species, and their habitats including -wetlands. The karst areas of Puerto Rico are unique geological and ecological features in the United States. The karst areas are a recognized aquifer recharge zone and haystack karst hills act as a refugia for many native plant species. Because of the extent of potential cumulative impacts to numerous streams, upland habitat and wetlands, plus the lack of information addressing alternatives, minimization, and the inadequate proposal for compensation we believe that in accordance with Part IV.3 (a) of the 1992 404 (q) MOA between our agencies, we are concerned that the project, as currently proposed, may impact aquatic resources of national importance. We recommend that the Corps not issue a permit for this action as currently proposed. As per the 404 MOA, the Service requests to be informed of any meetings with the applicant and the Corps or any additional documentation submitted to the Corps, regarding this permit action.

If you have any questions please contact Marelisa Rivera at 787 851 7297 x 206.

Sincerely,

Edwin Mufiz  
Field Supervisor

Fhl/mtr

Enclosures

cc:  
DNER, San Juan  
EQB, San Juan

Mr. Castillo

9

PRPB, Land Use Division, San Juan

PRPB, CZM, San Juan

EPA, San Juan

EPA, Dan Montella, New York

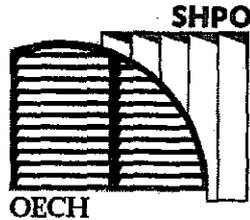
COE, Regulatory, Jacksonville

FWS, Atlanta

FERC, DC

OFICINA ESTATAL DE  
CONSERVACIÓN HISTÓRICA  
OFICINA DEL GOBERNADOR

STATE HISTORIC  
PRESERVATION OFFICE  
OFFICE OF THE GOVERNOR



December 10, 2010

Eng. Sindulfo Castillo  
US Army Corps of Engineers  
Regulatory Section  
400 Fernández Juncos Avenue  
San Juan, Puerto Rico 00901-3299

**SHPO 08-03-10-01 VIA VERDE NATURAL PIPE LINE PROJECT,  
ISLANDWIDE, PUERTO RICO [SAJ-2010-02881 (IP-EWG)]**

Dear Engineer Castillo:

We acknowledge receipt of the Public Notice regarding the above referenced project. We would like to inform you that this project had been previously reviewed by SHPO personnel and our comments presented in our letter dated September 17, 2010 (copy enclosed) remain in effect.

If you have any questions regarding this matter, please contact Miguel Bonini, Archaeologist, at (787) 721-3737 or [mbonini@prshpo.gobierno.pr](mailto:mbonini@prshpo.gobierno.pr).

Sincerely,

A handwritten signature in cursive script, appearing to read "Carlos A. Rubio Cancela".

Carlos A. Rubio Cancela, Architect  
State Historic Preservation Officer

CARC/BRS/MB/jvr

Enclosure

December 13, 2010

Edgar W. García  
Department of Defense  
Jacksonville District Corps of Engineers

Dear Mr. García:

The government of Puerto Rico and the Puerto Rico Electric Power Authority (PREPA) proposed gas pipeline from Peñuelas through the mountain central region and along the north of the Island. They presented the Environmental Impact Statement (EIS) to the Department of Natural and Environmental Resources and had public hearings. All these processes have been forced and accelerated without taking in considerations what the specialists, engineers, and community group.

As a scientist and a landscape ecologist I can say that the gas pipeline project (Via Verde) has been evaluated without scientific rigor. The errors and omissions through the EIS are unacceptable from a scientific perspective. In addition to all errors in the document my major concern is the lack of analysis of ecosystem deterioration and destruction, especially the connectivity of systems. Some species that will be affected are listed, however these species by themselves do not tell us an accurate information about the whole system. The EIS is not a serious analysis about the effects of the construction and maintenance of the pipeline over the natural resources from an ecosystem perspective. The trees, birds, amphibians and other ecosystems components do not survive isolated by themselves. On the contrary they survive in an interdependent system that needs to be connected.

The EIS do not contemplate the connectivity of the ecosystem, the disruption of biochemical process (especially in wetlands), the creation of new forest edges that may result in new opportunities for opportunistic species and diseases, and species with invasive behavior that could be detrimental for the ecosystem. The pipeline represents a barrier for dispersion, movement, and migration of small species, promotes habitat fragmentation that may result in inbreeding, and contributes to the homogenization of the genetic diversity inter and intra-species.

I request the Corps of Engineers the immediate disapproval of the permit SAJ-2010-02881 (IP-EWG) requested by PREPA for the gas pipeline project (strategically and incorrectly known as Via Verde). In addition I demand the Corps of Engineers a deep, responsible, clear, and scientific evaluation of the project with public hearings.

As a scientist is my responsibility to use my knowledge and experience to serve my country, Puerto Rico. STOP THE LIE OF VIA VERDE AND DO NOT BE PARTICIPANT OF THE DESTRUCTION OF TROPICAL ECOSYSTEMS.

Best Regards,



Johanna Delgado Acevedo, Ph.D.



# United States Department of the Interior



## FISH & WILDLIFE SERVICE

### Boqueron Field Office

Carr. 301, KM 5.1, Bo. Corozo

P.O. Box 491

Boqueron, PR 00622

DEC 15 2010

Col. Alfred A. Pantano, Jr.  
District Commander  
Jacksonville District Corps of Engineers  
701 San Marco Boulevard.  
Jacksonville, FL 32207-0019

Re: SAJ 2010-02881 (IP-EWG), Via Verde  
Pipeline Project.

Dear Col. Pantano:

The U.S. Fish and Wildlife Service (the Service) has received a copy of the above referenced Public Notice (PN) dated November 19, 2010, for the construction of a natural gas pipeline from EcoEléctrica to the PR Electric Power Authority (PREPA) power plants on the north coast of Puerto Rico. The proposed project has been publicly named by the proponent as Via Verde. Our comments are issued in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et. seq.*) and the Endangered Species Act (ESA) (16 U.S.C. 1531 *et. seq.* as amended).

The applicant is requesting a permit to construct an approximately 92-mile-long pipeline covering about 1,672 acres, crossing 235 rivers and covering 369 acres of jurisdictional wetlands. The Caribbean Ecological Services Field Office has been involved in providing technical assistance to PREPA and its consultants on the current proposal. We have provided preliminary comments to the Corps in October 2010, based on the information submitted with the applicant's Joint Permit Application. We also provided technical assistance to the applicant regarding appropriate methodologies to conduct surveys for listed species.

The Service supports PREPA's efforts toward reducing Puerto Rico's dependence on fossil oils and encourages the Applicant to look for alternate energy sources for Puerto Rico. In 2006, the Service issued an Incidental Take Permit to WindMar RE for take anticipated during the construction and operation of a proposed wind farm on federally-listed species. For this project, WindMar appropriately minimized possible adverse effects and developed a comprehensive mitigation plan for the affected species. In 2008, the Service consulted with the Corps on the Gasoducto del Sur project. For this last project, the Service provided guidance and technical assistance to the Applicant for 2 years to minimize possible effects of the project on the endangered Puerto Rican nightjar and avoid effects to two listed plant species. The conservation

plan for the project was formalized through a Memorandum of Agreement between the Applicant and the Puerto Rico Department of Natural and Environmental Resources. At the present time, the Service is reviewing several other energy projects in Puerto Rico.

The following comments and recommendations are based on the information provided in the PN and information we have in our files.

**Purpose of the Project, Single and Complete Project, Federal Involvement and compliance with the National Environmental Policy Act (NEPA)**

The public notice states that the overall proposed purpose of the project is to deliver an alternate fuel source to three existing electric power generating facilities located in Arecibo, Toa Baja and Palo Seco operated by PREPA. EcoEléctrica was the first and remains the only source of natural gas in Puerto Rico. We believe the proposal may not include all elements necessary to meet this purpose.

Based on the information in our files and recent discussions with EcoEléctrica's consultant (see Enclosure 1), it is our understanding that the only authorized source of natural gas in Puerto Rico needs to be upgraded in order to supply the additional gas needed for the proposed pipeline. In May 1996, the Federal Energy Regulatory Commission (FERC) authorized EcoEléctrica to construct, and operate a liquefied natural gas (LNG) import terminal in Peñuelas, Puerto Rico. Environmental Condition No.11 of the May 1996 Order specified that "EcoEléctrica shall commence construction on its LNG facilities within 3 years of the date of this Order, or file a motion to extend the deadline, with the specific reasons why additional time is necessary." Therefore, it appears that authorization for the construction of the second authorized storage tank and four of the six authorized vaporizers has lapsed, and for EcoEléctrica to build another LNG storage tank, or other related facilities, it must obtain prior FERC authorization.<sup>1</sup>

In its July 19, 2010, semiannual report<sup>2</sup> to FERC (see Enclosure 2), EcoEléctrica indicated that it is considering construction of the second LNG Storage tank to supply natural gas fuel to the Commonwealth for a future expansion. We note that in this report, EcoEléctrica only addresses the Terminal Modification project for delivering natural gas to Costa Sur as previously permitted by FERC. By letter dated November 15, 2010, EcoEléctrica indicated to the Service that the current modifications to their facilities are not part of PREPA's Via Verde pipeline project, and that they would need to request FERC's approval for any physical or operational modifications that might be necessary in their facilities to serve the newly proposed pipeline project.

The PN fails to discuss necessary changes to EcoEléctrica's currently authorized facilities and operations to supply natural gas to PREPA's three facilities in the north. The Service issued a Biological Opinion for the original development of the EcoEléctrica facility, and modifications

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<sup>1</sup> FERC, Order Amending Authorization Under Section 3 of the Natural Gas Act, April 16, 2009, Footnote #3.

<sup>2</sup> EcoElectrica, L.P. LNG Import Terminal and Cogeneration Project Docket Number CP-95-35-000, Semi Annual Report LNG Operating Report, July 19, 2010.

to this facility would require a reinitiation of consultation under Section 7 of the Endangered Species Act, which we discuss later in this letter.

Because the Via Verde pipeline would require additional storage and modifications to the EcoEléctrica terminal, these projects are interrelated and should be viewed as one single and complete project. Should EcoEléctrica fail to obtain FERC authorization for the physical and/or operational modifications that might be necessary to serve the pipeline, the Corps would be permitting a fragment of a project that could not fulfill the stated purpose and need and would have irreversible resource impacts.

In addition, this project should be evaluated as a major construction activity since it would affect about 1,672 acres of land, including about 369 acres of wetlands, several Commonwealth Forests or Reserves, forested mountain and karst areas, and known habitat for more than 30 federally listed threatened or endangered species. Only when the project enters the San Juan metropolitan area do the environmental impacts drop significantly. We believe that the Corps has sufficient control and responsibility to warrant Federal Review over the entire project from the EcoEléctrica terminal to the end of the pipeline, and therefore a Federal EIS for this project is warranted.

### **Alternatives Analysis**

The applicant's alternative analysis does not include PREPA's original plan to build a new natural gas combined cycle power plant close to the existing Costa Sur facility, and to retro fit both Costa Sur and Aguirre power plants to use natural gas. This was the applicant's preferred alternative in the past and now is not mentioned in the applicant's alternatives analysis. We believe that this alternative is reasonable and practicable, as it is already permitted, would have lower environmental impacts, and would be more secure and easier to maintain than the currently proposed gas pipeline.

### **Habitat Impacts**

The project will cut through the southern karst region, central mountains, and northern karst region of Puerto Rico. Many portions of the alignment are currently isolated and not subject to developmental pressures. These include the Rio Abajo Commonwealth forest and the Vega Commonwealth forest, the DNER designated north karst Priority Conservation Area (PCA), the Caño Tiburones PCA, and the San Pedro Swamp Critical Wildlife Area.

The construction right of way (ROW) width ranges from 100 to 150 feet, and more if needed, with a final permanent ROW of 50 feet. The "Declaración de Impacto Ambiental Preliminar"(DIA-P) states that all vegetation within the construction ROW will be cut and that the permanent 50 foot ROW will be maintained as a no-root zone with no woody vegetation. The DIA-P does not propose mitigation for impacts to previously undisturbed forested areas in this long corridor that will create an avenue for invasive and noxious species to enter previously

isolated areas of wildlife habitat. The DIA-P also does not describe methods for maintaining a 92-mile, 50-foot-wide no-root zone corridor through karst and mountainous topography.

The Service is concerned that the clearing of all vegetation in the 150 foot ROW as stated in the DIA-P, in areas of highly erodible or unstable lands would cause excessive erosion that could impair water quality and channel stability in streams and rivers along the route. Trenching is likely not feasible in many steep areas within the corridor, yet DIA-P includes no discussion of how these areas will be traversed.

Since the construction ROW varies in width, we believe that all project impacts should be based on the worst-case scenario of a 150-foot wide ROW. Generalized drawings as seen on sheet 2 of the PN do not clearly represent what is written in the DIA-P. The proposed permanent 50 foot ROW and its associated no root zone will require either mechanical or chemical maintenance, which implies construction of a permanent maintenance road with associated stream crossings along most of, if not the entire, ROW length. This is not addressed anywhere in the documents. Utilizing the full estimate of ROW impacts should also help account for staging areas along the project route.

The Service is concerned about the possible impacts of directional drilling in the karst portions of the pipeline corridor. Voids in the rock matrix may lead directly to the aquifer, and a "frac-out" of drilling muds in this type of terrain and geology could contaminate underground waters and adversely affect human health, unique subterranean fauna, and commerce.

### Endangered Species

The Service concurs with the Corps' determination that the proposed project may affect the following 32 listed species: Puerto Rican nightjar (*Caprimulgus noctitherus*); Puerto Rican parrot (*Amazona vittata vittata*); Puerto Rican crested toad (*Peltophryne lemur*); Puerto Rican boa (*Epicrateres inornatus*); Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*); Puerto Rican broad-winged hawk (*Buteo platypterus brunnescens*); Puerto Rican plain pigeon (*Patagioenas inornata wetmorei*); and the listed plant species *Auerodendron pauciflorum*, palo de Ramón (*Banara vanderbiltii*), diablito de tres cuernos (*Buxus valhii*), *Cordia bellonis*, *Daphnopsis helleriana*, palo de rosa (*Ottoschulzia rhodoxylon*), *Myrcia paganii*, chupacallos (*Pleodendron macranthum*), *Shoepfia arenaria*, erubia (*Solanum drymophilum*), *Tectarea estremarana*, *Thelypteris inabonensis*, *Thelypteris verecunda*, *Thelypteris yaucoensis*, *Chamaecrista glandulosa*, cobana negra (*Stahlia monosperma*), *Polystichum calderoense*, nogal (*Juglans jamaicensis*), *Mitracarpus maxwelliae*, *Mitracarpus polycladus*, *Cordia rupicola*, *Catesbaea melanocarpa*, *Eugenia woodburyana*, bariaco (*Trichilia triacantha*), and St. Thomas prickly ash (*Zanthoxylum thomasianum*). No designated critical habitat is present along the proposed route for the project. The Service also continues to recommend surveys of the petitioned species coqui llanero (*Eleutherodactylus juanariveroi*) where the project crosses wetlands in Toa Baja.

In addition to the species listed above, the Corps also needs to make an effect determination with regards to the endangered Antillean manatee (*Trichechus manatus*). As we mentioned earlier in this letter, when EcoEléctrica was originally authorized, formal consultation under Section 7 of the ESA was concluded for the species. Since that time, the Environmental Baseline has changed; therefore, the Corps' biological assessment should also include an analysis of any necessary changes to current facilities and/or operation of the EcoEléctrica LNG terminal needed for the Via Verde project.

On October 18, 2010, the Service provided technical assistance to the Corps regarding the information included in the draft Biological Evaluation for the project. We concluded that the biological evaluation provided by the applicant did not rely upon survey methodologies that maximized detection probabilities for federally-listed species and did not include site-specific habitat characterization. Therefore, the Service could not concur with the determinations of the biological evaluation. We recommended that surveys for listed species be appropriately designed and conducted. We also recommended the development of a Biological Assessment, since we considered the project a major construction activity under NEPA. On November 10, 2010, December 2, 2010 and December 8, 2010, the Service provided additional technical assistance to the project applicant regarding appropriate survey methods for listed species along the proposed route.

At the present time, we continue to recommend that appropriate site-specific surveys be conducted along the proposed route to determine presence/absence of listed species within the project area and the amount of suitable habitat. Survey methodologies should be developed and surveys conducted by experienced and qualified personnel, and in close coordination with the Service. The Biological Assessment should include the results of such surveys and should be part of the Federal EIS. The Biological Assessment should consider the behaviors to be affected by the project, and proposed site-specific measures to avoid or minimize possible adverse effects.

Federal regulations at 50 CFR 402.12 provide guidance regarding Biological Assessments. A biological assessment shall evaluate the potential effects of the action on listed species and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action and is used in determining whether formal consultation or a conference is necessary. The Biological Assessment shall be completed before any contract for construction is let, and before construction is begun (50 CFR 402.12(b)(2)). The regulation also describes the information should be considered for inclusion in the Biological Assessment (see 50 CFR 402.12(f)). The regulation recommends the following:

- (1) The results of an on-site inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally.
- (2) The views of recognized experts on the species at issue.
- (3) A review of the literature and other information.
- (4) An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies

- (5) An analysis of alternate actions considered by the Federal agency for the proposed action.

The Federal agency or the designated non-Federal representative shall complete the Biological Assessment within 180 days after its initiation (receipt of or concurrence with the species list), unless a different period of time is agreed to by the Service and the Federal agency (50 CFR 402.12(i)). If a permit or license applicant is involved, the 180-day period may not be extended unless the agency provides the applicant, before the close of the 180-day period, with a written statement setting forth the estimated length of the proposed extension and the reasons why such an extension is necessary. Once the Service reviews the Biological Assessment and concurs in writing with the Corps's initiation letter, a biological opinion is provided to the Corps within 135 days.

We would like to provide the following technical assistance for the planning and implementation of the surveys to inform the Biological Assessment.

#### **Habitat characterization for the Puerto Rican sharp-shinned hawk and Puerto Rican broad-winged hawk**

We agree with the Applicant's approach of characterizing the suitable breeding habitat for the endangered raptors utilizing expert's opinion, maps of previously known breeding areas or home ranges, data from previous studies and published references. We recommend compiling these data within a digital Geographic Information System (GIS). We would like to meet with the species experts and discuss during a working meeting the areas to be included in the analysis to ensure that all available information is considered for the effects determination. We also would like to have the opportunity to visit the areas with contracted personnel. If surveys to determine breeding territories are not conducted, suitable breeding habitat for the species should be avoided. The alternative of avoiding impacts to potential nesting trees and tree species is not protective to the species if the breeding territory is not identified. We do not concur with the Applicant that it is possible to avoid impacts to breeding habitat and breeding behavior without first identifying the breeding territory. Under the assumption that suitable habitat is occupied for breeding, possible take as defined by the ESA should be anticipated. It is important to determine the number of breeding territories that would be affected by the project construction and operation in order to evaluate in a Biological Opinion whether the project jeopardizes the continued existence of the species.

#### **Potential presence of endangered plants**

We do not agree with the Applicant's proposal of surveying at intervals of 100 m within suitable habitat. Interval sampling and transects is appropriate for diversity inventories, but not to detect presence of listed plant species, due to their patchy distribution and similarity of appearance with other common species. We recommend that personnel trained to recognize the listed species systematically search all areas of suitable habitat within the project footprint. We propose a working meeting between our staff and the Applicant's contracted personnel to share information

and delineate together the survey areas. Once the areas are designated, we propose combined site visits to determine the suitability of the sampling approach for each area. The Service requests that if listed species are identified or found, duplicates of herbarium specimens are provided to our office for reference purposes.

#### **Potential presence of coqui llanero in Toa Baja**

We agree with PREPA's approach to search for this species. We would like to have the opportunity to visit the ROW of the proposed project within other wetland areas in northern Puerto Rico to identify whether habitat suitable for the coqui llanero is present in other areas of the route.

#### **Potential presence of the Puerto Rican crested toad**

We agree with PREPA's approach to search for the Puerto Rican crested toad in both the southern and northern limestone forest areas. We recommend that before surveys are initiated, survey areas are discussed and delineated between our staff and contracted species experts. We would like to also have the opportunity to visit the areas with contracted personnel. As we mentioned in our letter dated October 18, 2010, haystack hills between Manatí and Bayamón harbor suitable habitat for the Puerto Rican crested toad. These areas should be included in the survey plans.

#### **Puerto Rican nightjar**

We continue to recommend intensive surveys during the breeding season for the endangered Puerto Rican nightjar to determine the amount of suitable habitat and the number of singing males or territories that the project may affect. This information is necessary to determine direct and indirect effects to the species, and to formulate measures to avoid and minimize adverse effects during construction and operations.

#### **Puerto Rican boa**

The Applicant should delineate and quantify the amount of suitable boa habitat within the project area. The applicant should first consider alternatives to avoid these areas and develop conservation measures to minimize possible adverse effects where avoidance is not possible. Once possible effects are appropriately minimized, the Service would work with the Applicant to develop a search and rescue protocol for relocating individual animals to suitable habitat outside of the project area prior to project construction.

#### **Impacts to Landowner Incentive Programs**

The present project goes throughout properties under the Service's Partners for Fish and Wildlife Program (PFWP). We have identified that at least three properties under a current Conservation Agreement with the Service that may be adversely affected by the proposed project: Hacienda

Pellejas in Adjuntas, Hacienda Esperanza in Manatí, and the US Navy Radio Station in Toa Baja. Current efforts at these highly ecologically valued properties include restoration of forest, riparian habitat and restoration of wetland areas. The Service has invested close to \$180,000 of federal funds on these restoration activities, and we recommend modifying the project to avoid these areas. If avoidance is not practicable, the conservation investment in these properties must be compensated with comparable restoration efforts on other similar properties.

### **Wetland Impacts**

Temporary wetland impacts in the Joint Permit Application were calculated using a 50-foot width, even though the ROW width is 150 feet. As stated above, we recommend using a 150-foot construction corridor width to estimate temporary impacts.

The Applicant states that all wetland impacts will be temporary. Because the project involves approximately 235 separate wetland and river crossings, poor construction techniques on even a fraction of these, such as failing to remove all matting or excess fill material, or to properly grade and revegetate disturbed areas, could easily result in substantial permanent impacts.. This makes calculating wetland and habitat impacts difficult since impacts to wetlands and streams depend largely on the construction technique the contractor will use and does not take into account operation and maintenance of the pipeline.

Some of the wetlands the project may affect are within areas designated by the Commonwealth of Puerto Rico as Natural Reserves and Critical Wildlife Areas, including: the Cucharillas Marsh PCA, San Pedro Swamp PCA, Caño Tiburones Natural Reserve, and Hacienda la Esperanza Natural Reserve. These areas lie within the northern karst, an area known for its underground streams, springs and shallow aquifer.

Directional drilling is proposed to minimize impacts on larger rivers and streams, wetlands, roads and other areas, which involves injecting drilling mud (bentonite clay and other substances) under pressure into the bore hole. A "frac-out" occurs when the drilling mud escapes the bore hole, and if it enters waters supporting aquatic life, micro particles of the clay can clog the gills of aquatic organisms. While there is a discussion regarding steps to take in the event of a frac-out, the Service is very concerned with the use of this method in karst topography, where voids in the substrate are common and often connected to ground- and surface-water systems.

The pipeline route crosses multiple low-order streams in mountainous areas. These streams are the headwaters of larger rivers and support a marine-derived native stream fauna composed of several species of freshwater shrimp, crabs and gobies. This diverse community is sensitive to disturbance, increased turbidity, and changes in channel morphology. Excessive erosion and sedimentation during construction or maintenance of the ROW could cause long-term or permanent impacts to these important wildlife areas.

Directional drilling is also proposed to avoid impacts to forested wetland areas. This includes an approximately 1-mile long crossing under the mangrove wetlands and the Rio Cocal in Toa Baja. However, all project drawings of wetland crossings show the 150-foot ROW and the permanent 50-foot no-root zone. It is not clear whether the 50-foot permanent ROW in forested wetlands could be used to access the pipeline in the future. If so, then this should be considered a permanent wetland impact. Because of the muck soils associated with some of these wetland types, additional staging areas will be needed for the drill rig, pipe, etc. There is no mention of how drilling mud will be managed, since there will be a need for sumps and other ground disturbances at the drill site to store drill muds.

### **Mitigation**

The Corps has not yet verified the Applicant's jurisdictional determinations. The Applicant proposes a .01-to-1 compensatory mitigation ratio. This would amount to 4 acres of compensatory mitigation for an estimated 369 acres of "temporary" wetland impacts, which is inappropriate and unacceptable to the Service. A much higher ratio is necessary to compensate for the: 1) temporary loss of wetlands functions and values; 2) likely permanent loss of functions and values due to contractor errors; and 3) permanent habitat alteration by species such as cattails that rapidly invade disturbed wetland areas and out compete more beneficial wetland plants.

The Applicant should develop an adequate mitigation plan after the appropriate efforts have been implemented for avoidance and minimization. In addition we recommend that the Corps impose a performance bond to assure proper compliance with the mitigation and minimization measures.

The project area includes the mitigation area for the Gasoducto del Sur project, despite our repeated requests during the technical assistance process to avoid this area. This area was selected as a mitigation area to preserve its large amount of undisturbed, quality habitat. The Corps needs to assure compliance with previous permit conditions as part of considering this new permit action.

### **Summary and Conclusion**

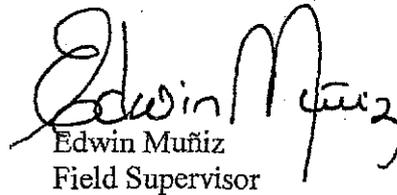
This project is one of the largest infrastructure projects proposed in Puerto Rico in decades. Its 92-mile corridor of temporary and permanent impacts would cross karst, mountain, and coastal habitats, a number of which are recognized in the Puerto Rico Comprehensive Wildlife Conservation Strategy as Critical Wildlife Areas important to conservation. The project could affect habitat for more than thirty federally-listed species and one species for which we are considering a petition for listing. Impacts to fauna and flora are not well documented, and maintenance for sensitive areas after construction is not well specified.

A broad spectrum of fish and wildlife resources occur within and adjacent to the proposed pipeline route, including migratory birds, amphidromous fish, endangered species, and wetlands. The karst areas of Puerto Rico are unique geological and ecological features in the United States,

and serve as an important aquifer recharge zone for the island. The haystack karst hills are a refugium for many native plant species. The project could adversely affect numerous streams and wetlands, and the Applicant's proposal does not appropriately consider alternatives to avoid, and measures to minimize, such impacts. The proposed 0.01-to-1 compensatory mitigation ratio is inadequate. Therefore, we are advising you, in accordance with part IV 3(a) of the 1992 Memorandum of Agreement between our agencies on the elevation of permit decisions under section 404(q) of the Clean Water Act, that the proposed project may result in substantial and unacceptable impacts to aquatic resources of national importance. We recommend that the Corps deny a permit for this action as currently proposed. The Service requests to be informed of any meetings with the applicant and the Corps or any additional documentation submitted to the Corps, regarding this permit action.

If you have any questions please contact Marelisa Rivera at 787 851 7297 x 206.

Sincerely,

  
Edwin Mufiz  
Field Supervisor

Fhl/mtr

Enclosures

cc:

DNER, San Juan  
EQB, San Juan  
PRPB, Land Use Division, San Juan  
PRPB, CZM, San Juan  
EPA, San Juan  
EPA, Dan Montella, New York  
COE, Regulatory, San Juan  
FWS, Atlanta  
FERC, DC



December 16, 2010

Mr. Edgar W. García  
Department of Defense  
Jacksonville District Corps of Engineers  
Antilles Office  
400 Fernández Juncos Av.  
San Juan, Puerto Rico 00901-3299

**RE: Response to Public Notice for the Vía Verde natural gas pipe line project (Permit Application No. SAJ- 2010-02881 (IP-EWG))**

Dear Mr. García:

In response to the Public Notice dated November 19, 2010, concerning the above referenced project, I hereby present my comments and concerns with the archaeological Phase 1A report that is included in the DIA-P submitted by the proponent. This report presents major inadequacies, which clearly constrain its use by the COE for the assessment of the effects that this undertaking will have of historic properties that are listed or potentially eligible for inclusion in the National Register of Historic Places, as required in Section 106 of the National Historic Preservation Act of 1966, as amended. My major concerns with said archaeological assessment are listed below:

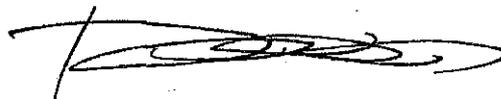
- The inventory of archaeological sites included in the report presents major omissions, which limit its use for addressing the archaeological sensitivity of the area of potential effects of this project. Examples of these omissions include the Adjuntas 1 site documented by Irving Rouse more than half a century ago, located in the Pellejas Valley, which is crosscut by the right of way of this project. Additional examples include the archaeological Phase II studies conducted by Goodwin and Associates in the Río Cocal 1 site located in NSGA Sabana Seca published in 2003 and the Phase II and mitigation research conducted by SEARCH Inc. on behalf of the COE in the AR-38 and AR-39 sites in Arecibo published in 2008, both of which lie on the immediate vicinity of the area of potential effects of this project. Therefore, **a thorough revision of the inventory of historic properties, academic literature, and contract reports is warranted for evaluating with higher resolution the archaeological sensitivity of the area of potential effects of this project.**
- **The methods used for the walkover survey that were implemented are deficient.** No systematic protocol was established for the archaeological reconnaissance, which was basically conducted in a random fashion. According to the limited methodological information provided in the report, the walkover survey was undertaken mostly along a single transect vector, thus limiting the potential of this prospection for identifying resources across the full lateral extent of the area of potential effects of the project (150 feet). Furthermore, no criteria for predictive modeling, a basic tool in archaeological large-scale surveying, were ever devised, which drastically limits the capability of the implemented survey to detect additional sites in the right of way of the project.

- Of major concern is the fact that the archaeological survey did not include considerable portions of the proposed undertaking. **In fact, of the 92 miles of the right of way of this project, the archaeological surface reconnaissance only covered 27.6 miles (30 percent), drastically limiting the ability of all interested parties to determine the effects that this activity might have on historic properties yet undiscovered.** For instance, only .6 miles were prospected out of the initial 20 miles of the project, leaving unsurveyed all terrains from PR-2 in Peñuelas to the Pellejas Valley in Adjuntas because, according to the archaeologists, the area was "inaccessible" (pp. 253). Other areas that were not surveyed include the tracts between: miles 21 to 24.7 (pp. 253-254), miles 26 to 42.9 (pp. 255), miles 54 to 59 (see Figure 46 in pp. 261), miles 63 to 65 (pp. 263-264), miles 67.3 to 67.6 (pp. 267), miles 68 a 70.1 (pp. 267), miles 72 to 75 (pp. 268), miles 77 to 78 (pp. 269-270), miles 80 to 82 (pp. 270), miles 83 to 85 (pp. 272) and miles 85 to 92 (pp. 273). **Thus, in order for the COE to have the necessary criteria for evaluating this project, a full surface reconnaissance of the rest of the areas (the unsurveyed 70%) to be impacted by this project needs to be conducted.**
- The aforementioned situation is worsened when we consider that **no archaeological (or environmental) assessments were made in the areas where the access roads that need to be established for moving the heavy machinery and other equipment that will be used in the installation of the pipe and the delimitation of its right of way are to be located.** Furthermore, no additional work was conducted on the staging areas that need to be established for the horizontal directional drilling, which tend to be larger in horizontal extent than the rest of the areas of the right of way of the project.
- Another major concern is that, at present, not only has the surface reconnaissance not covered the full extent of the area to be directly or potentially impacted by this project, but also that **no subsurface testing program has been implemented in order to detect additional historic properties.** The need for the implementation of a systematic subsurface testing program along the proposed route of the right of way of the project, as well as of the access roads for transporting equipment and heavy machinery and its staging areas is vital in order to get a detailed panorama of the historic properties that are to be affected by this undertaking. Only then will the COE be able to make an informed evaluation of the alternatives for mitigating the adverse effects that it might have on the cultural properties that are to be impacted by this project.

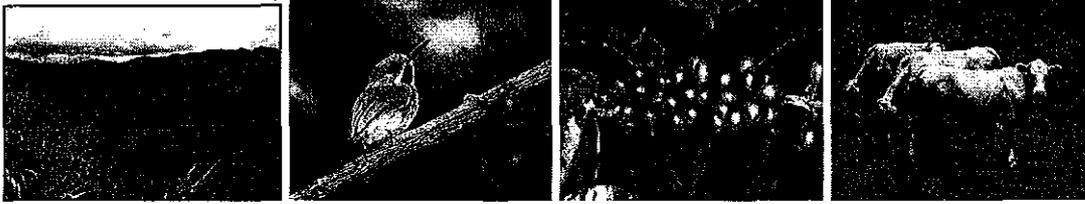
As an archaeologist with two decades of experience in the field and as a former Specialist in Historic Properties for the PRSHPO, it is my hope that the concerns hereby presented are considered by the COE for assessing the potential effects that this undertaking will have on historic properties.

If you have any further questions or concerns, do not hesitate to contact me at (787)207-7318 or at [reniel.rodriguez@upr.edu](mailto:reniel.rodriguez@upr.edu).

Cordially,



Reniel Rodríguez Ramos, Ph.D.



16 of December of 2010

Mr. Sindulfo Castillo  
Chief Regulatory Section  
US Army Corps of Engineers Antilles Office  
400 Fernández Juncos Ave.  
San Juan PR 00901-3299  
[sindulfo.castillo@usace.army.mil](mailto:sindulfo.castillo@usace.army.mil)

REF: Comments Via Verde Project AEE #2010-62-0210-JGE-T

Dear Chief Castillo:

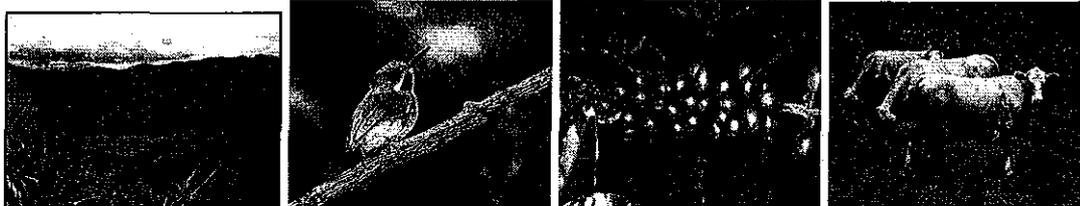
Ganaderia Don Juan Santiago Nieves, Inc (GDJSN) has been informed by the Autoridad de Energia Electrica (AEE), Commonwealth of Puerto Rico, of their intention to construct the Via Verde Project through our property known as Hacienda Central Pellejas (HCP) in Adjuntas, PR. These properties are identified by their catastral number: 240-000-005-04-901, 240-000-004-14, 240-000-005-04, and 240-000-009-39.

Hacienda Central Pellejas (HCP), referred as the “Jewel of the Mountains”, is an ecological, agricultural, hydrological, scenic, and historical property certified by the Department of the Interior (DOI), the US Fish and Wildlife Service (FWS), the Department of Agriculture Commonwealth of PR, the US Forest Service, and the Department of Natural Resources of the Commonwealth of Puerto Rico (DRNA).

The ‘Jewel of the Mountains’ is rich in history, from being the last settlement of General Roy Stone during the Hispanic American war in 1898, to a prosperous sugar cane hacienda from the 1920s to 1960s, to a 1,000 certified charolais cattle ranch during the 1980’s, and the film site of the movie Flight of Fancy in 1995. HCP is devoted primarily to shade grown 100% Arabica coffee and a working charolais/red brangus cattle ranch.

Since 2001, Dr. Luis J. Ramos Santiago, President of Ganaderia Don Juan Santiago Nieves, Inc. (agricultor bonafide) together with the United States Department of Agriculture (USDA-NRCS), the Forest Service (USFS), the Department of the Interior (DOI), the Fish and Wildlife Service (FWS), the International Institute of Tropical Forestry (IITF), the Department of Natural Resources of the Commonwealth of Puerto Rico (DRNA), and Puerto Rico’s Department of Agriculture and Tourism Company has worked in partnership for the protection, conservation, restoration and enhancement of the natural resources within the hacienda.

*Hacienda Central Pellejas...a jewel in the mountains of Puerto Rico.*



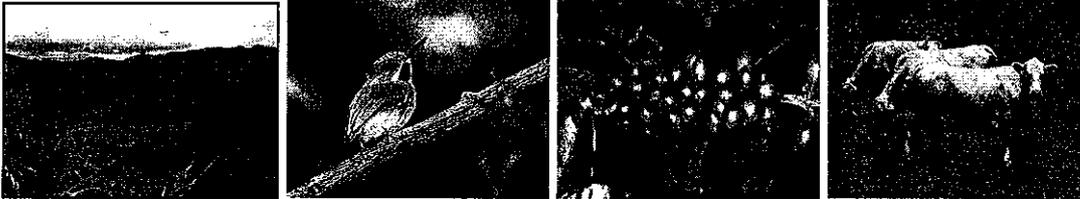
The United States Forest Service (FS) conducted the Forest Stewardship Management Plan which identified the rich ecological diversity of Hacienda Central Pellejas: 466 acres of pristine primary forest, the birth of 45 water creeks and one (1) affluent river (Pellejas River: a major tributary to the Rio Grande de Arecibo Water Legacy Area), the existence of water tunnels that channels water from the Municipality of Adjuntas through the property towards the Municipality of Utuado, three (3) archeological sites, 1,400 acres of essential habitat to a total of 86 bird species, 15 of the 17 endemic bird species of Puerto Rico, and habitat to 12 species on the Federal and local endangered species act, an agricultural valley, numerous large water fall, minimum contamination from light and sound, and other important ecological attributes. More recently, the Hacienda Central Pellejas region and Adjuntas were designated by the Important Bird Areas (IBA) as Important Conservation Area for endemic and migratory bird species.

Besides the aforementioned ecological attributes, HCP has been committed to sensitive agricultural conservation practices. Such commitment granted HCP the White House Conservation Award in December 2006, and in 2005, the Private Stewardship Grant (\$115,627) by the Fish and Wildlife Service Department of the Interior (FWS-DOI). This Private Stewardship Grant has been the largest single award given to a private for profit institution in Puerto Rico.

HCP is portrayed by the FWS-DOI at the national level as the model farm of the Partners Program of the FWS. Moreover, HCP signed an agreement with the United States Department of Agriculture and the Natural Resources and Conservation Services (NRCS) under the Conservation Reserve Program for the conservation and management of 800 acres, the largest contract area in Puerto Rico and the Caribbean region.

Recognizing HCP high ecological value and the increasing worldwide demand for ecotourism destinations, HCP submitted to the Tourism Company, the Economic Development Office of the Commonwealth of Puerto Rico, and the Department of Agriculture a plan for an Agro-Ecotourism development. This plan received preliminary endorsements by government agencies for the establishment of a sustainable agro-eco-friendly tourism project within 50 acres of the farm.

LTC Ramos Santiago's commitment with the preservation and conservation of HCP has lead to a signed agreement with four (4) leading conservation agencies including, the Department of the Interior (DOI 2010), the Atlantic Coast Joint Venture ([www.acjv.org](http://www.acjv.org)), the Trust for Public Land ([www.tpl.org](http://www.tpl.org)), and Casa Pueblo ([www.casapueblo.org](http://www.casapueblo.org)) for the establishment of a conservation easement on the entire property at perpetuity on Hacienda Central Pellejas.



Therefore, construction of the Via Verde Project through Hacienda Central Pellejas will have a direct and long term negative impact on the ecological, agricultural, hydrological, scenic, tourist, and historical characteristics of the "Jewel of the Mountains". As President of GDJSN, we are requesting the United States Army Corps of Engineers to consider an alternate route from Hacienda Central Pellejas.

Yours truly,

***Luis J. Ramos Santiago***

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Fideicomiso de Conservación de Puerto Rico

The Conservation Trust of Puerto Rico

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Fax 787-722-5872  
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December 17, 2010

Edgar W. García  
Project Manager  
US Army Corps of Engineers  
Puerto Rico & U.S. Virgin Islands Permitting Office  
Stop 7½ Antilles Office  
400 Ave Fernandez Juncos  
San Juan, PR 00901-3223

**RE: Comments of the Conservation Trust of Puerto Rico for the Joint Permit Application of Natural Gas Pipeline Project**

Dear Mr. García:

Greetings from the Conservation Trust of Puerto Rico. The Conservation Trust of Puerto Rico (CTPR) is a private, nonprofit organization established in 1970, whose mission is to secure functional and healthy ecosystems in the islands of Puerto Rico, and to instill in their inhabitants a sense of responsibility towards the conservation of our natural resources, so that we may receive the ecosystem services that will help us achieve our social, economic and quality-of-life goals.

The CTPR has evaluated documents related to the Joint Permit Application for the Natural Gas Pipeline Project, proposed by the Puerto Rico Electric Power Authority, and would like to formally provide the following comments.

1. In 1984, Hacienda La Esperanza was designated as a nature reserve by the Planning Board of Puerto Rico. This designation implicates the conservation of the biological processes necessary to maintain the functionality of the ecosystems being protected. With only 7.4% of our land under legal protection, any impact on any of these protected areas (given the 93% available for development), should receive the strictest environmental scrutiny and should be unwarranted

under any economic development argument unless there are greater national security interests or life related needs.

2. Due to the high ecological value of the ecosystems being protected in Hacienda La Esperanza Nature Reserve (HLENR), the U.S. Fish and Wildlife Service (USFWS) has selected it as a reintroduction site, of a northern population, of the critically endangered Puerto Rican Crested Toad (PRCT) (*Peltophryne lemur*); this species is the only toad native to Puerto Rico. The CTPR and the USFWS have a collaborative agreement to establish a second population of the PRCT in the northern karst region of Puerto Rico, and has identified a third site for potential reintroduction in the future; one population will be located in HLENR. In addition, the applicant identified only Peñuelas as possible habitat for the PRCT. However, historical records locate the species in the northern karst between Bayamón and Manatí.

Reasons for listing the PRTC included the limited number of breeding sites, vulnerability to habitat destruction and human disturbance, over-utilization, and predation, among other threats. Since 1992, the species has not been found in the northern karst area. The currently known natural breeding ponds are located in the southern karst of Puerto Rico.

The final recovery plan for the PRCT approved in 1992 states that the toad could be considered for delisting when six self-sustainable populations have been established and maintained for 10 years: three in the northern karst and three in the southern karst of Puerto Rico. The recovery activities for the PRCT have been planned, implemented and monitored throughout the PRCT Recovery Working Group (Group). This Group includes representatives of the USFWS, the Puerto Rico Department of Natural and Environmental Resources (DNER), the American Zoo and Aquarium Association (AZAA), the Puerto Rico National Park Company (PRNPC), local NGO's, universities, and community groups. Since 2003, the Service has been the leader of this Group, providing funding, technical assistance, logistical support, and coordination of other recovery activities.

3. HLENR protect important water bodies as the "Río Grande de Manatí" and "Caño San José". Almost all the area protected by the reserve is cover with different kinds of herbaceous wetlands, *Pterocarpus* forests, remnants and mangrove. The integrity of these systems and associated ecosystems depends on the connectivity that allows the continue flow of species throughout the water bodies. In order to maintain connectivity along the wetlands of the reserve, the CTPR is implementing two wetland restoration projects:

**Project 1** is part of a cooperative agreement between the CTPR and USFWS for the ecosystem reforestation and reestablishment of the irrigation system.

**Project 2** is a *Pterocarpus officinalis* forest restoration in accordance with a Consent Decree agreed upon by the United States of America (USA) and Power Poles Inc. (PPI) due to PPI's impact on 17 acres of jurisdictional areas (wetlands) within their property in Río Grande, Puerto Rico. The CTPR is involved in the process as a third party mitigator to whom PPI will provide the funding for the design and execution of a mitigation plan.

Given the critical value of the limited available natural protected lands in the small islands of Puerto Rico and the critical habitat restoration projects underway at Hacienda La Esperanza Nature Reserve, financed with federal funding, we respectfully request that a comprehensive alternative production and distribution plan be explored for this project so as to identify the best method, location and route that would attain AEE goals and objectives. Furthermore, given the high risk and security issues related with gas pipelines on human and other natural life, this project should have the most rigorous standard, which is usually not compatible with a fast track approach. The CTPR recognizes interest that the Puerto Rico Electric Power Authority have represented in utilizing cleaner fossil fuels, yet the impact of over 1,100 acres of open and forested lands throughout a 93 miles stretch, in an island with its longest stretch being 100 miles, is without doubt a extremely high impact project that deserves careful and thoughtful review.

If you need additional information you may contact us at the address above, or telephone (787) 722-5834.

Cordially,

Fernando Lloveras San Miguel, Esq.  
Executive Director

**From:** [Jaime.Torres@dot.gov](mailto:Jaime.Torres@dot.gov)  
**To:** [Garcia, Edgar W SAJ](mailto:Garcia, Edgar W SAJ)  
**Cc:** [Carlos.MACHADO@dot.gov](mailto:Carlos.MACHADO@dot.gov); [Martin.Knopp@dot.gov](mailto:Martin.Knopp@dot.gov)  
**Subject:** Permit Application No. SAJ- 2010-02881 (IP-EWG)  
**Date:** Friday, December 17, 2010 1:44:47 PM

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Dear Mr. Garcia:

Find below our initial comments regarding the installation of the gas line and the referenced permit application:

- The existing "Policy on the Accommodation of Utilities on Highways Right of Way" adopted by the Puerto Rico Highway and Transportation Authority (PRHTA) and approved by Federal Highway Administration (FHWA) on May 30, 1990, Sec 5-5.02(a); p.28, does not include longitudinal installation of pipeline conveying gas, oil, gasoline and other flammable or dangerous substances within the control access lines of controlled-access highways nor within tunnels or on major bridges. Hence, a project level agreement for this particular utility accommodation would be needed. FHWA approval for the proposed utility installation would constitute an administrative action.

Controlled access highways relevant to Via Verde are: PR-22 and PR-2

- In areas where PRHTA policy permits the longitudinal installation, the installation should be outside the Right of Way. If evaluated alternatives demonstrate this option not feasible, then any above the ground portion of the utility line, or appurtenances must be installed outside the roadway clear zone or be shielded in a way to protect the traveling public.

- Underground utilities within the clear zone must be designed to handle static and dynamic loads associated to heavy vehicles over the area of influence above the utility line. (ex. errant vehicles departures, disabled trucks, or maintenance vehicles)

- How is the proponent planning to maintain the traffic during construction on the affected highways? He must demonstrate operations and safety analysis to assess potential impacts on traffic, during construction, and during maintenance operations; as well as mitigation strategies.

As the project continues to develop, we may have more detailed site specific comments.

If you have additional questions, feel free to contact our Division Office.

Best Regards,

Jaime F. Torres Gonzalez

Area Engineer

Federal Highway Administration

**App-1123**

Puerto Rico & US Virgin Island Division

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P BE GREEN Please consider not printing this e-mail unless necessary.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE

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St. Petersburg, Florida 33701-5505  
(727) 824-5317; FAX (727) 824-5300  
<http://sero.nmfs.noaa.gov/>

December 19, 2010

F/SER4:JK/pw

(Sent via Electronic Mail)

Colonel Alfred Pantano  
District Engineer, Jacksonville District  
Department of the Army Corps of Engineers  
Jacksonville Regulatory Office, South Permits Branch  
PO Box 4970  
Jacksonville, Florida 32232

Attention: Edgar W. Garcia

Dear Colonel Pantano:

NOAA's National Marine Fisheries Service (NMFS) reviewed the public notice dated November 19, 2010, for SAJ-2010-02881 (IP-EWG). The applicant, Autoridad de Energia Electrica, requests authorization from the Department of the Army to construct and install a 24-inch diameter, steel natural gas (NG) pipeline approximately 92 miles long with a construction right-of way (ROW) of 150 feet that traverses the island of Puerto Rico from the EcoEléctrica Liquid Natural Gas Terminal in the municipality of Peñuelas to the Cambalache Thermoelectric Power Plant in the municipality of Arecibo, and then eastward to the Palo Seco power plant facility in the municipalities of Toa Baja and San Juan. The total project area is about 1,672 acres and the pipeline will traverse 235 rivers and wetlands, including 369 acres of jurisdictional Waters of the United States. The public notice indicates that the work would impact approximately 28.5 acres of Estuarine Forested Wetland and Canals which are identified as essential fish habitat (EFH) by the Caribbean Fishery Management Council (CMFC). The need for compensatory mitigation is acknowledged by the applicant, but the applicant defers specific proposals until additional construction detail is available. Based on a preliminary review of this application, the Jacksonville District concludes an Environmental Impact Statement is not be required, and the District also concludes that the project would not adversely impact EFH or federally managed fishery resources. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

*Project Area*

The public notice indicates that the work would impact approximately 28.5 acres of Estuarine Forested Wetland and Canals. NMFS also reviewed aerial imagery of the project site as part of our review of impacts to EFH. The public notice does not include results from a survey of estuarine inhabitants of the specific areas to be impacted.



### *Essential Fish Habitat at the Proposed Project Site*

The site of the proposed project includes mangroves, seagrass, sandy bottom, and algal communities. CFMC identifies these habitats as EFH for several species, including juvenile and adult gray snapper (*Lutjanus griseus*); juvenile mutton snapper (*Lutjanus analis*); juvenile nassau (*Epinephelus striatus*) and goliath grouper (*Epinephelus itajara*); and juvenile spiny lobster (*Panulirus argus*). Seagrass and mangrove directly benefit the fishery resources of the Atlantic Ocean and the Caribbean Sea by providing nursery habitat. Seagrass and mangrove habitats are part of a habitat complex that includes hard bottoms and coral reefs, and this habitat complex supports a diverse community of fish and invertebrates within the Atlantic Ocean and the Caribbean Sea. Seagrass and mangrove also provide important water quality maintenance functions (such as pollution uptake), stabilize sediments, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. The cumulative loss of these habitats continues to reduce fisheries production within the waters of Puerto Rico.

### *Request for Additional Information*

At this time, NMFS does not have sufficient information to complete a review of the proposed work; we request that the Jacksonville District provide the following:

- 1) Please clarify what is meant by "ALL wetland impacts will be temporary." The proposed ROW of 150 feet seems to imply that impacts to wetlands are not temporary.
- 2) Based on the answer to #1, please provide the total square footage of resource impacts (seagrass, other submerged vegetation, mangroves, and other benthic resources). The public notice indicates a total of 28.5 acres of EFH will be impacted but does not indicate the acreage for each habitat type.
- 3) Please provide additional explanation that can help us determine if HDD will be utilized when encountering "Estuarine Forested Wetland" and the other types of EFH habitats, such as seagrass and other submerged vegetation. This would help NMFS evaluate alternatives to the proposed action.
- 4) Please provide the results of an actual survey of the organisms in the estuarine areas that the proposed project impacts.

### *EFH Conservation Recommendations*

Additional information is needed for NMFS to complete the EFH consultation. Based on the information provided this far, NMFS finds the project would have substantial adverse impacts on EFH. Section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH conservation recommendations when an activity is expected to adversely impact EFH. Based on this requirement, NMFS provides the following:

#### **EFH Conservation Recommendation**

The Department of the Army shall not authorize the project as proposed. To make the project acceptable, the applicant shall revise the project to include the following items, which NMFS may revise based upon review of the additional information requested above.

1. No clearing shall be authorized in areas that support seagrass or mangroves.
2. Best management practices to minimize seagrass and mangrove impacts and water quality degradation shall be incorporated into the project design.
3. Once the final design for the project is set, the applicant shall develop a compensatory mitigation plan that offsets all direct and indirect impacts to EFH. The plan shall be based on a functional assessment and provided to NMFS for review and approval before the project is authorized.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and implementing regulation at 50 CFR Section 600.920(k) require your office to provide a written response to this letter within 30 days of its receipt. If it is not possible to provide a substantive response within 30 days, in accordance with our "findings" with

your Regulatory Functions Branch, an interim response should be provided to NMFS. A detailed response then must be provided prior to final approval of the action. Your detailed response must include a description of measures proposed by your agency to avoid, mitigate, or offset the adverse impacts of the activity. If your response is inconsistent with our EFH Conservation Recommendation, you must provide a substantive discussion justifying the reasons for not following the recommendation.

Thank you for the opportunity to provide these comments. Related questions or comments should be directed to the attention of Mr. José A. Rivera at NOAA HCD, c/o US Army Corps of Engineers, 400 Fernandez Juncos Avenue, San Juan, Puerto Rico, 00901-3299. He may be reached by telephone at 787-501-7639 or by e-mail at [Jose.A.Rivera@noaa.gov](mailto:Jose.A.Rivera@noaa.gov).

Sincerely,



/ for

Miles M. Croom  
Assistant Regional Administrator  
Habitat Conservation Division

cc:

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GOVERNMENT OF PUERTO RICO  
Puerto Rico Electric Power Authority

SAN JUAN, PUERTO RICO

PO Box 364267  
San Juan, PR 00936-4267



www.prepa.com

December 20, 2010

EXPRESS MAIL EB 078636801 US



Mr. Edwin Muñiz  
Field Supervisor  
Caribbean Office  
Fish & Wildlife Service  
Boquerón, PR 00622

Dear Mr. Muniz:

**Re: SAJ 2010-02881 (IP-EWG), Vía Verde Pipeline Project  
Final Environmental Impact Statement**

As agreed during the telephone conversation that you had with our Environmental Consultant, Eng. Daniel Pagán on December 17, 2010, enclosed please find an electronic copy of the Final Environmental Impact Statement (EIS) for the referenced project. The EIS was filed before the Environmental Quality Board (EQB) last November 29, 2010, and approved on November 30, 2010, after the PREPA's compliance with the procedures established by the EQB, and the required evaluation by this agency. Please note that the document under consideration has been posted at the Webpage of the EQB since its filing date and available to the general public since then.

The comments presented in your December 15, 2010 letter to the United States Army Corp of Engineers (USACE), were based on the preliminary EIS and not on the Final document approved by the EQB. Please note that most of the comments presented in your communication to the USACE were addressed in the approved final document.

PREPA reiterates its commitment to undertake all efforts required to address each and every one of the regulatory requirements presented by the Fish & Wildlife personnel, related with the Vía Verde Pipeline Project. Moreover, all efforts will be made to facilitate the implementation of the Work Plan jointly developed by the USACE, Fish & Wildlife Service and PREPA, aimed to supplement the Biological Assessment previously presented as part of the Joint Permit Application and the EIS developed for this project.

Cordially,

Ángel L. Rivera Santana, Director  
Planning and Environmental Protection

Enclosure



December 20, 2010 04:12 PM Eastern Daylight Time

## **Fitch Rates Puerto Rico Elec Power Auth's Approx. \$500MM Series EEE 'BBB+'; Outlook Stable**

NEW YORK--(BUSINESS WIRE)--Fitch Ratings has assigned a 'BBB+' rating to Puerto Rico Electric Power Authority (PREPA) as follows:

--Approximately \$500 million series EEE power revenue bonds (federally taxable) 'BBB+'.

The bonds are scheduled to price during the week of Dec. 20 2010. Proceeds will be used to fund PREPA's capital improvement plan (through 2012 based on current projections) and portions of the Via Verde project, a natural gas pipeline that is scheduled to be completed by February 2012. PREPA's current capital improvement plan (CIP) does not include costs of the Via Verde project which are estimated at \$450 million. The 2010 series EEE bonds will contain a debt service reserve fund equal to interest payable on all outstanding power revenue bonds within the next 12 months net of federal subsidy. The series EEE bonds will be issued as federally taxable Build America Bonds (BABs), although they will be tax-exempt for residents of Puerto Rico.

In addition, Fitch affirms the following rating:

--\$7.6 billion power revenue bonds at 'BBB+'.

The Rating Outlook is Stable.

### **SECURITY:**

The bonds are secured by a senior lien on net revenues of the electric system.

### **RATING RATIONALE:**

--The 'BBB+' rating reflects PREPA's weakened financial profile that appears to have stabilized as a result management's efforts to reduce government accounts receivables, cut operating costs and improve liquidity.

--Concerns center on the system's above-average leverage levels and increasing debt service schedule that relies on operating efficiencies to increase net revenues and maintain debt service coverage of at least 1.50 times (x).

--While electricity sales and expenditure cuts in fiscal 2010 were both better than initial projections, longer-term improvements are dependent upon electricity sales and operational efficiencies in-line with projections that already assume negative sales growth over the next two fiscal years.

--PREPA's high percentage of accounts receivable (25%) pressures its liquidity position and is little changed since fiscal 2009 although government agencies have made payments to PREPA in fiscal 2011.

--Fitch also views as a concern the basis swap PREPA entered into in 2008. As of Nov. 30, 2010, the swap had a negative fair value to PREPA of \$37.9 million. The current mark to market does not require collateral posting at this time.

**App-1129**

--PREPA continuously evaluates the appropriateness of the rate structure. Currently, PREPA does not anticipate increasing basic charges and has not done so since 1989.

**KEY CREDIT DRIVERS:**

--The current rating assumes ongoing success from the financial strategy put in place last year and continued improvement in financial performance, including reducing accounts receivables and improving net assets.

--Additional fuel diversity and long-term cost reduction have the potential to strengthen financial metrics and limit rate volatility.

**CREDIT SUMMARY:**

PREPA is one of the largest public power systems in the U.S., and its credit strength is founded on its position as the sole provider of power to the commonwealth of Puerto Rico, an island of 4 million people. The agency has historically operated independent from the commonwealth and has been allowed to pass through the costs of fuel and purchase power. Higher generating reserves are required for PREPA as an island system, which has a total of 5,839 megawatts (MW) of owned and purchased capacity compared with the 2010 peak of 3,404. Concentration of resources in oil exposes PREPA to volatile fuel costs and carbon legislation or regulation. While Fitch views the utility's efforts to diversify its resource mix as positive and believes the concentration is off-set by PREPA's ability to pass through fuel and purchased power costs to customers.

The deterioration of operating performance due to weak retail sales, together with the depletion of lines of credit for fuel (due to the 2008 spike in fuel) and working capital (due to increased accounts receivables), resulted in a Fitch downgrade to 'BBB+' from 'A-' in November 2009. While the short-term pressure associated with the depleted lines of credit for fuel and working capital have eased with the funding of long-term debt, long-term pressures remain. The authority's current and projected debt service coverage is adequate, but transfer payments (contributions in lieu of taxes), which are required to be made to municipalities on the island after debt service payments, have been depleting any gain in net assets. Fitch believes that the authority's short-term plan to improve its equity position through cutting expenditures and improve its current liquidity position by decreasing accounts receivables, specifically related to the government sector, is both attainable and required in order to maintain the current rating level.

Through the three months ended Sept. 30, 2010, net revenues are down 3.8% from the same period last year, largely a result of decreased sales which PREPA attributes to reduced industrial and commercial sales, cooler weather, and increased transmission and distribution costs, which have been partially offset by decreases in general and administrative expenses. Overall sales are budgeted to be down 0.2% in fiscal 2011. Sales declines significantly lower than projected will likely impact financial metrics negatively and could put negative rating pressure on PREPA without offsetting measures to maintain or improve net revenue. As of Nov. 30, 2010, PREPA had liquidity of approximately \$348 million from lines of credit and a self-insurance fund.

Puerto Rico's economy is weak and wealth levels are significantly below the levels on the mainland (MHI 39% of U.S. average), which contributes to PREPA's high level of accounts receivables (A/R). Historically, most of PREPA's A/R have been related to customers in the government sector, such as the Department of Education or Puerto Rico Aqueduct and Sewer Authority (PRASA). Net A/R have been greater than 24% of total expenditures since 2006, the highest percentage of any public power utility rated by Fitch. While the size of accounts receivable from government agencies is a credit concern, continued progress on this front is evidenced by continued payments in fiscal 2011 from the Public Buildings Authority (PBA) \$20.2 million; University of Puerto Rico \$23.2 million; Department of Education \$39 million; and the Medical Services Administration has transferred \$19.9 million to the Government Development Bank of Puerto Rico (GDB) and was paid to PREPA on Dec. 16, 2010. Overall accounts receivables are still extremely high year-to-date (YTD) at \$1.05 billion and slightly above last year's figure of \$1.034 billion, although the overall ratio to sales is down to 25.2% YTD from 28.9% during the same period last year.

**PUBLIC POWER BONDS - KEY CREDIT POINTS:**

Public power utility bonds in most cases are unsecured debt obligations supported solely by a pledge of net revenues generated by the utility, including other legal structural protections, such as rate covenants, and debt service reserve fund requirements. Public power utilities (municipal and cooperative) are effectively owned by their customers with a mission to provide essential, reliable, relatively low-cost electric service. The average rating is 'A+', compared to their corporate

counterparts' average rating of 'BBB+', with approximately 31% rated at or above 'AA-' and 8% rated at or below 'BBB+'. The key credit underpinning supporting the high average rating is their self-regulating authority (or local rate setting ability).

Municipal utilities are generally not subject to state/federal regulatory oversight as compared to corporate utilities. This regulatory autonomy provides for a more timely recovery of costs (operating and debt service) through electric rates, and also gives public power issuers the ability to set financial targets/policies as well as renewable energy goals/standards. In addition, public powers' predominantly residential customer composition provides for more stable energy sales and in turn more predictable financial performance. Those with below-average ratings or low investment-grade or below investment-grade ratings generally have a limited economic base, above-average leverage (or debt burden) resulting in a high cost structure that may constrain financial flexibility.

Additional information is available at '[www.fitchratings.com](http://www.fitchratings.com)'

In addition to the sources of information identified in the Revenue-Supported Rating Criteria, this action was additionally informed by information from Creditscope.

Applicable Criteria and Related Research:

'Revenue-Supported Rating Criteria', dated 16 Aug. 2010.

'Public Power Rating Guidelines', dated 11 June 2009.

For information on Build America Bonds, visit [www.fitchratings.com/BABs](http://www.fitchratings.com/BABs).

Applicable Criteria and Related Research:

Revenue-Supported Rating Criteria

[http://www.fitchratings.com/creditdesk/reports/report\\_frame.cfm?rpt\\_id=564565](http://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=564565)

Public Power Rating Guidelines

[http://www.fitchratings.com/creditdesk/reports/report\\_frame.cfm?rpt\\_id=447150](http://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=447150)

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**App-1131**

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**App-1132**



Oficina del Senador  
Hon. Alejandro García Padilla

December 20, 2010

**VIA EMAIL & CERTIFIED MAIL/  
RETURN RECEIPT REQUESTED**

José M. Rosado  
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US Army Corps of Engineers Antilles Office  
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**RE: Permit Application No. SAJ- 2010-02881 (IP-EWG); *Via Verde* Pipe-line  
Project**

As a Member of the Senate of the Commonwealth of Puerto Rico I must express my serious concerns regarding the so-called "*Via Verde*" gas pipeline project, also known as the *Gasoducto del Norte*.

Natural gas could be part of a transition into a greener and more sustainable energy portfolio for Puerto Rico, but that is not the issue at stake.

**The true question before us is whether a major government action should be approved without serious scrutiny, both economic and environmental.**

The gist of the Puerto Rico Electric Power Authority's (PREPA) economic viability argument is its claim that the project shall cost only \$447 million dollars, to be financed by bond (debt) sale, and that once operational it will lower the island's high per kilowatt hour energy costs, currently from around 21 cents to 12

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**App-1133**



cents kilowatt hour in 2015, concomitantly lowering a client's monthly fuel adjustment electric bill item by around 20%.

Firstly, PREPA's \$447 million cost estimate is underestimated and misleading. Even accepting, for argument purposes, the extraordinary assumption that the project will not go substantially over-budget (a highly unlikely scenario given our past experiences with major government projects which doubled in cost along the way), the project overstates Puerto Rico's capacity to use natural gas as an energy source; fails to consider the cost of endangered species habitat mitigation, and thus plainly misstates the consumer level bill savings, if any, that will ensue.

#### **Overstated capacity to use natural gas, lower client savings.**

According to PREPA once *Via Verde* is approved, the cogenerating plant known as EcoEléctrica would supply enough natural to generate more than 70% of Puerto Rico's electric power. However it is known that said installation's current capacity to convert liquefied natural gas into usable gas form is around 77.4 million cubic feet per day which would be good for little more than 15% of the island's energy needs.

PREPA's electric service rates consist of (a) basic charges, made up of demand, client and energy related charges, (b) fuel adjustment charges designed to recover the cost of fuel oil purchased by PREPA; and (c) purchased power charges to recover cost of power purchased from cogenerators (EcoEléctrica and AES-PR) by PREPA.

Using 2008 gas prices, EcoElectrica's 15% energy generation capacity would translate to around \$50 million dollar yearly savings on oil purchases, not a substantial amount.

Given these numbers, even though PREPA claims a 20% consumer-level bill savings, the fact that only the fuel purchase adjustment bill item would be affected, experts have already concluded that consumers would not receive electric bill savings higher than 11% [UPR-Mayagüez economist José Alameda and Center for the New Economy policy director Sergio Marxuach.]

Even in the unlikely event that said cogenerator eventually tripled its regasification capacity, only about 45% of the island's energy needs would be covered, well below the 70% level claimed by PREPA, correlatively reducing the claimed savings associated to non-purchase of oil, substantially.

#### **Mitigation costs not fully considered.**

The project's alleged \$447 million price-tag also fails to factor in monetarily quantifiable environmental costs. As proposed by PREPA, this project is a 92 mile long, 150 feet wide corridor, more than 1,672 acres (1,721 *cuerdas*) of affected terrain, directly impacting 235 rivers, at least 369 acres (380 *cuerdas*) of



federally protected wetlands, and at least 32 threatened and/or endangered species of fauna and flora protected under Puerto Rico and federal laws, including the Puerto Rican Nightjar (*Caprimulgus noctitherus*), the Puerto Rican parrot (*Amazona vittata*), the Puerto Rican crested toad (*Peltophryne lemur*), Puerto Rican boa (*Epicrates inornatus*), Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*), Puerto Rican broad-winged hawk (*Buteo plaiypterus brunnescens*), and Puerto Rican plain pigeon (*Patagiuenas inornata wetmorei*).

However, PREPA's official position regarding mitigation in this process, as transcribed from the Corps public notice for this case is that "[g]iven the temporary nature of impacts expected to occur from construction, the applicant expects any such mitigation required by the U.S. Army Corps of Engineers (Corps) to be at or below 0.01 acres of compensatory mitigation per 1 acre of temporary wetland impacts." No detailed estimate of affected species and/or critical habitat mitigation costs is proffered.

Judging by mitigation requirements imposed by the United States Fish and Wildlife Service (USFWS) in previous cases with drastically inferior environmental footprints, *Via Verde's* environmental mitigation costs would reach and probably surpass the hundred-million dollar range. For example, in a 725-acre (746 *cuerdas*) property in Guayanilla were a proposed wind energy farm's impact would be the widening of 8.7 km of existing roads, siting of 1.4 km of new roads, and the land preparation for wind turbine projected footprints would affect a potential maximum of 30.1 acres (30.9 *cuerdas*), USFWS approval of the project rested on a mitigation plan that would perpetually protect nearly 518 acres of land (533 *cuerdas*) in a conservation easement --a monetarily valued real estate transaction--, and thus USFWS applied a mitigation factor of more than 17:1, compensating for impacts to dry forest habitat at a rate beyond 1700%. Only two endangered and one threatened species of fauna were reported at that site: the Puerto Rican nightjar (*guabairo*), the recently de-listed brown pelican (*pelicano pardo*) and the threatened roseate tern (*palometa*). Note that USFW imposed similar mitigation requirements to the original, smaller, *Gasoducto del Sur* prior to its approval, and given their recent opinion in this process, it is highly unlikely that USFWS will accept lesser mitigation compensations than those established by it in the past.

By simply calculating the acreage of earth to be moved, *Via Verde's* impact on land would be more than 50 times larger than the aforementioned Guayanilla wind farm. Logically, it would seem that a land conservation easement of more than 10,000 acres could be appropriate, especially considering that a greater number of species will be affected --including the nightjar (*guabairo*), the Puerto Rican crested toad (*sapo concho*) and the Puerto Rican parrot (*cotarra*



*puertorriqueña*)-, and given the fact that the pipeline might also affect areas designated as karst. Such a real estate transaction by itself would be in the hundred million dollar range.

Note that these mitigation costs leave out recurrent species and habitat management/conservation plans, which entail long term highly specialized scientific field work and related reporting to concerned agencies such as USFWS, among others.

More importantly, wetland mitigation measures will probably be imposed by the Corps under the Clean Water Act (33 U.S.C. § 1251, *et seq.*) (CWA), measures whose compensation ratio depends on the classification of the wetland and the degree of proposed environmental impact, and range from no net loss of wetland, to high ratios of 10:1 and beyond, depending the associated ecology and biodiversity. Thus, costly land acquisitions to create (mitigate) new wetland habitats would be required, a situation not factored into PREPA's plans, given its official position that wetland impacts will be temporary and that mitigation required will be "below 0.01 acres of compensatory mitigation per 1 acre".

#### **A word of caution.**

The Preliminary Environmental Impact Statement (P-EIS) for the *Via Verde* Pipeline was filed before a so-called Interagency Sub-Committee for Fast-Track Environmental Compliance (*Sub Comité Interagencial de Cumplimiento Ambiental por Via Acelerada*) in late November 2010. Then on November 30, it was 'considered' by the Puerto Rico Environmental Quality Board (EQB) which approved the EIS as final on December 1st. Just two days later, Puerto Rico's Planning Board then approved the project's site or land-use consultation (*consulta de ubicación*). This hurried approval process was conducted under the terms of an executive order by Gov. Luis Fortuño declaring a supposed "energy emergency."

Haste makes waste. This maxim is of particular relevance in regard the rational and responsible management of our island's limited natural resources, and is an aptly fitting reminder of how to deal responsibly with the task at hand.

Since 1952, our Constitution states as official, binding policy, the Commonwealth's duty "to conserve, develop and use its natural resources in the most effective manner possible". Furthermore, Puerto Rico's Environmental Public Policy Act (Act No. 416 of 22 September 2004, 12 L.P.R.A. § 8001, *et seq.*, establishes the Commonwealth's obligation to enforce "the precautionary principle" that regardless of uncertainties, rational measures proportional to the



seriousness of the potential environmental harms must be effected, in order to avoid or diminish said potential harms.

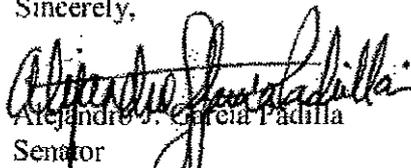
Corps of Engineers norms also demand caution. As such, per its Environmental Operating Principles (EOP) and applicable Program Management Plans (PgMPs), the Corps must:

1. Strive to achieve Environmental Sustainability. Environmental Sustainability may be described as the state of the environment that meets the needs of the present generation without endangering the ability of future generations to be able to meet their own needs. An environment maintained in a healthy, diverse and sustainable condition is necessary to support life.
2. Recognize the interdependence of life and the physical environment. Proactively consider environmental consequences of Corps programs and act appropriately in all circumstances.

Furthermore, in order for a permit to be issued under the CWA (33 U.S.C. § 1344) such as the one sought in this administrative process for "*Via Verde*", the applicant must establish that (1) there is no practical alternative to the proposed activity that would have less impact on the aquatic ecosystem; (2) the proposed activity will not have significant adverse impact on aquatic resources; (3) all appropriate and practicable mitigation will be employed (4) the proposed activity will not violate other state, Commonwealth, or federal laws (40 C.F.R. § 230.10); (5) the proposed activity is not contrary to the public interest, considering factors such as effects on wildlife, the environment, among others (40 C.F.R. § 320.4).

I urge the Corps of Engineers to consider the foregoing statements. At the least, the Corps should initiate formal evaluation proceedings so that *Via Verde*, the South to North *Gasoducto* is adequately and sufficiently scrutinized, so that a proper cost-benefit analysis that is proportional to its expected high environmental and economic impact is performed before undertaking the action.

Sincerely,

  
Alejandro J. García Padilla  
Senator  
Commonwealth of Puerto Rico





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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SAN JUAN, PR 00907-4127

December 21, 2010

Mr. José M. Rosado  
Deputy District Engineer for the Antilles  
U.S. Army Corps of Engineers  
Antilles Office  
400 Fernandez Juncos Ave.  
San Juan, PR 00901-3299

**RE: Public Notice Number SAJ-2010-02881 (IP-EWG)**

Dear Mr. Rosado:

We are in receipt of the above Public Notice (PN) describing the Puerto Rico Electric Power Authority's (PREPA) request to obtain Department of the Army authorization for construction of a natural gas pipeline project that will pass through the municipalities of Peñuelas, Adjuntas, Utuado, Arecibo, Barceloneta, Manati, Vega Alta, Vega Baja, Dorado, Toa Baja, Cataño, Bayamón, and Guaynabo, Puerto Rico. The pipeline, known as Via Verde, would be approximately 92 miles long and 24 inches in diameter with a right-of-way 150 feet wide. The total project area is approximately 1,672 acres and the pipeline would traverse 235 rivers and wetlands, resulting in an estimated impact to 369 acres of jurisdictional waters of the United States. The applicant's stated purpose for this project is to deliver an alternate fuel source to three existing electric power generating facilities located in Peñuelas, Arecibo, and Toa Baja.

After evaluating the information contained in the November 19, 2010 PN, the Environmental Protection Agency (EPA) believes that the applicant has not adequately demonstrated the need for the proposed pipeline in accordance with the Clean Water Act Section 404(b)(1) Guidelines requirements. The applicant must better document the need for a natural gas pipeline by presenting a more thorough alternatives analysis. Such analysis should evaluate other fuel sources other than natural gas since the stated purpose does not specify fuel type, the construction of an alternative terminal near one of the north coast power plants and the installation of a shorter length pipeline between Arecibo and Toa Baja.

EPA also has concerns regarding the use of directional drilling, particularly in karst terrain areas. In the past and on other projects in the Caribbean, directional drilling has resulted in major impacts when the drilling mud leaked into the surrounding environment. Due to the nature of karst terrain, we are concerned that any spill of drilling mud may contaminate groundwater or reach other aquatic resources which were not evaluated as part of this review.

If PREPA complies with the needs requirement of the Clean Water Act Section 404 (b)(1) guidelines, the risks of directional drilling must be thoroughly analyzed. In conjunction with such analysis, PREPA must establish appropriate mechanisms to monitor

the drilling operations so that any escape of drilling mud is detected immediately as well as identify steps to be taken to minimize potential impacts of an escape.

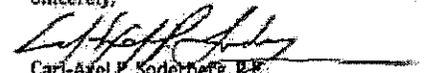
Furthermore, PREPA has not proposed adequate compensation to offset any impacts to jurisdictional areas which would result from the proposed project. While PREPA has proposed the use of horizontal directional drilling and vertical wall trenching, among other measures, to avoid and minimize impacts to wetlands, additional analysis to identify the nature and extent of both temporary and potentially permanent impacts at each jurisdictional area will be needed. We acknowledge that PREPA has offered to be vigilant of such impacts in order to immediately determine whether mitigation is required at any area along the project corridor; but, specific plans to address the need for mitigation must be identified in advance. EPA is also concerned about the criteria identified in the PN for determining whether mitigation sites will be successful. Finally with regard to mitigation, EPA believes that any compensatory mitigation required for permanent impacts should be at a minimum of a 1:1 ratio.

After carefully considering the challenges associated with this project, EPA recommends that an environmental impact statement (EIS) rather than an environmental assessment (EA) be prepared for this project. As highlighted in the PN, the project covers a large area and impacts many rivers and wetlands. Though the wetlands to be traversed are diverse in nature, all provide the important functions of flood water storage and filtration of contaminants that would otherwise reach other aquatic resources. These indirect impacts associated with the loss of wetlands also need to be evaluated. The PN states that the impacts of the project are expected to be temporary in nature; however, the impacts to threatened and endangered species could be extensive, as demonstrated by the fact that a formal versus informal Endangered Species Act (ESA) consultation is being undertaken for the project.

In summary, EPA believes that the Via Verde project could have substantial impacts to aquatic resources and that adequate compensatory mitigation has not been offered to offset such impacts. Furthermore, an EIS is needed to properly evaluate the project's impacts. Therefore, it is EPA's position that a permit for this project be held in abeyance until our concerns are addressed.

If you have any questions regarding this matter, please contact me at (787) 977-5801 or have your staff contact José Soto of the Multimedia Permits and Compliance Branch at (787) 977-5829.

Sincerely,

  
Carl Axel F. Soderberg, P.E.  
Director  
Caribbean Environmental Protection Division

cc: USFWS - Boquerón, PR  
DNER - San Juan, PR  
PRPB - San Juan, PR  
PREQB - San Juan, PR



"Hengstenberg, Derek"  
<Derek.Hengstenberg@tetratech.com>

12/21/2010 01:27 PM

"Rafael\_Gonzalez@fws.gov" <Rafael\_Gonzalez@fws.gov>

cc "daniel\_paganrosa@yahoo.com"  
<daniel\_paganrosa@yahoo.com>, Yousev Garcia  
<yousevgr@yahoo.com>

bcc

Subject Raptor Survey Work Plan

Rafael,

Here is my second attempt of delivering this work plan. I received an error message.

-Derek

Derek Hengstenberg | Certified Wildlife Biologist  
Main: 207.879.9496 | Cell: 908.616.0436  
derek.hengstenberg@tetratech.com

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Raptor Survey Work Plan-Via Verde Project.pdf



Rafael  
Gonzalez/R4/FWS/DOI  
12/22/2010 05:28 PM

To "Hengstenberg, Derek"  
<Derek.Hengstenberg@tetrattech.com>  
cc "daniel\_paganrosa@yahoo.com"  
<daniel\_paganrosa@yahoo.com>,  
"Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>,  
bcc  
Subject RE: Raptor Survey Work Plan 

Hello Derek,

Thanks for the work plan. As soon as we review it we will contact you.

Best regards,

Rafael

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"Hengstenberg, Derek"  
<Derek.Hengstenberg@tetrattech.com>

12/21/2010 01:24 PM

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cc "daniel\_paganrosa@yahoo.com" <daniel\_paganrosa@yahoo.com>, Yousev Garcia <yousevgr@yahoo.com>  
Subject RE: Raptor Survey Work Plan

Hello Rafael,

Attached is the work plan for Broad-winged Hawk and Sharp-shinned Hawk surveys along the Via Verde pipeline project. Please review and let me know if you have any questions. We intend to begin surveys on January 12.

I look forward to working with you on this project.

Regards,

Derek

Derek Hengstenberg | Certified Wildlife Biologist

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# Via Verde Pipeline Project: 2011 Puerto Rican Broad-winged Hawk and Puerto Rican Sharp-shinned Hawk surveys

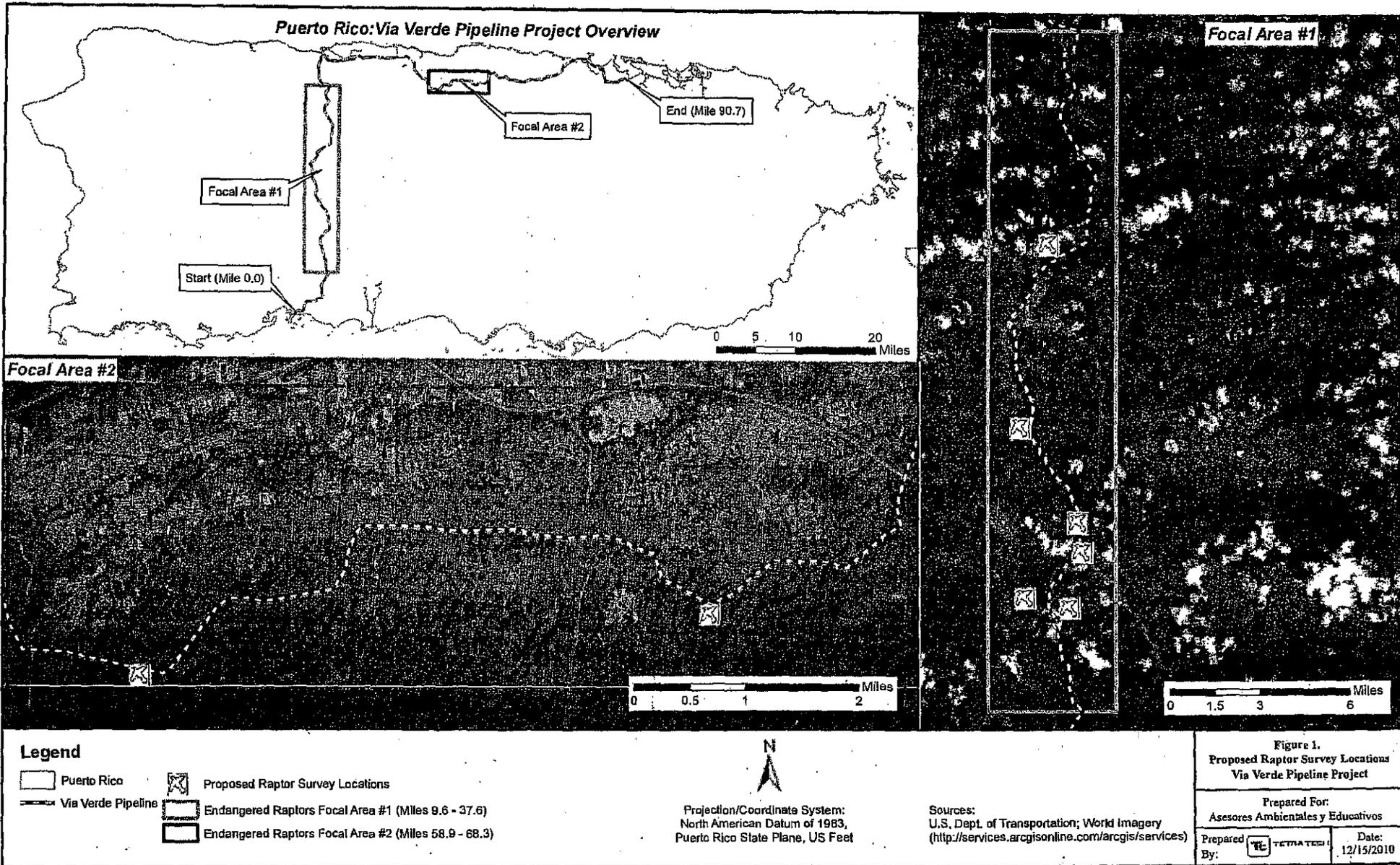
*DRAFT: December 20, 2010*

## 1.0 Introduction

This work plan describes the proposed raptor surveys along the Via Verde Pipeline (Project area) within the municipalities of Manati, Utuado, and Adjuntas, Puerto Rico. The function of these surveys is to document occurrence of the Puerto Rican Broad-winged Hawk and Puerto Rican Sharp-shinned Hawk within the two focal areas of concern. Both endangered raptors are non-migratory and remain on Puerto Rico year-round. They are federally endangered and protected under the Endangered Species Act. The proposed raptor surveys will provide a baseline data set on these species in forested areas of concern along the Project area. The survey will also evaluate how much raptor habitat could be affected by the proposed Project. This data may provide useful information to help minimize potential environmental impacts from the proposed Project.

## 1.1 Project Background

The Puerto Rico Electric Power Authority (PREPA) is proposing to construct a 24" natural gas pipeline from the municipality of Peñuelas, crossing the island through the central mountain region from the south to north towards San Juan (Figure 1). USFWS has commented on the project and has requested additional surveys for endangered raptors to be conducted in areas of potential habitat along the pipeline corridor. During consultation, USFWS has stated that it is important to determine the number of breeding territories that may be affected by project construction and the amount of habitat to be affected. Until further studies demonstrate differently, the USFWS assumes suitable habitat within the proposed pipeline corridor is occupied by endangered raptors for breeding and potential take may be anticipated in those areas. The following work plan describes how Tetra Tech will evaluate the Project area for endangered raptors.



## 2.0 Endangered Raptor Surveys

### 2.1 Objectives

Tetra Tech biologists will conduct direct, visual observations of raptor movements and document species composition, flight heights, flight patterns, flight direction, movements, and habitat use patterns in the project area. Documented territories will be spot-mapped and the percentage of habitat to be impacted by the Project will be evaluated.

### 2.2 Methods

Tetra Tech will conduct raptor surveys for Broad-winged Hawks and Sharp-shinned Hawks from vantage points in forested areas along the Project area (Figure 1.0). Areas selected for surveys were identified during an initial biological evaluation (Focal Areas 1 and 2) and ground-truthed during a site-reconnaissance trip in December 2010. Raptor surveys will be conducted from 8 to 10 vantage points located within forested sections of the Project area during the month of January 2011. Surveys will be conducted from the morning to early afternoon hours (~0700 to ~1300) when both species of raptors are engaged in aerial displays above the canopy. Surveys will be conducted on days with suitable weather conditions with minimal precipitation and fog.

Each vantage point will be surveyed twice during the survey period of January 12 to January 26, 2011. This time period is when both species are engaged in epigamic and territorial aerial displays. Surveys will be designed to cover areas identified to have potential habitat for these species. Potential habitat of concern were identified through a desktop biological evaluation and confirmed through USFWS consultation as well as a site-reconnaissance survey.

Tetra Tech biologists will use high quality binoculars (10x42 mm), spotting scopes (15-46x60 mm), and range finders to record data on species composition, flight heights, habitat use patterns, and movements of raptors in the project area. Raptors will be spot-mapped and their GPS position will be recorded on field maps. If a surveyed area confirms presence of either Broad-winged Hawk and/or Sharp-shinned Hawk, biologists will conduct area searches to further evaluate those habitats for the presence of a nest site.

Tetra Tech will compile all data from the January surveys and provide a site summary report. This report will include all relevant information including: i.e. nesting territories, amount of raptor habitat to be impacted by the pipeline, maps of vantage points, area search maps, raptor spot maps, and potential nest sites. This information can be used by AAE and the USFWS to determine the anticipated effects on these species by the pipeline.



DEPARTMENT OF DEFENSE  
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SAN JUAN, PUERTO RICO 00901-3299  
December 22, 2010

Antilles Regulatory Section  
SAJ-2010-02881 (IP-EWG)

Eng. Francisco E. Lopez  
Autoridad de Energía Eléctrica  
P.O. Box 364267  
San Juan 00936-4267

Dear Mr. Lopez:

Reference is made to your Department of the Army (DA) permit application, submitted through Joint Permit Application Number 1059, of September 20, 2010 for the Via Verde Natural Gas Pipeline (NGPL) project. The proposal is to construct and install a 24-inch diameter steel NGPL for approximately 92 miles with a construction right-of way (ROW) of 150 feet wide, that transverses the island of Puerto Rico from the Eco Eléctrica Liquid Natural Gas Terminal in municipality of Peñuelas, to the Cambalache Termoeléctrica electric power plant in the municipality of Arecibo, then east to the Palo Seco facility in the municipalities of Toa Baja and San Juan. The pipeline route will encompass both private and public lands which include commercial, industrial, and agricultural land uses. The total project area is about 1,672 acres that will impact 235 river and wetland crossings, for a total of 369 acres of jurisdictional Waters of the United States. Please refer to case number SAJ-2010-02881 (IP-EWG) in future correspondence regarding this project.

We also make reference to meetings held on October 26, 27 and 28, 2010 with US Fish and Wildlife Service (FWS), State Historic Preservation Office (SHPO) and Federal Highway Administration (FHA) respectively, in which the requirements managed by each agency were discussed with members of your consulting firm.

A careful review of your project and preliminary review of the comments from resource agencies and the public has revealed various environmental and public interest concerns which cannot be adequately evaluated with the information at hand. As discussed with your contractor and the other resource agencies in previous meetings, the information on record does not fully address the public interest factors and information of the Via Verde NGPL project regarding public safety, environmental impacts, endangered species, habitat conservation and historic properties required for the Corps to adopt a position in the review process at this point.

Although you provided information with your permit application that address some of the comments herein provided, please be advised that the information and or referenced materials provided is largely deficient, very conceptual, and failed to adequately address the issues raised by the agencies and the general public. We believe PREPA (Spell)

needs to provide a more comprehensive and detailed response to address the issues of concern. Furthermore, the Corps believes that project impacts have not been adequately quantified; thus precluding proper evaluation of the project's direct and secondary impacts on the aquatic environment. We are concerned about the potential direct, indirect, and cumulative impacts of the project on the aquatic resources.

As part of the permit application you provided detailed maps and drawings depicting locations of most of the jurisdictional areas within the proposed route and ROW. However, a review of the National Wetland inventories revealed the existence of jurisdictional areas that were not identified or accounted for in the Jurisdictional Determination (JD) submitted as part of the permit application. Please be advised that these areas will be eventually ground-truth during a jurisdictional determination site visit, which would be coordinated in the near future.

The Corps evaluated the alternative analysis submitted as part of the permit application, and found it deficient in scope and detail, as it does not focus on minimization of impacts to jurisdictional areas and it rather provides a route selection matrix overview of additional project routes. Although the applicant's has outlined other alternatives considered for the development of the alignment, we still believe that the analysis is largely qualitative and lacks sufficient details for an adequate review. The analysis mentions the rationale for the final selection of the preferred route; however, it fails to provide a quantification of the impacts, costs, and other issues that were crucial in the final selection.

Also, as per FWS letter of December 15, 2010, enclosure 1, the Eco Eléctrica facility has not contemplated the construction of a connection or modification to connect the Via Verde Project. Also, the letter stated that the storage capacity of the facility is not sufficient to provide services to the new Via Verde Project. Furthermore, informal conversations with Mr. Daniel Pagan on December 20, 2010, revealed that PREPA has contemplated a natural gas barge offload option off a small key near the Eco Eléctrica plant that can provide the capacity needed to provide natural gas to the Via Verde project with modification to the infrastructure of the key. Such infrastructure modification would have to be part of this permit evaluation, and the aforementioned option has not been discussed in the alternative analysis provided with permit application. The U.S. Army Corps of Engineers (Corps) believes that without an actual connection to a natural gas supply system the Via Verde natural gas pipeline cannot be considered under the National Environmental Policy Act as a single and complete project.

The Postal Office returned several Public Notices due to insufficient addresses. It is the Corps responsibility to notify the public of projects adjoining their properties. You could either, obtain correct mailing addresses and forward it to this office or hand deliver it to the adjoining property owner. If to be delivered, then a return receipt is requested. Be advised that we would grant these neighbors an additional 30-day comment period.

Attached is a list of the letters received in response to the Public Notice issued for the above referenced permit application. Copies of the response letters are also enclosed. The following paragraphs summarize the comments provided in those letters. Please review and provide a detailed written response to each of the issues raised in said letters. To expedite the evaluation of your permit application, we request your response be provided in English.

The National Marine Fisheries Service (NMFS), Protected Resources Division (PRD) by email dated November 19, 2010, indicated that a preliminary review of the available documentation suggested that the project will likely require consultation with said agency pursuant to Section 7 of the Endangered Species Act. Furthermore NMFS Essential Fish Habitat by letter dated December 19, 2010, stated that the service would require consultation under Magnuson Stevens Act due to the potential presence of important essential fish habitats.

FWS, by letter dated December 15, 2010, Boquerón Field Office stressed the need for the development of a Biological Assessment to address more than 32 ESA species potentially encountered on the project path, adherence with NEPA requirements of a single and complete project, alternative analysis, habitat impacts and mitigation. FWS further recommends that the permit be denied as currently proposed.

Federal Highway Administration (FHWA), by email dated December 17, 2010, stated that the "Policy on the Accommodation of Utilities on Highways Right of Way" adopted by the Puerto Rico Highway and Transportation Authority (PRHTA) and approved by FHWA on May 30, 1990 does not include longitudinal installation of pipeline conveying gas, oil, gasoline and other flammable or dangerous substances within the control access lines of controlled-access highways nor within tunnels or on major bridges. Hence, a project level agreement for this particular utility accommodation would be needed.

SHPO, by letter dated September 17, 2010, stated that in accordance with the consultation requirements pursuant to Section 106 of the National Historic Preservation Act (NHPA), a Cultural Resource Assessment (Phase 1A and Phase 1B) will be required to identify the presence/absence of cultural resources of archaeological/historic significance within the project's area of potential effects. No position can be provided until Phase 1A and 1B are finalized and the data is evaluated.

The Environmental Protection Agency (EPA) by letter of December 21, 2010, recommended the permit for the project be denied, since the project has the potential to cause or contribute to significant degradation of waters of the U.S., including aquatic resources of national importance, and therefore, does not comply with Section 404(b)1 Guidelines. Also EPA recommends the development of an Environmental Impact Statement (EIS).

The College of Engineers and Surveyors of Puerto Rico (CIAPR) by letter of December 17, 2010 suggest that there are other alternatives such as the use of the Costa Sur complex in combination with the Aguirre Power Plant which can generate 73% of the Island electricity.

The Sierra Club stressed by way of its membership that they are opposed to the project and requested that Corps hold public hearings (PH) and prepare an EIS.

The general public, interest groups, and others, sustained that they are opposed to the project, the project has not addressed property rights, environmental impacts, ESA, EFH, habitat conservation, potential safety risks, health hazards and its effects on the nearby communities; the lack of discussion of alternatives regarding alternative renewable resources, which also minimize impacts to the aquatic resources.

After reviewing the responses stated above, the Corps agrees with the comments from the resource agencies and the general public, and reserves the option to request an EIS and hold a PH. A comprehensive and detailed rebuttal on the comments from the agencies must be provided. Any other information you feel may be helpful in order to fully justify the proposal should also be submitted at this time.

As required by NEPA and the Clean Water Act (CWA) Section 404(b)(1) Guidelines, the Corps must consider a broad range of alternatives during the evaluation of a permit application. Under these regulations, the Corps must give detailed consideration to practicable alternatives that focus on the accomplishment of the applicant's and the public's interest and needs. The regulations define a practicable alternative as an alternative that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. The Corps is neither a proponent nor an opponent of the applicant's proposal which will be identified as the "applicant's preferred alternative." However, 40 CFR Part 230.10(a) allows permit issuance for only the least environmentally damaging practicable project alternative. That is, no discharge of dredged or fill material shall be permitted if there is a practicable alternative, which would have less adverse impact on the aquatic ecosystem providing the alternative does not have other significant adverse environmental consequences.

Further, pursuant to 33 CFR Part 320.4, the Corps must evaluate the project to ensure that it would not be contrary to the public interest. In that regard, the Corps must assess the relative extent of the public and private need for the project, and the extent and permanence of the beneficial and/or detrimental effects that the project is likely to have on the public and private uses to which the area is suited. In addition, the Corps must evaluate the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed work or structure.

We are concerned about the potential direct, indirect, and cumulative impacts of the proposed project on the aquatic resources. In order to implement the procedural provisions of NEPA and complete our regulatory analysis of compliance with Section 404(b)(1) guidelines and the public interest review factors we request your submittal of the following information:

- a) **Alternative Sites Analysis:** Please submit an analysis describing alternative energy solutions, alternative sites considered to locate the proposed project, including the Gasoducto del Sur. The purpose of such analysis is to clearly establish and document that the preferred and proposed alternative is the least environmentally damaging practicable project alternative. As part of this alternatives analysis we request that you: (1) define a set of criteria for site evaluation; (2) define a system to rate a site against each of the criteria; (3) describe a method to comparatively weigh each rating as to its importance; and (4) prepare a report describing the search for the sites, identification of their location and rating, and a narrative which shows which site is the preferred alternative.
- b) **Avoidance and Minimization:** Please provide documentation of your evaluation of practicable modifications or alternatives to the project layout or design, which could prevent and/or minimize impacts to waters of the United States and the aquatic environment, and discuss why the proposed impacts could not be minimized any further. In this regard, please evaluate and discuss the practicability of reducing the size of the proposed structures, and relocating, modifying or eliminating some of the project components to avoid and minimize the project's direct, indirect and cumulative impacts.
- c) **Compensatory Mitigation** Your application did not include any compensatory mitigation plan designed to offset impacts to 369 acres of waters of the U.S. As outlined in the 1990 Memorandum of Agreement between the DA and EPA concerning the determination of mitigation under the CWA, mitigation should only be considered after all practicable measures have been made to avoid and/or minimize wetlands impacts. Upon demonstrating that the proposed project represents the least-environmentally damaging practicable alternative, and after all effort has been made to avoid and/or minimize wetland impacts, you must provide a mitigation plan to offset unavoidable wetland impacts. The Compensatory Mitigation Plan shall discuss feasible measures, which would be implemented to compensate for the project's unavoidable direct, indirect and cumulative impacts to the aquatic environment. This is for proposed impacts that cannot be avoided or minimized. The purpose of this plan is to show how compensatory work would balance the impacts of the project. Your mitigation and monitoring plan must be approved prior to issuance of a DA permit. Your mitigation and monitoring plan should include the following twelve fundamental components: 1) objectives (restoration, enhancement, etc.), 2) site selection

criteria, 3) site protection instruments (e.g., conservation easement), 4) baseline information for impact and compensation sites (reference to each wetland impact and mitigation polygon should be based on an accepted wetland classification system (i.e., FLUCCS, or FNAI)), 5) credit determination methodology, 6) mitigation work plan (e.g., a description of all wetland and upland enhancement and restoration activities to include prescribed fire, pine canopy thinning, exotics removal, culvert installation, grading, gyro-tracking, and planting, and timeframes for initiation and completion), 7) maintenance plan with schedule 8) ecological performance standards (e.g., should be measurable and attainable). 9) monitoring requirements (e.g., quantitative and qualitative vegetative community analysis), 10) long-term management plan, 11) adaptive management plan, and 12) financial assurances (e.g., please reference Regulatory Guidance Letter 05-1: *Guidance on the Use of Financial Assurances, and Suggested Language for Special Conditions for Department of the Army Permits Requiring Performance Bonds* for your edification on types of financial assurance).

- d) Wetlands: Please provide an assessment of all direct, indirect, and secondary impacts, and mitigation activities. Secondary impacts should be assessed for all wetlands (except those targeted for direct impact) both on and off the project impact site, which fall within 300' of the development footprint. We request that as part of the above mentioned mitigation efforts (including avoidance, minimization and compensation) for the proposed project you consider further measures to prevent and minimize impacts, and offset the project's unavoidable impacts to jurisdictional areas. Also, please describe which measures would be implemented during the construction and operation of the project to minimize such impacts.
- e) The Corps concurs with the comments expressed by the agencies with regards to Horizontal Directional Drilling (HDD). As stated by the agencies, the use of HDD in the Karst region shall be fully assessed and evaluated. In previous projects the Corps has discovered that bentonite mud was accidentally released, resulting in detrimental consequences. Also, as part of the permit application a Frac-Out Plan was provided that stated that "pits" would be constructed to collect return mud. The plan also states that the mud would be collected from the "pits" and taken to a sedimentation pond where the sterile residuals are separated to be reused. Residuals are listed as bentonite, polymers, and surfactants. It is not clear if the "pits" or the sedimentation ponds are lined to avoid contaminant discharge, nor how many sedimentation ponds would be constructed. Also, the plan mentions the use of dye tracers, the use of such tracer would need to be coordinated with the EPA.

- f) Fish and Wildlife Values: Please respond to the comments provided by FWS and NMFS in the attached communications. All the concerns presented by these resource agencies would have to be fully addressed during our evaluation and coordination of the permit application to initiate consultation under Magnuson Stevens Act.
- g) Threatened & Endangered Species: Please review FWS and NMFS in the attached letters. This information will be necessary to initiate consultation with NMFS and FWS, under Section 7 of the ESA.
- h) Cultural Resources: Please inform us of the progress with regards to providing a complete Phase IA and Phase IB Archaeological Studies for the project; we request that you please provide us with copies of any pertaining correspondence and documentation exchanged with SHPO.
- i) Infrastructure and Utilities – Please provide evidence of your coordination with the appropriate Commonwealth of Puerto Rico government agencies for the evaluation of the project's proposed plan for obtaining and providing utilities and services including to carry out your project.
- j) Cumulative Impacts: In order for the Corps to consider environmental cumulative impacts of the proposed project, we request to provide information regarding other existing, in progress or proposed projects that could affect the aquatic resources to be impacted by the development of the proposed project. In particular, please provide information regarding your evaluation of potential past, present and foreseeable future environmental impacts of the proposed action in relation to such projects and describe the corresponding minimization and mitigation measurements being proposed. In this regard future expansions of PR-22, construction of PR-10, Waste to Energy plant in Arecibo are examples of projects that need to be considered in the analysis.
- k) Please provide a map depicting the proposed staging areas and access roads. The Corps is concerned about the presence of wetland areas in or immediately adjacent to the proposed right-of-ways. Please explain what preventive measure would be implemented by PREPA to avoid additional impacts into these areas during construction activities.
- l) Water Quality: Please describe the potential impacts of the proposed project on water quality and the measures to be implemented during the project construction and operation to avoid and minimize such impacts. In this regard, please describe in particular the measures that would be implemented to avoid and minimize the potential adverse environmental effects of accidental leaks into the aquatic environment.

- m) You are reminded that two necessary prerequisites to the issuance of a DA permit for your project are the issuance Water Quality Certification and a Coastal Zone Management (CZM) Consistency Certification by Puerto Rico's Environmental Quality Board, and the Planning Board, CZM office. Therefore, keep this office informed of the status of your applications for these certifications. In this regard, please provide us with copies of any requests for information that you may have received from any of these agencies and your corresponding responses, and clarify any project modifications that may have resulted from your coordination.

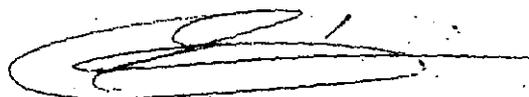
Please provide information pursuant to Section 176(c) of the Clean Air Act regarding whether your proposal will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153.

Your application will be held in abeyance for 45 days pending receipt of your response. If within the next 45 days from the date of this letter we have not received a written communication from you, we will take final action on your Department of the Army permit application. Final action could include withdrawal or denial of your permit application. Should the file be withdrawn, it will be retained for a period of one year.

You are cautioned that any work performed below the mean high waterline or ordinary high waterline in waters of the United States, or the discharge of dredged or fill material into adjacent wetlands, without a DA permit could be subject to enforcement action. Receipt of a permit or endorsement from other agency does not obviate the requirement for obtaining a DA permit for the work described above prior to commencing work.

If you have any questions or comments regarding this case, you may contact Mr. Edgar W. Garcia, at telephone numbers 729-6905/6944 ext. 3059, or at the letterhead address.

Sincerely,



Edgar W. Garcia  
Antilles Regulatory Section

Enclosures - Attached CD

Copy to:  
Mr. Larry Evans  
BC Peabody Consulting, P.A.  
509 Guisando de Avila, Suite 100  
Tampa, FL 33613



Jerry Ziewitz/R4/FWS/DOI  
12/22/2010 03:38 PM

To Aaron Valenta/R4/FWS/DOI@FWS  
cc Edwin Muniz/R4/FWS/DOI@FWS, Marelisa  
Rivera/R4/FWS/DOI@FWS  
bcc  
Subject Via Verde 3b letter and briefing

#17

Aaron,

I've attached the materials needed for our 1/4/2011 briefing appointment with the RD. If we can have this surnamed before the briefing, perhaps Cindy can sign the letter then. I will also put these and other supporting documents on the S drive today.

Edwin: I shortened the statement you provided and put it into a bullet format, which seems to be preferred. Let Aaron and me know if you find any problems with my edits -- I still have you on there as the preparer.



Via Verde 3b NOTE TO REVIEWERS 2010-12-22.doc



Via Verde 3a LETTER 2010-12-15 signed.pdf



Via Verde 3b BRIEFING 2010-12-22.doc



Via Verde 3b LETTER 2010-12-22.docx

Jerry Ziewitz  
Conservation Planning Assistance Coordinator  
Southeast Region  
U.S. Fish and Wildlife Service  
2639 North Monroe Street, Suite A-200  
Tallahassee, Florida 32303  
(850) 553-3646

## NOTE TO REVIEWERS

ACTION: 3(b) letter for the Via Verde Pipeline, Puerto Rico

STAFF ORIGINATOR: Jerry Ziewitz SUPERVISOR: Aaron Valenta

IS THE ACTION LITIGATION DRIVEN? No

ACTION REQUESTED:

SIGNATURE   X    
SURNAME   X  

REVIEW   X    
FYI ONLY     

### VERY BRIEF BACKGROUND ON ISSUE/ACTION:

The Jacksonville District of the Corps has issued a public notice (PN) for the 404 permit application from Francisco E. Lopez, Autoridad de Energía Eléctrica (the applicant), to build a 92-mile long natural gas pipeline with a 150-foot wide construction right-of-way that would cross the island of Puerto Rico from the south to the north and then parallel the northern shore to its terminus near San Jaun. The total project area is about 1,672 acres, and the pipeline would cross 235 rivers and wetlands, covering 369 acres of jurisdictional waters of the United States. The Boqueron FO has sent a "3(a)" letter recommending permit denial and advising the Corps that the project *may* result in substantial and unacceptable impacts to aquatic resources of national importance. Boqueron requests a "3(b)" letter from the RD confirming that the project *will* result in such impacts. Staff recommends RD signature of the 3(b) letter.

**RD signature on the letter is needed on or before noon, January 10, 2011, and the addressee must receive it by COB January 11, 2011.**

HAVE APPROPRIATE SERVICE PROGRAMS REVIEWED AND SURNAMED?  
Yes.

## **BRIEFING FOR REGIONAL DIRECTOR**

**PREPARED BY:** Field Supervisor, Caribbean Ecological Services Field Office, Boquerón PR

**TO:** Regional Director, Southeast Region, Atlanta, GA

**DATE:** December 22, 2010

**SUBJECT:** Proposed Via Verde Gas Pipeline (Puerto Rico)

**PURPOSE OF BRIEFING DOCUMENT:** Summarize issues associated with the proposed Via Verde Gas Pipeline in support of a letter advising the Corps that the project will have substantial and unacceptable impacts on aquatic resources of national importance (ARNIs) (a "3(b)" letter under our MOA with the Corps for elevating permit decisions).

### **BACKGROUND**

- The Puerto Rico Electric Power Authority (PREPA) is proposing a natural gas pipeline from the EcoEléctrica Liquid Natural Gas (LNG) facility on the south coast of Puerto Rico in Peñuelas to its power plants on the north coast (see map attached).
- The 92-mile-long pipeline would cross 235 streams and wetlands. A 150-foot-wide right-of-way makes the total project footprint about 1,672 acres, including 369 acres of jurisdictional wetlands, making this project one of the largest infrastructure projects proposed in Puerto Rico in decades.
- The Corps issued a Public Notice (PN) for a proposed permit on 11/19/2010.
- The Caribbean Ecological Services Field Office has provided technical assistance to PREPA and its consultants.
- We provided preliminary comments to the Corps in October 2010, and responded to the Corps' PN by letter dated 12/15/2010, which included our determination that the project may have substantial and unacceptable impacts to ARNIs (a "3(a)" letter under our permit elevation MOA with the Corps), and concurred with the Corps' determination that the project may affect 32 listed species.
- The Corps has not yet requested initiation of formal consultation.
- To begin the permit decision elevation process, the Corps must receive our 3(b) letter by 1/11/2011.
- PREPA plans on beginning construction of this project early in 2011.

### **RESOURCE ISSUES**

- PREPA did not follow Service guidance on surveys for the 32 listed species; therefore, the information necessary for an adequate Biological Assessment is not yet available. We have recommended additional surveys along the entire pipeline route and continue to provide technical assistance.
- The proposed pipeline route will affect at least three properties that have existing conservation agreements under the Partners for Fish and Wildlife Program. The Service investment in these agreements is \$180,000.

- The project crosses the southern karst region, central mountains, and northern karst region. Many portions of the alignment are isolated and not subject to developmental pressures. These include the Rio Abajo Commonwealth Forest, the Vega Commonwealth Forest, the DNER-designated north karst Priority Conservation Area (PCA), the Caño Tiburones PCA, the San Pedro Swamp Critical Wildlife Area, and portions of a Service-identified Strategic Habitat Conservation Area.
- PREPA characterizes all wetland effects as temporary impacts; however, because the project involves 235 separate wetland and river crossings, poor construction techniques on even a fraction of these could easily result in substantial permanent impacts.
- The project alignment through the northern karst region crosses areas designated as Natural Reserves and Critical Wildlife Areas, including the Cucharillas Marsh PCA, San Pedro Swamp PCA, Caño Tiburones Natural Reserve, and Hacienda la Esperanza Natural Reserve. The northern karst is known for its underground streams, springs and shallow aquifer.
- The Corps has not yet verified PREPA's jurisdictional determinations.
- PREPA proposes a .01-to-1 compensatory mitigation ratio. This would amount to 4 acres of compensatory mitigation for an estimated 369 acres of "temporary" wetland impacts, which is inappropriate and unacceptable to the Service.
- PREPA proposes directional drilling to minimize impacts on larger rivers and streams, wetlands, roads, and other areas, which involves injecting drilling mud (bentonite clay and other substances) under pressure into the bore hole. A "frac-out" of drilling mud in this type of terrain and geology could contaminate underground waters and adversely affect human health and unique subterranean fauna.
- We advised the Corps that it should consider the permit a "major federal action" requiring an EIS.
- The LNG terminal operator, EcoEléctrica, informs us that the terminal does not currently have the storage capacity to supply the proposed pipeline, and that building additional capacity could require FERC authorization. If so, the project proposal is incomplete and authorizing it would represent segmentation of a large project that is prohibited under NEPA.
- Impacts to fauna and flora are not well documented, and protection of sensitive areas after construction is not well specified. A broad spectrum of fish and wildlife resources occur within and adjacent to the proposed pipeline route, including migratory birds, amphidromous fish, endangered species, and wetlands. The karst areas of Puerto Rico are unique geological and ecological features in the United States, and serve as an important aquifer recharge zone for the island. We recommend confirming the FO determination that the project will result in substantial and unacceptable impacts to ARNIs.

**Contact:** Edwin E. Mufiz, Field Supervisor, Caribbean ES Field Office, Puerto Rico,  
787 - 851-7297 x 204





REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
P.O. Box 4970  
JACKSONVILLE, FLORIDA 32232-0019

DEC 23 2010



*Via Verde*

Carlos Machado  
Assistant Division Administrator  
Federal Highway Administration  
350 Ave Carlos Chardon Suite 210  
San Juan PR 00918-2148

Dear Mr. Machado:

RE: Via Verde Natural Gas Pipe Line SAJ-2010-02881

The US Army Corps of Engineers (USACE) has received a permit application submitted by PREPA. The applicant proposes to construct and install a 24-inch diameter steel natural gas (NG) pipeline approximately 92 miles long with a construction right-of way (ROW) of 150 feet wide, that traverses the island of Puerto Rico from the EcoEléctrica Liquid Natural Gas Terminal in the municipality of Peñuelas, to the Cambalache Thermoelectric Power Plant in the municipality of Arecibo, then east to the Palo Seco power plant facility in the municipalities of Toa Baja and San Juan. The total project area is about 1,672 acres and the pipeline will traverse 235 rivers and wetlands, covering 369 acres of jurisdictional Waters of the United States. A copy of the public notice for this proposal is enclosed.

In accordance with the National Environmental Policy Act (NEPA) and our environmental policies and procedures, an environmental document will be prepared to document the evaluation of alternatives, including the no action and public involvement. The majority of the potential environmental impacts of the proposed project are within the jurisdiction of the USACE. The USACE is taking the lead for NEPA review, as well as to any consultation required under ESA, EFH, and Sec 106 of the NHPA.

We hereby extend an invitation to become a cooperating agency with the USACE in the development of the NEPA document for the proposed project in accordance to 40CFR1501.6 of the Council on Environmental Quality's regulations for the implementation of procedural provision of NEPA. Pursuant to NEPA **Sec. 1501**, cooperating agencies are responsible for identifying as early as practicable any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of this project should include the following activities as they relate to your area of expertise:

1. Provide meaningful and early input on agency concerns.
2. Participate in monthly coordination meetings, quarterly interdisciplinary team meetings, and joint field reviews, as appropriate.

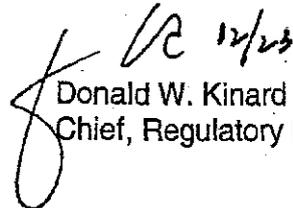
3. Timely review and comment on pre-draft and pre-final NEPA documents to reflect views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

Please provide a written response indicating your acceptance or denial of this invitation no later than 30 days from the receipt of this letter. If you accept, please identify the appropriate contact person within your organization for future coordination. If your agency declines, the response should state the reason(s) for declining the invitation. Federal agency that chooses to decline the invitation to be a cooperating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss the project or our agencies' respective roles in more detail, please contact Mr. Edgar W. Garcia, Project Manager, at 787-729-6905, extension 3059. Thank you for your cooperation and interest in this project.

Sincerely,

  
Donald W. Kinard  
Chief, Regulatory Division

Encl

cc:  
FWS  
NMFS - ESA  
NMFS - EFH  
SHPO  
EPA

Via Verde



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
P.O. Box 4970  
JACKSONVILLE, FLORIDA 32232-0019

DEC 23 2010

REPLY TO  
ATTENTION OF

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

Dear Mrs. Bose:

RE: Via Verde Natural Gas Pipe Line SAJ-2010-02881

The US Army Corps of Engineers (USACE) has received a permit application submitted by PREPA. The applicant proposes to construct and install a 24-inch diameter steel natural gas (NG) pipeline approximately 92 miles long with a construction right-of way (ROW) of 150 feet wide, that traverses the island of Puerto Rico from the EcoEléctrica Liquid Natural Gas Terminal in the municipality of Peñuelas, to the Cambalache Thermoelectric Power Plant in the municipality of Arecibo, then east to the Palo Seco power plant facility in the municipalities of Toa Baja and San Juan. The total project area is about 1,672 acres and the pipeline will traverse 235 rivers and wetlands, covering 369 acres of jurisdictional Waters of the United States. A copy of the public notice for this proposal is enclosed.

In accordance with the National Environmental Policy Act (NEPA) and our environmental policies and procedures, an environmental document will be prepared to document the evaluation of alternatives, including the no action and public involvement. The majority of the potential environmental impacts of the proposed project are within the jurisdiction of the USACE. The USACE is taking the lead for NEPA review, as well as to any consultation required under ESA, EFH, and Sec 106 of the NHPA.

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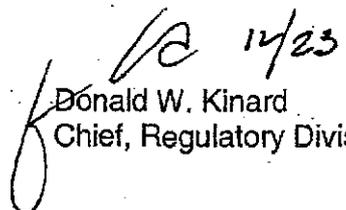
1. Provide meaningful and early input on agency concerns.
2. Participate in monthly coordination meetings, quarterly interdisciplinary team meetings, and joint field reviews, as appropriate.
3. Timely review and comment on pre-draft and pre-final NEPA documents to reflect views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

Please provide a written response indicating your acceptance or denial of this invitation no later than 30 days from the receipt of this letter. If you accept, please identify the appropriate contact person within your organization for future coordination. If your agency declines, the response should state the reason(s) for declining the invitation. Federal agency that chooses to decline the invitation to be a cooperating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss the project or our agencies' respective roles in more detail, please contact Mr. Edgar W. Garcia, Project Manager, at 787-729-6905, extension 3059. Thank you for your cooperation and interest in this project.

Sincerely,

 11/23  
Donald W. Kinard  
Chief, Regulatory Division

Encl

cc:  
FWS  
NMFS - ESA  
NMFS - EFH  
SHPO  
EPA

- Alberta: Draft Land Use Plan Infringes Treaty 8
- British Columbia: The St'at'imc No Coalition Opposes The St'at'imc Settlement Agreement With BC Hydro And The Province Of BC
- Gabon: Close To Our Ancestors: Gabon Forest Peoples Map Their Land - Video Documentary

## Weekly News

- Weekly News

## Regions

- North America
- South America
- Australia
- Africa
- Europe and Russia
- Greenland
- Oceania
- Middle East
- Central America & Caribbean
- Asia
- Southeast Asia
- Central Asia
- Indigenous Peoples General

## Issues

- Climate Change
- Dams and Water
- Heritage
- Human Rights
- Land and Territory
- Language
- Mining
- Oil and Gas
- Sovereignty
- Petitions and Sign-On Letters

## Resources

- Journals
- Videos, Movies, and Audio Recordings
- Conferences, Workshops, Festivals, & Calls for Papers
- Jobs and Internships
- Funding, Grants, Awards, and Fellowships
- Graduate Programs

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Ads by G

Tuesday, 28 December 2010 13:57

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## Puerto Rico: Letter Of Concern From IITC Concerning Via Verde Gas Pipeline And Human Rights Concerns

Hon. Luis G. Fortuño, Governor of Puerto Rico, via Email: webmaster@govpr.org

Hon. Daniel José Galán Kercado, Secretary of the Department of Natural Resources, Puerto Rico, via fax: (787) 999-2303

Re: Via Verde Gas Pipeline Project and Human Rights Concerns

Respectful Greetings,

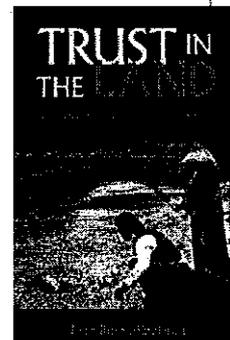
The International Indian Treaty Council (IITC) is a Non-governmental Organization (NGO) of Indigenous Peoples from North, Central and South America, the Caribbean and the Pacific founded in 1974. In 1977 the IITC was the first Indigenous organization to receive Consultative Status II, now Special Consultative Status with the United Nations (UN) Economic and Social Council. Since that time the IITC has participated actively to promote and defend the human rights of Indigenous Peoples in the international arena.

I am writing at the request of the IITC Board of Directors to express our serious concerns regarding the proposed Gas Pipeline Project called "Via Verde", and the licensing of large-scale gas development on Boriken (Puerto Rico). It is our understanding that the Taino Indigenous People who will be directly impacted continue to strongly oppose this project.

IITC has been informed by our affiliate the United Confederation of Taino People based in Boriken (Puerto Rico) that they have expressed serious human rights concerns regarding this project, and that these remain unresolved and unaddressed to date. Based on information we have received from the impacted Indigenous Peoples, if this project moves forward a number of violations human rights will result. These include, inter alia the rights to health, self-determination, food, freedom of religion, Sacred Sites and cultural practice as well the right to free, prior and informed consent.

A number of international standards including the UN Declaration on the Rights of Indigenous Peoples affirm the inherent right to free prior and informed consent of Indigenous Peoples whose lands, cultures, health and ways of life may be affected by proposed development projects. Although, the preamble to the constitution of the Commonwealth of Puerto Rico ensures the "free participation of its citizens in collective decisions", this multinational project has not taken into consideration the objections of the Taino People.

The IITC has been informed that the Taino Indigenous People of Boriken (Puerto Rico) as well as other local community members who live in the areas that will be affected by this project have told the Federal and national government of Puerto Rico, that they will not permit the construction of the Gas Pipeline "Via Verde" because it threatens their lives, health, welfare, security, culture, Sacred Sites, food sovereignty, traditional lands and resources and property. We understand that the project threatens to contaminate the environment and ecosystem



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Cash Bounties Offered for Native Americans

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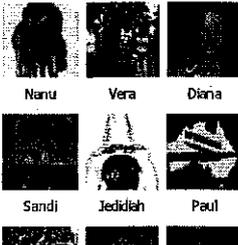
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which includes over 21 rivers, as well as groundwater, air, fish, agricultural lands, endangered species, and wildlife habitats. The land, rivers, water, air, fish, forests, agricultural lands, and Sacred Sites are the source of life, medicine, food security, culture, spirituality and ceremonies for past, present and future generations.

The Taino People of Boriken have informed the IITC of their petition to the Federal and Puerto Rican governments to cancel all plans and permits related to this project. Specific concerns they have expressed include:

- The proposed Gas Pipeline not only threatens Taino People but all the Peoples of Boriken (Puerto Rico); according to the AEE plans, the pipeline route is 146 km long with a potential impact to over 100 meters wide and, would severely impact around 400 agricultural acres.
- It will severely affect the conservation of the of the Rio Grande de Arecibo and Rio Portuguese Watersheds and impact on many rivers including, Rio de la Plata, Rio Bayamón, Quebrada Diego, Rio Cibuco, Cano Matos, Perdomo Canal, Rio Grande de Arecibo, Caguana River, River Caguanita, Pellejas River, Rio Corcho, Quebrada Arenas, Rio Tallaboa, Tanamá River, Indian River, Rio Grande de Manati and Rio Yunes.
- The pipeline route is comprised of 106 km of the Karst Conservation Zone which supplies more than 25% of the total water demand of the country and directly impacts 223 acres of Special Conservation Zones.
- The presence of sinkholes and unstable terrain located within the pipeline route has some of the highest slopes ranging from sea level on the coast to 3,000 feet above sea level in Adjuntas will be more susceptible to landslides. The "Via Verde" pipeline route crosses two seismic fault lines and then continues towards San Juan, affecting 13 municipalities and 51 communities.
- Although the government says "there is a prudent separation of the pipeline from the communities"; the pipeline will pass along the side of the road that runs in front of the Levittown community in Toa Baja which is home to about 30,071 people; pass through the lands of the University of Puerto Rico in the Town of Utuado, with potential risks to over 22,854 families and students and will be exposed along sections of the Arecibo Utuado PR10 where over 13,104 vehicles transit every day.

The IITC welcomed President Obama's long-awaited announcement on December 16th the United States will not only support the United Nations Declaration on the Rights of Indigenous Peoples but that their commitment will be measured by the actions that they take. The IITC urges the Federal and Puerto Rican Governments to uphold this commitment as well as obligations under other international human rights standards to which they are obligated. These include the International Covenant on Civil and Political Rights, the International Convention on the Elimination of All Forms of Racial Discrimination and, as of December 16th, the UN Declaration on the Rights of Indigenous Peoples.

The International Indian Treaty Council therefore urges the Federal and Puerto Rican Government, to ensure that no further gas development projects takes place within Boriken without the free, prior and informed consent of the Taino People.

Thank you for your consideration of our concerns and for supporting an immediate halt to this project until the human rights concerns of the impacted Indigenous Peoples can be sufficiently addressed and resolved. We greatly appreciate acknowledgement of your receipt of this letter, and any information you can provide as to your intended or planned actions in this matter.

Sincerely,

Andrea Carmen  
IITC Executive Director

cc: Hon. Jennifer A. Gonzales Colon, Presidenta de la Camara de Representantes de Puerto Rico; Email: jengonzalez@camaraderepresentantes.org

Hon. Eric Correa Rivera, President of the Comisión de Recursos Naturales, Ambiente y Energía de la Cámara de Representantes de Puerto; Email: ecorrea@camaraderepresentantes.org

Hon. Thomas Rivera Schatz, Presidente del Senado de Puerto Rico; Email: trivera@senadopr.us

Hon. Luz M. Santiago Gonzalez, President of the Senate Commission on Natural Resources; Email: lsantiago@senadopr.us

Edgar W. Garcia, US Army Corp of Engineers; Email: edgar.w.garcia@usace.army.mil

Mr. Ken Salazar, Secretary, United States Dept. of the Interior; Email: kensalazar@ios.doi.gov

Mr. James Anaya, Special Rapporteur on the Human Rights of Indigenous Peoples, Emails:

eight for men over 12; 130 Spanish pieces of eight for women children; 130 Spanish pieces of eight for scalps. As a result, hundred innocent Native Americans killed.

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And For -  
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anaya@law.arizona.edu; indigenous@ohchr.org

Mr. Francisco Cali Tzay, United Nations Committee on the Elimination of Racial Discrimination (CERD), Urgent Action/Early Warning Procedure Chair; Email: Francisco@hotmail.com

Mr. Saul Vicente and Ms. Mirna Cunningham, Latin America/Caribbean Indigenous expert members of the United Nations Permanent Forum on Indigenous Issues: Emails: binizaa2002@yahoo.com.mx, mirmacunningham@aol.com

Hungary: The Roma Education Fund United Confederation of Taino People, Email: caney@prtc.net; mukaro@uctp.org  
Seeks A Full-Time, In-House

Hungary: The Roma Education Fund Seeks A Full-Time, In-House IT Specialist Background Information: The Roma Education Fund (REF) is an international organization that aims to close the gap in educational outcomes between Roma and non-Roma through policies and programs that support quality education for Roma and through desegregation of educational systems in formal Decade for Roma Inclusion member countries. 1. description: The ...

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Map location of Boriken/Puerto Rico

Tags: Puerto Rico Taino gas environment IITC Boriken

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Mexico: Everyday Practices Of  
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Mexico: Everyday Practices Of  
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Mexico Emiko Saldivar, 2011  
Indigenismo, or the study and  
incorporation of indigenous cultu  
and people into national societies  
was a major political project of th  
Mexican state for much of the 20  
century. While indigenismo has b  
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Granero, and Frederica Barclay,  
2011 This article examines a se  
stories told among the Awajun,  
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convergence and divergence and  
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United States: Native Arts And Cultures Foundation Announces

United States: Native Arts And Cultures Foundation Announces Call For Letters Of Intent For 2011 Grants The Native Arts and Cultures Foundation (NACF) announced a call for letters of intent for the Foundation's 2011 grants. The three categories include: Artist Project Grants; Mobilizing the Community; and the Regional Collaboration Pilot Program. NACF's grants support the artistic creativity of American Indian, ...

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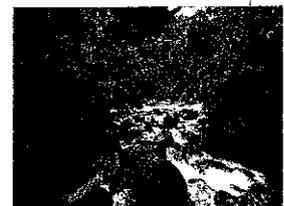
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Fig. 9: Start of the PPT-operation.

## 7. CONCLUSION

The PPT Method, a new trenchless technology combining the major benefits of both HDD and microtunnelling, have been developed and tested by Herrenknecht AG and more importantly, tested under realistic field conditions where the method has proven to be feasible and shows great potential. Further development throughout 2004 is necessary to meet the target date of 2005 for execution of the first project by PPT methods.



Rafael  
Gonzalez/R4/FWS/DOI  
12/29/2010 10:07 AM

To "Hengstenberg, Derek"  
<Derek.Hengstenberg@tetrattech.com>  
cc "daniel\_paganrosa@yahoo.com"  
<daniel\_paganrosa@yahoo.com>,  
"Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>,  
bcc  
Subject RE: Raptor Survey Work Plan 

Derek,

Before the Service can accurately evaluate the hawks survey proposal. We need to know the following information:

1. Are you going to survey each point for six hours (~0700 to ~1300)?
2. How many biologists you are going to have during the hawk survey?
3. Are the biologist train to work with hawks?

In addition, surveys on north of focal area #1 and focal area # 2 can be improve by adding more survey points.

Please let me know if you have any questions,

Rafael Gonzalez  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
Ecological Services Caribbean Field Office  
P.O. Box 491  
Boquerón, Puerto Rico 00622

(787) 851-7297 x 214 (voice)  
(787) 851-7440 (fax)  
rafael\_gonzalez@fws.gov



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>

12/29/2010 09:23 PM

To: Rafael\_Gonzalez@fws.gov, "Hengstenberg, Derek"  
<Derek.Hengstenberg@tetratech.com>  
cc: "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>,  
Yousev Garcia <yousevgr@yahoo.com>,  
Edwin\_Muniz@fws.gov, LarryEvans@bcpeabody.com

bcc

Subject: Re: Raptor Survey Work Plan

Dear Rafael:

In regard to your last E-Mail we contacted Mr. Edwin Muñiz and ask if we could have a site visit to the selected observation post included in Derek Hengstenberg Work Plan. It is considered that visiting the identified locations before making a final determination will allow F&WLS to validate that no further sites are needed to implement the Work Plan presented for needed consideration.

I recommend that we coordinate said site visit as soon as possible so we could initiate the implementation of the Work Plan within the time frame agreed upon during our last meeting at your Boqueron Offices.

To accomplish our mutual goals, I called my partner Mr. Yousev Garcia to call you up tomorrow and coordinate said visit in accordance with your schedule.

Happy Holidays,

Danny Pagan

"Hengstenberg, Derek" <Derek.Hengstenberg@tetrattech.com>



"Hengstenberg, Derek"  
<Derek.Hengstenberg@tetrattech.com>

12/30/2010 12:03 PM

To "Rafael\_Gonzalez@fws.gov" <Rafael\_Gonzalez@fws.gov>

cc "daniel\_paganrosa@yahoo.com"  
<daniel\_paganrosa@yahoo.com>,  
"Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>,  
Yousev Garcia <yousevgr@yahoo.com>,  
"Edwin\_Muniz@fws.gov" <Edwin\_Muniz@fws.gov>,  
"LarryEvans@bcpeabody.com"  
<LarryEvans@bcpeabody.com>

Subject RE: Raptor Survey Work Plan

Rafael,

---

Rafael,

Here are my answers for the work plan.

1. Are you going to survey each point for six hours (~0700 to ~1300)? Yes, each survey day will be 6 hours
2. How many biologists you are going to have during the hawk survey? 2  
Biologists per survey locations
3. Are the biologist train to work with hawks? All biologists working on the project will be familiar with identification of both species of raptors.

At the current scope there are 8 survey points spread throughout, I guess the site visit will confirm these locations.

Thanks

Derek



Rafael  
Gonzalez/R4/FWS/DOI  
12/30/2010 12:34 PM

To "Hengstenberg, Derek"  
<Derek.Hengstenberg@tetrattech.com>  
cc "daniel\_paganrosa@yahoo.com"  
<daniel\_paganrosa@yahoo.com>, "Edwin\_Muniz@fws.gov"  
<Edwin\_Muniz@fws.gov>, "LarryEvans@bcpeabody.com"  
bcc

Subject RE: Raptor Survey Work Plan

Derek,

Thanks for the answers!

Rafael Gonzalez  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
Ecological Services Caribbean Field Office  
P.O. Box 491  
Boquerón, Puerto Rico 00622

(787) 851-7297 x 214 (voice)  
(787) 851-7440 (fax)  
rafael\_gonzalez@fws.gov



January 7, 2011

Mrs. Marelisa Rivera  
Assistant Field Supervisor  
U.S. Fish and Wildlife Service  
Ecological Services Caribbean Field Office  
P.O. Box 491  
Boquerón, Puerto Rico. 00622

**Re: Raptor Survey Work Plan (December 21, 2010)  
Additional Supplemental Information**

Dear Marelisa:

As discussed during the field trip conducted between Fish & Wildlife Service Personnel on January 4, 2010, and after discussion with our client the Puerto Rico Energy and Power Authority (PREPA), it was determined to accept the recommendations presented by Mr. Rafael Gonzalez, Fish and Wildlife Biologist. These were related with adding two (2) additional observation locations into the supplemental Study Work Plan presented last December 21, 2010. These Supplemental field work were aimed to identify any habitats of the Broad-winged hawk and the Sharp-shinned hawk within the Via Verde alignment as described in the Environmental Impact Statement approved last November 30, 2010 by the Environmental Quality Board.

The additional observation locations agreed upon are to be located in the following areas:

- One at the east side of the Río Grande de Arecibo, upstream of the Dos Bocas Dam. (This will be utilized to observe the Via Verde pipeline segment that is aligned with PR-10) and,
- The second one will be located in the Puente Blanco area located in the municipal boundary between Utuado and Adjuntas (This will be utilized to observe the area where the Via Verde Pipeline alignment crosses the Pellejas River).

We are confident that the supplemental information included herein will be adequate to secure the required approval for the proposed field work. This will allow PREPA to undertake the supplemental work as originally scheduled. It will also allow PREPA to present a written report covering its findings by the end of January 2011.

In the event additional information related with this important subject is needed, please do not hesitate to contact us at your earliest convenience.

Cordially Yours,

Yousev Garcia Ramos  
Director

cc. Via Verde PREPA File  
cc. Mr. Derek Hengstenberg (Tetratex)  
cc. Eng. Daniel Pagan (Asesores Ambientales y Educativos)



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>

01/07/2011 01:43 PM

To "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>

cc Jousef Garcia <yousevgr@yahoo.com>, IVELISSE  
SANCHEZ SOULTAIRE <I-SANCHEZ@PREPA.COM>,  
"FRANCISCO E. LOPEZ GARCIA"

bcc

Subject Letter covering the addition of two observation locations into  
the Hawk supplemental field study

History: This message has been replied to and forwarded.

Dear Marelisa:

Attached please find the letter accepting Rafael Gonzalez recommendations associated with including two additional observation locations into the supplemental field study presented back on December 21, 2010.

Hope that this will address all pending F&WLS concerns and allow us to initiate the field studies by next week as originally planned.

Best Regards

Danny Pagan



Carta al F&WLS additional observation locations 1-7-11.pdf

Marelisa Rivera/R4/FWS/DOI  
01/12/2011 04:55 PM

To Daniel Pagan <daniel\_paganrosa@yahoo.com>  
cc Jousef Garcia <yousevgr@yahoo.com, Edgar Garcia, Omar  
Monsegur/R4/FWS/DOI, Rafael Gonzalez/R4/FWS/DOI,  
Edwin Muniz/R4/FWS/DOI, Carlos Pacheco/R4/FWS/DOI,>

bcc

Subject Comments FWS regarding raptors and plants

# 30

Danny:

We have reviewed the information provided on January 7, 2011 regarding the proposed protocol to survey raptors and maps, and would like to provide the following comments. These comments and recommendations are based on observations/ recommendations from Service biologists during site visit conducted on January 4, 2011.

1. Add six new observation points to the endangered raptors study. Focal area surveys can be improved by adding more observation points. Even though the species participate in epigamic and territorial aerial displays during breeding season they do not stay most of the time over the canopy. The suggested points are shown in Figure 1 with the prefix FWS (coordinates of suggested points can be found on attach KMZ file, suggested point can be relocated within the suggested area).
2. Observation points by geographic location should be surveyed simultaneously. We suggest the next group of points to be studies at the same time:
  - a. Points 2, 3 and FWS foreman.
  - b. Points 1 and 4.
  - c. Points 5, 6 and FWS Puente Blanco.
  - d. Point 7, FWS Rio Abajo1 and 2.
  - e. Point 8 and FWS Manati 1 and 2.
3. Conduct surveys for the Puerto Rican Parrot simultaneously with the raptor survey near the Rio Abajo Forest. The endangered Puerto Rican Parrot has been reported around the Rio Abajo Forest, parrot observation includes feeding, flying and sheltering. Survey points near the Rio Abajo Forest are point 7, FWS Rio Abajo1 and 2.

Figure 1.

FWS Mar

FWS Rio Abajo 2 Punto Obserbacion 7

FWS Rio Abajo 1

Punto Observacion 6 FWS Puente blanco area

Punto Observacion 5

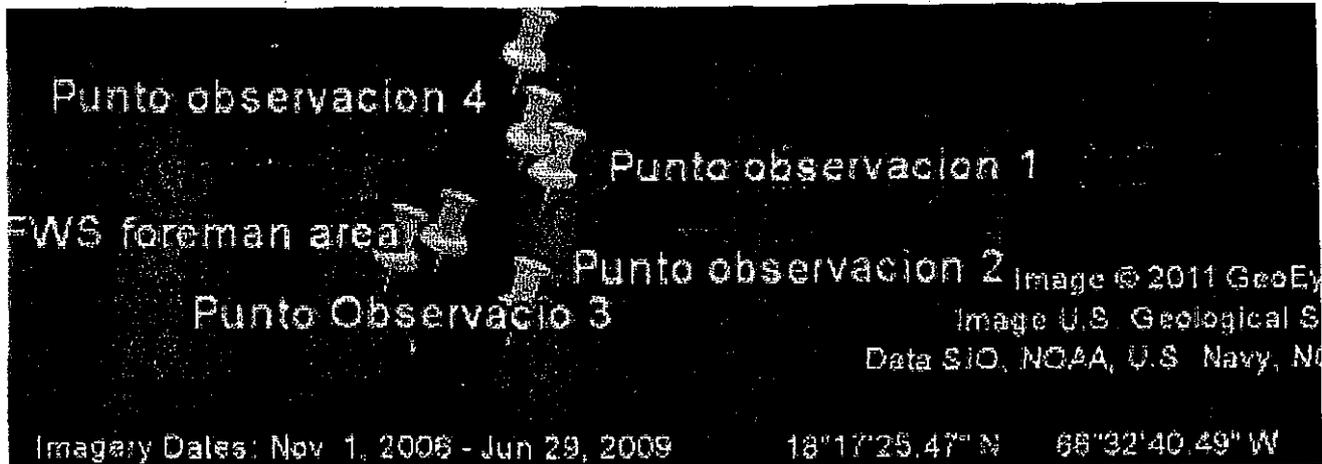
Punto observacion 4

Punto observacion 1

FWS foreman area

App-1174

Punto observacion 2



We also would like to provide comments regarding the plant surveys. We have provided technical assistance to PREPA regarding the surveys to identify suitable habitat for federally listed plants along the propose route for the Via Verde. On a meeting with PREPA on December 8, 2010 we agreed to conduct preliminary assessments for the Peñuelas area on December 13 and December 20, 2010.

The following comments are based on the points discussed on the December 8, 2010 meeting and the site visits to the Peñuelas area:

1. PREPA agreed to submit to the USFWS a detailed schedule of the site visits. The purpose of this schedule is to allow the USFWS personnel to conduct joint site visit to determine the quality of the habitat and the potential for the presence of Federally Listed plants. At present time, PREPA have failed to provide this schedule.
2. The Service expressed to PREPA our interest of evaluating the habitat within the following areas: the dry limestone forest of Peñuelas, the montane forest between Pico Cerrote and the town of Adjuntas and the limestone area between Manati and Vega Alta. At present time, we have only evaluated the area of Peñuelas (two sites).
3. During the December 13 and December 20, 2010 site visits we evaluated the Peñuelas area and confirmed the presence of suitable habitat comparable to the Guánica Forest Reserve. This area harbors suitable habitat for the following plant species: *Ottoschulzia rhodoxylon* (palo de rosa), *Trichilia triacantha* (bariaco), *Buxus valhii* (diablito de tres cuernos), *Eugenia woodburyana*, *Catesbaea melanocarpa* and *Cordia rupicola*. Furthermore, the structure of the vegetation at Peñuelas indicates that the area has remained undisturbed for at least 50 years and that the previous disturbance was limited to the extraction of wood for charcoal. This is evidenced by the presence of a well developed forest with an open understory and little evidence of exotic species. The Service has identified transects between the following reference points as highly valuable habitat for the previously mentioned plants: 18° 1' 14.65"N, 66 °42' 30.05"W - 18° 1' 25.69"N, 66° 41' 41.23"W and 18° 1' 25.69"N, 66° 41' 41.23"W - 18° 2' 44.56"N, 66° 41' 50.73"W. The Service is also interested in a comprehensive survey of the following transect: 18° 1' 9.19"N, 66 °42' 22.04"W - 18° 1' 2.77"N, 66° 42' 23.09"W.
4. PREPA have failed to provide a comprehensive written methodology and a schedule for the specific survey of threatened and endangered plants. We have urged PREPA consultant Yousev Garcia about the importance of providing the methodology. PREPA have only provided a brief summary related to plants survey on a letter dated November 5, 2010.
5. The Service has recommended that the surveys for threatened and endangered plants in areas with suitable habitat should be conducted within the entire expected footprint of the project. A general survey of the area is not recommended since it should result in the fail to detect viable populations of listed plants. Therefore, the surveys should be systematic and conducted by a group of trained botanists. The surveys of areas that are outside the footprint are unacceptable. Areas with suitable habitat should be entirely surveyed.

6. As we mentioned in previous occasions, we are concerned regarding impacts to listed species in the northern karst region, particularly on "mogotes". Any possible impact to the vegetation of a "mogote" should require an exhaustive survey for listed plants.

If you need additional information, please let us know. Thanks

Marelisa Rivera  
Assistant Field Supervisor  
U.S. Fish and Wildlife Service  
Ecological Services Caribbean Field Office  
P.O. Box 491  
Boqueron, Puerto Rico 00622  
(787) 851-7297 x 206 (direct)  
(787) 851-7440 (fax)  
(787) 510-5207 (mobile)  
marelisa\_rivera@fws.gov

There are three constants in life...change, choice and principles.  
Stephen R. Covey

Daniel Pagan <daniel\_paganrosa@yahoo.com>



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>

01/07/2011 05:12 PM

To "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>

cc Jousef Garcia <yousevgr@yahoo.com>

Subject Fw: Raptor work

Dear Marelisa:

As requested, enclosed please find the map identifying the additional observation locations mentioned in our previous letter. Hope that it provides the additional information requested.

Best Regards

Danny

Derek:

Please see attachment with the two additional observations points requested by USFWS. See you Next Week.

Yousev

--- On Fri, 1/7/11, Hengstenberg, Derek <[Derek.Hengstenberg@tetrattech.com](mailto:Derek.Hengstenberg@tetrattech.com)> wrote:

From: Hengstenberg, Derek <[Derek.Hengstenberg@tetrattech.com](mailto:Derek.Hengstenberg@tetrattech.com)>  
Subject: RE: Raptor work  
To: "Daniel Pagan" <[daniel\\_paganrosa@yahoo.com](mailto:daniel_paganrosa@yahoo.com)>, "Yousev Garcia" <[yousevgr@yahoo.com](mailto:yousevgr@yahoo.com)>  
Cc: "LarryEvans@bcpeabody.com" <[LarryEvans@bcpeabody.com](mailto:LarryEvans@bcpeabody.com)>  
Date: Friday, January 7, 2011, 11:25 AM

Can you send me GPS coordinates for these locations quicky? Or a map pinpointing the location. I am printing maps of the survey sites and would like to include these points (spot mapping).

Thanks

Derek Hengstenberg | Certified Wildlife Biologist

Main: 207.379.9496 | Cell: 908.616.0436

[derek.hengstenberg@tetrattech.com](mailto:derek.hengstenberg@tetrattech.com)

Tetra Tech | Ecological Services

451 Prestumpscot Street | Portland, Maine 04103 | [www.tetrattech.com](http://www.tetrattech.com)

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From: Daniel Pagan [[mailto:daniel\\_paganrosa@yahoo.com](mailto:daniel_paganrosa@yahoo.com)]  
Sent: Friday, January 07, 2011 11:33 AM  
To: Hengstenberg, Derek; Yousev Garcia  
Cc: [LarryEvans@bcpeabody.com](mailto:LarryEvans@bcpeabody.com)

App-1177

**Subject: Re: Raptor work**

Derek:

The service are requesting us to add 2 additional observation sites ( 9th and 10th). These are to be located in the following areas:

1. One at the east side of the Rio Grande de Arecibo, up stream of the Dos Bocas Dam. (This will be utilized to observe the Via Verde pipeline segment that is aligned with PR-10) and,
2. The other one will be located in the Puente Blanco sector in the municipal boundary between Utuado and Adjuntas (This will be utilized to observe the area where the Via Verde Pipeline alignment crosses the Pellejas River).

We will be confirming this information in writing to Marelisa this afternoon.

I spoke with the Secretary of the Department of Natural and Environmental Resources and Ivan will be available from Wednesday of said week (Jan 12, 2011). He will be taking care of this personally on Tuesday January 11, 2011

Have a safe trip.

Danny

---

**From:** "Hengstenberg, Derek" <Derek.Hengstenberg@tetrattech.com>  
**To:** Daniel Pagan <daniel\_paganrosa@yahoo.com>; Yousev Garcia <yousevgr@yahoo.com>  
**Cc:** "LarryEvans@bcpeabody.com" <LarryEvans@bcpeabody.com>  
**Sent:** Fri, January 7, 2011 11:28:41 AM  
**Subject:** Raptor work  
All,

I have lined up 2 biologists to work with me over the next couple of weeks. I am flying down there on Monday and plan to conduct a site tour on Tuesday with everyone to familiarize ourselves with the survey points and if need be to find a second survey point in focal area 2. Our current scope of work consists of 8 different sites. I just want to be sure that is going to work for the Service. Yousev mentioned that Service would like a 9<sup>th</sup> point.

Do we have final go ahead from USFWS on our protocol?

Thanks

Derek Hengstenberg | Certified Wildlife Biologist

Main: 207.879.9496 | Cell: 908.616.0436

derek.hengstenberg@tetratech.com

Tetra Tech | Ecological Services

451 Presumpscot Street | Portland, Maine 04103 | [www.tetratech.com](http://www.tetratech.com)

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[attachment "Utado Observation Point.jpg" deleted by Marelisa Rivera/R4/FWS/DOI] [attachment "Puente Blanco Observation Point.jpg" deleted by Marelisa Rivera/R4/FWS/DOI]



Felix Lopez/R4/FWS/DOI  
01/12/2011 08:37 AM

# 29

To: Marelisa Rivera/R4/FWS/DOI  
cc  
bcc  
subject: AEE Reply

History: This message has been forwarded.



Comparison between Draft and Final EIS of Via Verde and FWS concerns.doc FEIS reply.doc

Felix Lopez  
USFWS  
Boqueron FO  
787 510 5208

"No one seems to know what it is we do, but what ever it is, we are the only ones that can do it, and we do it well"

Comparison between Draft and Final EIS of Via Verde and FWS concerns:

Draft EIS did not discuss wetland mitigation, frac out, or any form of compensatory mitigation.

The COE Public Notice mentioned a nominal .01 to 1 mitigation for temporal wetland losses; the FEIS mentions a possible 3:1 mitigation for wetland impacts pending final decision from the Corps of Engineers. This however is not part of the existing COE permit application. The FEIS states that on site compensatory mitigation is being considered however the exact requirement for wetland mitigation will depend on verification of the Wetland Delineation and US Army Corps of Engineers final decision.

A frac out plan is now included in the FEIS as well as the use of a flourecine dye to detect any loss of drill mud under rivers and streams. It still does not really address our concern of loss of drill mud in karst.

The FEIS mentions a 10:1 habitat compensatory mitigation for the guabairo already negotiated with DNER.

A better description of the proposed construction through karst is provided, but it is still very poorly worded how AEE will avoid impacts to T&E plant species.

The lack of a final determination of impacts from the ROW land clearing continues, a 150 foot maintenance right of way is claimed by AEE along the entire route within this is a 100 foot construction right of way, however the document states that this construction right of way may expand out to a maximum of 300 depending on construction methods. The document states that the ROW will be cleaned of all vegetation and obstructions and leveled prior to construction activities. A 3:1 forested upland mitigation is being proposed for unavoidable impacts but there are no specifics other than it will be coordinated with DNER, we believe that the species list for any possible reforestation efforts should also be coordinated with the Service.

Section 6 states that forested areas will be planted with species that were present in the cleared areas or with similar species found in the forest.

Page 6.63 states that via verde will require the patrolling of the 50 permanent ROW, this will be used by biologist to determine the success of upland forest mitigation.

Section 6 of the document makes reference to a compensation and mitigation plan, however this plan is not included in the FEIS.

The formula used to estimate the extent of forested impacts may be slightly flawed: 18 miles x 30 meters = 221 cuerdas. If you use only feet instead of meters then the proposed 100 foot construction right of way x 18 miles; the estimated impacts are 224 cuerdas. We recommend that measurement units be standardized when making calculations.

One of FWS concerns was the maintenance of the 50 foot ROW. The need to patrol the pipeline is mentioned in several sections in the FEIS. The pipeline will be patrolled at least once a year or more. Patrols will be carried out by foot, vehicle or aircraft. This will require permanent vehicle access points and the maintenance of the ROW for vehicular traffic. FWS remains concerns include the method of ROW maintenance and the method of vehicular access to be used in the numerous stream crossings since no permanent vehicular stream crossings will be left.



Edwin Muniz/R4/FWS/DOI

01/13/2011 12:20 PM

# 33

To Dave Flemming/R4/FWS/DOI, Stephanie  
Bruner/R4/FWS/DOI@FWS

cc Marelisa Rivera/R4/FWS/DOI

bcc

Subject White House Input

Here is the White House for Via Verde gas pipeline proposal.



20110113\_Via Verde White House report.docx

---

Edwin E. Muñiz  
Field Supervisor  
Caribbean Field Office  
U.S. Fish and Wildlife Service  
(W) 787-851-7297  
(C) 787-405-3641  
(F) 787-851-7440  
edwin\_muniz@fws.gov  
Visit us at <http://www.fws.gov/caribbean/es/>

### Hot Topics

The Puerto Rico Electric Power Authority (PREPA) is proposing the Via Verde gas Pipeline which consists of a 92-mile-long natural gas pipeline that would cross 235 streams and wetlands. The proposal includes a 150-foot-wide-right-of-way that would affect about 369 acres of jurisdictional wetlands. The proposed project could affect habitat for more than thirty federally-listed species and one species for which was petitioned to be listed. The Service concurred with the Corps of Engineers' determination that the proposed project may affect thirty-two federally-listed species and recommended the development of a Biological Assessment. The Service does not concur with the applicant's determination that all impacts on wetlands would be temporary. The applicant also failed to perform an alternative analysis and to provide mitigation. The Service believes that because of the number of crossings, existing topography along the proposed route, construction techniques, possible contamination with drilling mud during directional drilling and the need to maintain a significant portion of the right-of-way free of native woody vegetation, substantial permanent impacts to ARNIs are anticipated. The ARNIs consist of creeks, rivers and wetlands located within the Northern Karst Region of Puerto Rico. The northern karst has been identified by the Service as a Strategic Habitat Conservation area and by the Puerto Rico Department of Natural Resources as a Priority Conservation Area. The Service supports the Commonwealth's efforts toward reducing Puerto Rico's dependence on fossil oils and encourages the use of alternate energy sources. In the past, the Service issued an Incidental Take Permit for a wind farm in southern Puerto Rico, concluded informal consultation for a former pipeline project known as "Gaseoducto del Sur", and are currently reviewing and providing technical assistance to several applicants on several alternate energy projects in Puerto Rico. However, the Service is concerned that the Via Verde Gas Pipeline as proposed will have substantial and unacceptable impacts on aquatic resources of national importance (ARNI) and listed species.

### New Media

The letter sent outlining the Service's position regarding the proposed Via Verde Gas Pipeline has been discussed in several media outlets in Puerto Rico.

Aaron Valenta/R4/FWS/DOI

01/13/2011 03:19 PM

# 37

To Jerry Ziewitz/R4/FWS/DOI@FWS

cc Jack Arnold/R4/FWS/DOI@FWS, Edwin  
Muniz/R4/FWS/DOI@FWS, Marelisa  
Rivera/R4/FWS/DOI@FWS

bcc

Subject 3(b) for Via Verde

Hi All,

Here's the signed 3(b) letter. Stephanie will have the original going out by FedEx this afternoon.



20110113\_3b\_Via Verde.pdf

Thanks,

Aaron Valenta  
Chief, Conservation Partnerships  
U.S. Fish and Wildlife Service  
1875 Century Boulevard, Suite 200  
Atlanta, Georgia 30345  
404/679-4144



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

1875 Century Boulevard  
Atlanta, Georgia 30345

JAN 13 2011

In Reply Refer To:  
FWS/R4/ES

Colonel Alfred A. Pantano, Jr.  
District Commander  
Jacksonville District Corps of Engineers  
701 San Marco Boulevard  
Jacksonville, Florida 32207-0019

RE: Public Notice SAJ-2010-02881 (IP-EWG), dated November 19, 2010, Via Verde Natural Gas Pipeline Project, Puerto Rico

Dear Colonel Pantano:

In accordance with the 1992 404(g) Memorandum of Agreement (MOA) between our agencies, the enclosed letter report provides the recommendations of the Department of the Interior in response to the above application for a Department of the Army Permit.

Pursuant to part IV 3(b) of the MOA, I have determined that the proposed work will have substantial and unacceptable impacts on aquatic resources of national importance, if permitted as specified in the public notice without incorporating our recommendations. I strongly encourage a mutual resolution of the identified wetland/wildlife concerns at the field level before you make a decision to issue the permit.

If you have any questions, please contact Edwin Muniz, Field Supervisor, Caribbean Ecological Services Field Office, at (787) 851-7297, extension 204.

Sincerely yours,

"for"  
Cynthia K. Dohner  
Regional Director

Enclosure

TAKE PRIDE  
IN AMERICA 

App-1186

Marelisa Rivera/R4/FWS/DOI  
01/14/2011 04:00 PM

40

To Daniel Pagan <daniel\_paganrosa@yahoo.com>  
cc CarlosPacheco/R4/FWS/DOI@yahoo.com, EDWIN BAEZ  
<E-BAEZ@PREPA.COM>, EdgarGarcia@yahoo.com,  
EdwinMuniz/R4/FWS/DOI@yahoo.com, "FRANCISCO E.  
bcc  
Subject Re: Comments FWS regarding raptors and plants

Dany:

We acknowledge the information regarding the raptors. Based on the information provided, our recommendations have been adopted by your staff.

However, the attached response does not address our concerns regarding surveys for plants. Since the beginning, we have requested the development of an appropriate methodology for the intensive surveys for listed plants. We have not received it yet. Conducting surveys without appropriate methodology and personnel to maximize the coverage for rare species with patchy distribution may result in lack of time and resources. Since we have limited staff, we cannot continue dedicating resources until we receive the appropriate methodology for the surveys of plants. It is important to continue clarifying that the purpose of my staff visiting the areas with your people and experts is to identify suitable habitat for conducting the intensive surveys and not to survey the area for the species. During these visits our staff noticed that most of the time, the group was outside of the center line of the proposed pipeline. From your staff present in these visits, only Dr. Axelrod has the experience and expertise to identify federally-listed plants. We would like to learn more about the expertise of Mr. Alberto Molina and his experience identifying federally-listed plants.

Be aware that the purpose of requested surveys for plants, raptors, PRCT, and nightjars are for the development of the Biological Assessment. As part of the formal consultation process both the Service and the Corps need to approve the BA. The Corps can share with you copy of the BA for the Gasoducto del Sur or Valenciano Project so you can see the level of analysis and the information needed. Until the BA is not complete the process does not start.

Thanks

Marelisa

Daniel Pagan <daniel\_paganrosa@yahoo.com>



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>  
01/12/2011 10:44 PM

To Marelisa\_Rivera@fws.gov  
cc Jousef Garcia <yousevgr@yahoo.com>, EdgarGarcia@yahoo.com, OmarMonsegur/R4/FWS/DOI@yahoo.com, RafaelGonzalez/R4/FWS/DOI@yahoo.com, EdwinMuniz/R4/FWS/DOI@yahoo.com, CarlosPacheco/R4/FWS/DOI@yahoo.com, LarryEvans@bcpeabody.com, Johanna R Willis <johannawillis@bcpeabody.com>, Ken Caraccia <KenCaraccia@bcpeabody.com>, "FRANCISCO E. LOPEZ GARCIA" <FLOPEZ1075@PREPA.COM>, IVELISSE SANCHEZ SOULTAIRE <I-SANCHEZ@PREPA.COM>, EDWIN BAEZ <E-BAEZ@PREPA.COM>  
Subject Re: Comments FWS regarding raptors and plants

Marelisa:

Thanks for your support and prompt response.

Attached please find our response to USF&WL additional request.

Hope that this will address all concerns.

Best Regards.

Danny

**From:** "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>  
**To:** Daniel Pagan <daniel\_paganrosa@yahoo.com>  
**Cc:** Jousef Garcia <yousevgr@yahoo.com>; EdgarGarcia@yahoo.com;  
OmarMonsegur/R4/FWS/DOI@yahoo.com; RafaelGonzalez/R4/FWS/DOI@yahoo.com;  
EdwinMuniz/R4/FWS/DOI@yahoo.com; CarlosPacheco/R4/FWS/DOI@yahoo.com  
**Sent:** Wed, January 12, 2011 4:55:19 PM  
**Subject:** Comments FWS regarding raptors and plants

Danny:

We have reviewed the information provided on January 7, 2011 regarding the proposed protocol to survey raptors and maps, and would like to provide the following comments. These comments and recommendations are based on observations/ recommendations from Service biologists during site visit conducted on January 4, 2011.

1. Add six new observation points to the endangered raptors study. Focal area surveys can be improved by adding more observation points. Even though the species participate in epigamic and territorial aerial displays during breeding season they do not stay most of the time over the canopy. The suggested points are shown in Figure 1 with the prefix FWS (coordinates of suggested points can be found on attach KMZ file, suggested point can be relocated within the suggested area).

2. Observation points by geographic location should be surveyed simultaneously. We suggest the next group of points to be studies at the same time:

- a. Points 2, 3 and FWS foreman.
- b. Points 1 and 4.
- c. Points 5, 6 and FWS Puente Blanco.
- d. Point 7, FWS Rio Abajo1 and 2.
- e. Point 8 and FWS Manati 1 and 2.

3. Conduct surveys for the Puerto Rican Parrot simultaneously with the raptor survey near the Rio Abajo Forest. The endangered Puerto Rican Parrot has been reported around the Rio Abajo Forest, parrot observation includes feeding,

flying and sheltering. Survey points near the Rio Abajo Forest are point 7, FWS Rio Abajo1 and 2.

Figure 1.

FWS Man

FWS Rio Abajo 2 Punto Obserbacion 7

FWS Rio Abajo 1

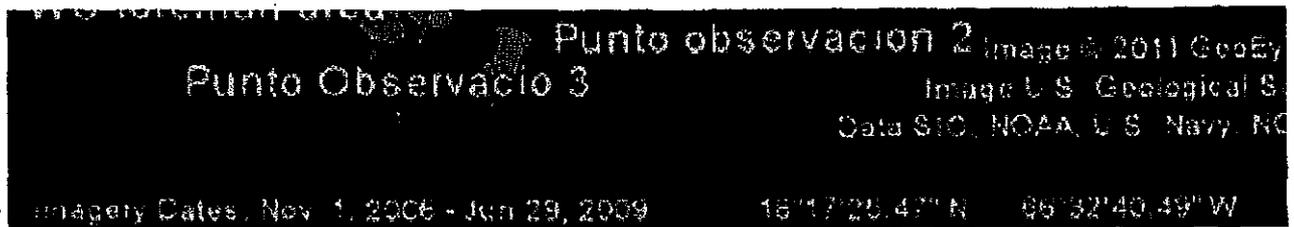
o Observacion 5 FWS Puente blanco area

Punto Observacion 5

Punto observacion 4

Punto observacion 1

EIA/S foreman area



We also would like to provide comments regarding the plant surveys. We have provided technical assistance to PREPA regarding the surveys to identify suitable habitat for federally listed plants along the propose route for the Via Verde. On a meeting with PREPA on December 8, 2010 we agreed to conduct preliminary assessments for the Peñuelas area on December 13 and December 20, 2010.

The following comments are based on the points discussed on the December 8, 2010 meeting and the site visits to the Peñuelas area:

1. PREPA agreed to submit to the USFWS a detailed schedule of the site visits. The purpose of this schedule is to allow the USFWS personnel to conduct joint site visit to determine the quality of the habitat and the potential for the presence of Federally Listed plants. At present time, PREPA have failed to provide this schedule.
2. The Service expressed to PREPA our interest of evaluating the habitat within the following areas: the dry limestone forest of Peñuelas, the montane forest between Pico Cerrote and the town of Adjuntas and the limestone area between Manati and Vega Alta. At present time, we have only evaluated the area of Peñuelas (two sites).
3. During the December 13 and December 20, 2010 site visits we evaluated the Peñuelas area and confirmed the presence of suitable habitat comparable to the Guánica Forest Reserve. This area harbors suitable habitat for the following plant species: *Ottoschulzia rhodoxylon* (palo de rosa), *Trichilia triacantha* (bariaco), *Buxus valhii* (diablito de tres cuernos), *Eugenia woodburyana*, *Catesbaea melanocarpa* and *Cordia rupicola*. Furthermore, the structure of the vegetation at Peñuelas indicates that the area has remained undisturbed for at least 50 years and that the previous disturbance was limited to the extraction of wood for charcoal. This is evidenced by the presence of a well developed forest with an open understory and little evidence of exotic species. The Service has identified transects between the following reference points as highly valuable habitat for the previously mentioned plants: 18° 1' 14.65"N, 66° 42' 30.05"W - 18° 1' 25.69"N, 66° 41' 41.23"W and 18° 1' 25.69"N, 66° 41' 41.23"W - 18° 2' 44.56"N, 66° 41' 50.73"W. The Service is also interested in a comprehensive survey of the following transect: 18° 1' 9.19"N, 66° 42' 22.04"W - 18° 1' 2.77"N, 66° 42' 23.09"W.
4. PREPA have failed to provide a comprehensive written methodology and a schedule for the specific survey of threatened and endangered plants. We have urged PREPA consultant Yousev Garcia about the importance of providing the methodology. PREPA have only provided a brief summary related to plants

survey on a letter dated November 5, 2010.

5. The Service has recommended that the surveys for threatened and endangered plants in areas with suitable habitat should be conducted within the entire expected footprint of the project. A general survey of the area is not recommended since it should result in the fail to detect viable populations of listed plants. Therefore, the surveys should be systematic and conducted by a group of trained botanists. The surveys of areas that are outside the footprint are unacceptable. Areas with suitable habitat should be entirely surveyed.

6. As we mentioned in previous occasions, we are concerned regarding impacts to listed species in the northern karst region, particularly on "mogotes". Any possible impact to the vegetation of a "mogote" should require an exhaustive survey for listed plants.

If you need additional information, please let us know. Thanks

Marelisa Rivera  
Assistant Field Supervisor  
U.S. Fish and Wildlife Service  
Ecological Services Caribbean Field Office  
P.O. Box 491  
Boquerón, Puerto Rico 00622  
(787) 851-7297 x 206 (direct)  
(787) 851-7440 (fax)  
(787) 510-5207 (mobile)  
marelisa\_rivera@fws.gov

---

There are three constants in life...change, choice and principles.  
Stephen R. Covey

☛ Daniel Pagan <daniel\_paganrosa@yahoo.com>

**Daniel Pagan**  
<daniel\_paganrosa@ya  
hoo.com>

To "Marelisa\_Rivera@fws.gov"

01/07/2011 05:12 PM

<Marelisa\_Rivera@fws.gov>

cc:Jousef Garcia <yousevgr@yahoo.com>

Subject:Fw: Raptor work

Dear Marelisa:

As requested, enclosed please find the map identifying the additional observation locations mentioned in our previous letter. Hope that it provides the additional information requested.

Best Regards

Danny

Derek:

Please see attachment with the two additional observations points requested by USFWS. See you Next Week.

Yousev

--- On Fri, 1/7/11, Hengstenberg, Derek  
<Derek.Hengstenberg@tetrattech.com> wrote:

From: Hengstenberg, Derek <Derek.Hengstenberg@tetrattech.com>

Subject: RE: Raptor work

To: "Daniel Pagan" <daniel\_paganrosa@yahoo.com>, "Yousev Garcia"  
<yousevgr@yahoo.com>

Cc: "LarryEvans@bcpeabody.com" <LarryEvans@bcpeabody.com>

Date: Friday, January 7, 2011, 11:25 AM

Can you send me GPS coordinates for these locations quicky? Or a map pinpointing the location. I am printing maps of the survey sites and would like to include these points (spot mapping).

Thanks

**Derek Hengstenberg | Certified Wildlife Biologist**

Main: 207.879.9496 | Cell: 908.616.0436

derek.hengstenberg@tetrattech.com

**Tetra Tech | Ecological Services**

451 Presumpscot Street | Portland, Maine 04103 | [www.tetrattech.com](http://www.tetrattech.com)

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**From:** Daniel Pagan [[mailto:daniel\\_paganrosa@yahoo.com](mailto:daniel_paganrosa@yahoo.com)]

**Sent:** Friday, January 07, 2011 11:33 AM

**To:** Hengstenberg, Derek; Yousev Garcia

**Cc:** LarryEvans@bcpeabody.com

**Subject:** Re: Raptor work

Derek:

The service are requesting us to add 2 additional observation sites ( 9th and 10th). These are to be located in the following areas:

1. One at the east side of the Rio Grande de Arecibo, up stream of the Dos Bocas Dam. (This will be utilized to observe the Via Verde pipeline segment that is aligned with PR-10) and,
2. The other one will be located in the Puente Blanco sector in the municipal boundary between Utuado and Adjuntas (This will be utilized to observe the area where the Via Verde Pipeline alignment crosses the Pellejas River).

We will be confirming this information in writing to Marelisa this afternoon.

I spoke with the Secretary of the Department of Natural and Environmental Resources and Ivan will be available from Wednesday of said week (Jan 12, 2011). He will be taking care of this personally on Tuesday January 11, 2011

Have a safe trip.

**App-1194**

Danny

**From:** "Hengstenberg, Derek" <Derek.Hengstenberg@tetrattech.com>  
**To:** Daniel Pagan <daniel\_paganrosa@yahoo.com>; Yousev Garcia <yousevgr@yahoo.com>  
**Cc:** "LarryEvans@bcpeabody.com" <LarryEvans@bcpeabody.com>  
**Sent:** Fri, January 7, 2011 11:28:41 AM  
**Subject:** Raptor work

All,

I have lined up 2 biologists to work with me over the next couple of weeks. I am flying down there on Monday and plan to conduct a site tour on Tuesday with everyone to familiarize ourselves with the survey points and if need be to find a second survey point in focal area 2. Our current scope of work consists of 8 different sites. I just want to be sure that is going to work for the Service. Yousev mentioned that Service would like a 9<sup>th</sup> point.

Do we have final go ahead from USFWS on our protocol?

Thanks

**Derek Hengstenberg | Certified Wildlife Biologist**

Main: 207.879.9496 | Cell: 908.616.0436

derek.hengstenberg@tetrattech.com

**Tetra Tech | Ecological Services**

451 Presumpscot Street | Portland, Maine 04103 | [www.tetrattech.com](http://www.tetrattech.com)

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[attachment "Utuada Observation Point.jpg" deleted by Marelisa Rivera/R4/FWS/DOI]  
[attachment "Puente Blanco Observation Point.jpg" deleted by Marelisa Rivera/R4/FWS/DOI]

Marelisa:

Thanks for your pront responce



Marelisa[1]letter with recommendations .doc Cerrote Study Area.jpg Dry Limestone Study Area.jpg



# United States Department of the Interior



## FISH & WILDLIFE SERVICE

### Boqueron Field Office

Carr. 301, KM 5.1, Bo. Corozo

P.O. Box 491

Boqueron, PR 00622

JAN 20 2011

*CAPS  
JPP*

Mr. Angel Rivera Santana  
Director, Planning and Environmental Protection  
PR Electric Power Authority  
PO Box 364267  
San Juan, Puerto Rico 00936-4267

Re: SAJ 2010-02881 IP-EWG, Via Verde  
Gas Pipeline, Final Environmental Impact  
Statement (Final EIS)

Dear Mr. Rivera:

Thank you for your letter dated December 20, 2010, providing a copy of the Final EIS for the Via Verde gas pipeline. Our comments are issued as technical assistance in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq. as amended).

In the letter, you mentioned that the comments raised by the Service on the December 15, 2010, letter to the U.S. Army Corps of Engineers were based on the preliminary EIS and not the Final EIS. You also mentioned that most of the comments raised in our December 15, 2010 letter were addressed in the approved Final EIS.

You should be aware that our December 15, 2010 letter is in response to the U.S. Army Corps of Engineers Public Notice requesting comments and our comments were based on the information provided by Puerto Rico Electric and Power Authority in the Joint Permit Application (JPA) and the documents referenced and attached to the JPA. The Final EIS was not part of the JPA; however, the preliminary EIS was part.

We have reviewed the information in the Final EIS and we have concluded that the document does not address the Service concerns regarding the Via Verde Project. Therefore, our comments made to the Corps on December 15, 2010 still stand. Furthermore, the Final EIS increased our concerns regarding possible effects to wetland since the document states that the project corridor may range from the 150 foot corridor to 300 feet in areas where HDD takes place. The JPA only mentioned a 150 foot corridor. Regarding the proposed mitigation for wetlands, the JPA and the final EIS are

Mr. Rivera Santana

2

not consistent. Other mitigation plans for impacts to fauna and flora are mentioned in the document but none have been developed or approved.

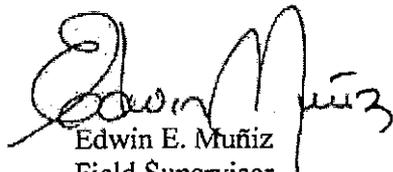
We have reviewed Chapter 8, Section 8.5 which listed the agency comments and PREPA's response. Of the numerous concerns the Service expressed regarding the proposed project, the Final EIS listed our comments regarding the lack of appropriateness of flora fauna studies, and the response consists of mentioning that additional studies will be conducted. The document mentioned that as the final answer to the Service concern is that it will be resolved during the ongoing Corps of Engineers Joint Permit Application review. Be aware that at present time, this issue has not been appropriately addressed. For example surveys with appropriate methodology for listed plants and the endangered nightjars have not been conducted. The Section 8.5 makes reference to the Joint Permit process, and defers addressing resolution of wetland impacts, mitigation, and other concerns to the ongoing Corps Joint Permit review.

The comments provided by the Service on December 15, 2010 are comprehensive and complex. While the Final EIS provides some additional information, the document does not provide an in-depth analysis of the direct, indirect, cumulative, interrelated and interdependent effects on our listed species and their habitats, aquatic resources (wetland, streams, etc.), forested lands and sinkholes in the northern karst region of Puerto Rico. We continue to believe that the project as currently proposed constitutes a major construction activity with potential significant adverse effects to the human environment. Therefore, we continue recommending the development of a federal Environmental Impacts Statement, as required under NEPA.

As we expressed before, the Service supports alternatives to the use of fuel as the main energy source in Puerto Rico. We recommend PREPA to continue identifying alternative sources, construction methods and project sites to minimize adverse effects of energy projects into our natural resources.

If you have any questions please contact Ms. Marelisa Rivera at 787 851 7297 x 206.

Sincerely,



Edwin E. Mufiz  
Field Supervisor  
Caribbean Ecological Services  
Field Office

Fhl/mtr

cc:

COE, Regulatory, Jacksonville

COE, Regulatory, San Juan



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>

01/23/2011 10:53 PM

# 47

To "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>, Edwin\_Muniz@fws.gov  
cc IVELISSE SANCHEZ SOULTAIRE  
<I-SANCHEZ@PREPA.COM>, Jousef Garcia  
<yousevgr@yahoo.com>, EDWIN BAEZ

bcc

Subject Via Verde Project

History

This message has been forwarded.

Dear Marelisa:

Sorry that I was not able to go back to you earlier, but believe me I was not able to do so.

**Raptor Field Study:**

First; thanks for the information related with Mr. Llerandi's participation on the raptors study being undertaken by Derek Hengstenberg of Tetra-Tech.

As you are aware, we are expecting to complete the field work on January 27, 2011, including all additional sites recommended by your office personnel. Instructions were given to Mr. Hengstenberg to update the protocol of the Work Plan developed and approved by your staff to include additional sites evaluated aimed to ensure the record reflects the work developed and completed. We hope to have the updated document in your office before January 25, 2011.

**Guabairo Field Study:**

We are including a Proposal aimed to evaluate the Guabairo Habitat on the segments of the alignment that may be considered suitable habitat for this endangered species. The proposal written by Julio Cardona and José L. (Tito) Chavert considers a scientific approach that has proven to be effective in undertaking the task requested by your office. In light of the above, we are pleased to present the Proposal for your consideration and approval. Please note that Mr. Cardona & Mr. Chavert are ready to initiate the required field work two days after the approval and acceptance of the document included herein is secured from the Fish & Wildlife Service. (See Attachment # 1)

The Proposal was written in Spanish, since it is the official language of the Commonwealth of Puerto Rico.

In the event additional information related with this subject is needed, please do not hesitate to contact us at your convenience.

Thank you for your support in this important project.

I will call you tomorrow to discuss these subjects in more detail.

Regards

Danny Pagan



Propuesta para Estudio de Guabairo - Via Verde-19 de enero de 2011[1].pdf



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>

01/25/2011 06:47 PM

# 49

To "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>, Edwin\_Muniz@fws.gov  
cc Jousef Garcia <yousevgr@yahoo.com>, Derek Hengstenberg <Derek.Hengstenberg@tetrattech.com>, Paul Myers <Paul.Myers@tetrattech.com>,  
bcc

Subject Updated Raptors Work Plan

History This message has been forwarded

Dear Marelisa:

As indicated in our previous E- Mail attached please find the updated Raptors Work Plan aimed to address the additional observation locations added as a result of your staff recommendations.

The document is being presented in an effort to have the record reflecting the actual work provided in accordance with F&WS recommendations.

Best Regards

Danny



Updated Raptor Survey Work Plan- Via Verde Project 1-25-11[1].pdf



GOVERNMENT OF PUERTO RICO  
**Puerto Rico Electric Power Authority**

Miguel A. Cordero López, P.E.  
Executive Director & CEO

m-cordero@prepa.com

January 27, 2011

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  
Via Verde Natural Gas Project  
Public Notice Number SAJ-2010-02881 (IP-EWG)**

US ARMY CORPS  
OF ENGINEERS  
2011 FEB -9 P 4:34  
ANTILLES OFFICE REGION  
OFFICE

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 Via 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 Via 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 Via 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.)



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2/9

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.<sup>1</sup>

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<sup>1</sup> 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.<sup>2</sup> 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<sub>2</sub>) and other greenhouse gas emissions. Even using the newest clean technology for burning coal, the amount of CO<sub>2</sub> emissions is around 30% lower when natural gas is burned instead of coal. CO<sub>2</sub> 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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<sup>2</sup> 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 Via 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 Via 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 Via 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 Via 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.

Construction associated with the Via 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. Via 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.

Ms. Judith Enck  
Page 5  
January 27, 2011

### **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 Vía 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<sub>2</sub> 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.

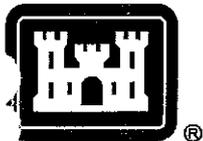
Cordially,



Enclosure

c EPA Caribbean Field Office  
USACE  
DNER  
EQB

App-1206



# NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS | Jacksonville District

BUILDING STRONG®

Release No.: NR 11-004

For Release: January 27, 2011

Contact: Nancy J. Sticht

Phone: (904) 232-1667 (904) 334-1054

Email: Nancy.J.Sticht@usace.army.mil

FAX: (904) 232-2237

## FOR IMMEDIATE RELEASE

### U.S. Army Corps of Engineers clarifies position on Via Verde permit application

JACKSONVILLE, Fla. – The U.S. Army Corps of Engineers, Jacksonville District has informed Puerto Rico Electric and Power Authority that its application for a Department of the Army permit to construct and install a natural gas pipe line transversing the island of Puerto Rico will be held in abeyance pending receipt of additional information and documentation.

The proposed 1,672-acre project area would impact 235 river and wetlands crossings, a total of 369 acres of jurisdictional Waters of the United States. The Corps renders permit decisions under Section 404 of the Clean Water Act of 1972, which regulates the discharge of dredged or fill material into waters of the United States, including wetlands.

The Corps informed the permit applicant, in a Dec. 22 letter, that its initial review of the project proposal and a preliminary review of comments received from resource agencies and the public following a Nov. 19 public notice revealed environmental and public interest concerns that cannot be adequately evaluated with the information initially submitted by the applicant. Among these concerns are public safety, environmental impacts, endangered species, habitat conservation and historic properties.

The National Environmental Policy Act requires that these concerns be properly addressed. Further, the Corps must coordinate with resource agencies, as appropriate, to satisfy Endangered Species Act (ESA), National Historic Properties Act and other legal requirements. At the direction of the Corps, the applicant is currently conducting cultural resources and ESA surveys, evaluating impacts and meeting with various agencies to address concerns.

The Corps will resume its evaluation once the applicant submits the required information. There is no estimate at this time of when the Corps expects to make a permit decision.

Page 1 of 2

US ARMY CORPS OF ENGINEERS | Jacksonville District

P.O. Box 4970 • Jacksonville, FL 32232-0019

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For more information, including a copy of the Corps' Dec. 22 letter, please visit [www.saj.usace.army.mil/Divisions/Regulatory/interest.htm](http://www.saj.usace.army.mil/Divisions/Regulatory/interest.htm) and click on the link for Via Verde Natural Gas Pipe Line.

###

Sandra Perez/R4/FWS/DOI

01/27/2011 05:23 PM

# 54

To daniel\_paganrosa@yahoo.com

cc Marellsa Rivera/R4/FWS/DOI, Edwin Muniz/R4/FWS/DOI

bcc

Subject Raptor and Nightjar Surveys - Via Verde, Project

Mr. Pagán,

Attached is the letter regarding Raptor and Nightjar Surveys.



Raptor and Nightjar Surveys\_Via Verde.pdf

Cordially,

Sandra Pérez  
Administrative Assistant  
Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
787-851-7297 ext. 200



# United States Department of the Interior



## FISH & WILDLIFE SERVICE

### Boqueron Field Office

Carr. 301, KM 5.1, Bo. Corozo

P.O. Box 491

Boqueron, PR 00622

JAN 27 2011

Daniel Pagán Rosa  
Asesores Ambientales y Educativos Inc.  
130 Winston Churchill Ave.  
PMB 145  
San Juan, Puerto Rico 00926-6018

Re: Raptor and Nightjar Surveys  
Via Verde, Project

Dear Mr. Pagán:

This letter is in response to your email dated January 23, 2011, regarding Raptor Field Surveys and Guabairo Field Study, and your email dated January 25, 2011, regarding the Updated Raptor Survey for the above-mentioned project. As requested, our comments are issued as technical assistance in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq. as amended).

#### Puerto Rican Nightjar (Guabairo) Field Study:

We have the following comments to the proposed protocol to survey Puerto Rican Nightjars:

1. The text included in the email mentioned that this is a proposal to evaluate Nightjar habitat, but the attached proposal mentioned that the purpose of the proposal is to evaluate nightjar presence and abundance. Be aware that the evaluation of nightjar habitat and evaluation of presence, absence and abundance are different types of studies with different methodologies.
2. The Nightjar studies should address the following areas as mentioned in the previous letters of October 18, 2010, November 10, 2010, and December 15, 2010:
  - a. Detect presence of the species,
  - b. Determine number of singing males to be affected by the project,
  - c. Quantify nightjar habitat size to be affected by the ROW of the project,
  - d. Determine possible direct or indirect effects on the species.
3. The Service recommends that surveys are conducted in Nightjar suitable habitat areas and should be conducted within the entire right of way of the project. Areas with suitable habitat should be surveyed in it's entirely.

4. Provide a detailed schedule of the site visits. The Service would like to participate in some site visits to determine quality of the habitat and the potential for the presence of the federal listed species.
5. The currently proposed evaluation is an effective method for nightjar presence but not for population estimates. The current method could be used as an index of males singing abundance. To obtain population estimates the applicant should use any method that account for potential detection bias (e.g. distance sampling).
6. We continue to be concerned with potential nightjar habitat impacts proposed destruction within the area identified for the mitigation area for the Gasoducto del Sur and nearby areas. As we have mentioned previously, this area has been identified by species expert as the best habitat to be protected in the Guayanilla-Peñuelas area. We continue recommending the project route to be modified to avoid fragmentation of this important habitat.

#### Raptor Surveys:

1. On January 12, 2011, the Service recommended additional points to be surveyed. On that same day, you submitted a letter accepting the Service recommendations. The new protocol submitted January 25, 2011, left out a point in the Mariati area recommended by the Service. We continue recommending that the Manati area be surveyed appropriately. In addition, the new protocol eliminated one point suggested by the applicant in Vega Alta and accepted by the Service.
2. New proposed raptor survey does not mention if observation points were simultaneously surveyed by area as suggested in our communication dated January 12, 2011. Instead mentions "depending on site locations viewshed coverage, one to three surveys locations will be conducted on daily basis".
3. An e-mail by Tetra tech on 12/30/2010 indicates that survey locations will be survey by 2 biologists per survey location, but your proposed survey does not mention the amount of biologists per survey location. On January 18, 2011, we expressed this concerned since we became aware that only three biologists were conducting the surveys instead of four. Furthermore, we are aware that the Principal Investigator left the island last week and only two biologists remain in the field. Be aware that the amount of "survey effort" is one variable that can affect the results of any study.

Regarding surveys of listed plants, we are still waiting for the methodology to be submitted to the Service for our review.

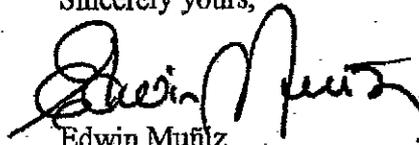
In several meetings and site visits, when the Service has expressed concerns regarding a particular area, the consultants have expressed that the route would be changed or has been changed. However, at present time, we have not received any updated information regarding the final route.

Mr. Pagán

3

Thank you for the opportunity to provide input. If you have any questions, please call Marelisa Rivera at 787-851-7297 extension 206.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Edwin Muñiz". The signature is fluid and cursive, with the first name being more prominent.

Edwin Muñiz  
Field Supervisor

Cc: COE, San Juan  
PREPA, San Juan

GOVERNMENT OF PUERTO RICO  
*Puerto Rico Electric Power Authority*  
SAN JUAN, PUERTO RICO

www.aeepr.com



PO BOX 384267  
SAN JUAN, PUERTO RICO 00936-4267

January 28, 2011

Mr. Edgar W. García  
Regulatory Project Manager  
Antilles Regulatory Section  
Jacksonville District Corps of Engineers  
400 Fernández Juncos Avenue  
San Juan, Puerto Rico 00901-3299

Dear Mr. García:

RE: SAJ 2010-02881 IP-EWG, Vía Verde Gas Pipeline

This correspondence responds to the letter you sent on December 22, 2010 with regard to Department of the Army permit application SAJ-2010-02881 (IP-EWG). The letter requested a comprehensive and detailed written response to issues of concern the U.S. Army Corps of Engineers (Corps) has and issues raised in letters and documents received during the public notice (PN) comment period. These comment letters and emails were included on a CD sent with your letter. This response consists of two documents. The first is a point by point response to the issues in your letter. The second is an attachment with additional information in response to the issues raised in some of the comment letters to the Corps PN.

The Puerto Rico Electric Power Authority (PREPA), the applicant, will continue to work closely with the Corps and all regulatory agencies, both federal and local. In this letter we will address the issues you raised and provide information in response to those issues. However, we must point out that it is difficult, if not impossible, to properly address issues of concern if the Corps does not clearly and specifically identify those substantive issues pertinent to its review responsibility. Advising PREPA the information previously provided does not "... fully address the public interest factors ..." and "... is largely deficient ..." does not help us provide the specific detailed response you may need on a particular issue.

You express a concern that project impacts have not been adequately quantified. We must profess some confusion on this point since Chapter VI in the Final Environmental Impact Statement (FEIS) approved on November 30, 2010 by the

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Mr. Edgar W. García  
Page 2  
January 28, 2011

Environmental Quality Board (EQB) is quite detailed in discussing impacts expected to occur from the project. As publicly announced, the FEIS can be found on the Via Verde website at [http://www.aeepr.com/viaverde\\_DIAP2.asp](http://www.aeepr.com/viaverde_DIAP2.asp). The document has also been posted on the EQB webpage since November 29, 2010. PREPA submitted a copy of the Preliminary Environmental Impact Statement and of the said FEIS to the Corps, since parts of those documents have been incorporated by reference to the Joint Permit Application (JPA). With regard to impacts specific to the aquatic resource, additional information is provided further in this correspondence, Item d. Wetlands. After reviewing the information provided in Chapter 6 of the FEIS and the "Wetlands" section of this letter, if the Corps determines further, detailed information will be required, the applicant and its agents request a meeting be scheduled to discuss what additional, specific information is necessary.

We agree the use of National Wetlands inventory maps to ascertain the existence of jurisdictional areas for Puerto Rico, particularly along the north coast, is challenging. Recognizing that fact, Mr. Jorge Coll (Coll Rivera Environmental) determined the extent of waters of the U.S. (WoUS) for the project after completing a detailed field survey. The methodology employed for this site specific field study followed the 1987 Corps of Engineers Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Caribbean Islands Region (the Caribbean supplement). In areas where differences between the Manual and the Caribbean supplement occurred, the Caribbean supplement took precedence. The *Jurisdictional Wetlands and U.S. Waters Determination Study – Via Verde Pipeline, August 2010* and *Via Verde Wetland Data Determination Forms – Caribbean Islands* sections found in the Preliminary EIS, included with the original JPA submittal, detail the limits of the jurisdictional wetlands. There were areas where a determination was difficult, due to past or recent land use, or other reasons. In those cases, Mr. Coll based his determination on the best information available, interpreted in light of his professional experience and knowledge of the ecology of wetlands in the area, as stated in the Caribbean supplement. The applicant's wetland scientists acknowledge that minor discrepancies may exist and welcome the opportunity to field verify (ground-truth) any questionable wetland signatures during a jurisdictional determination site visit. Since this has been the procedure utilized by the Corp to address challenges, we would like to coordinate the field visits (ground-truth) at your earliest convenience so any concerns can be immediately addressed.

You state that the Alternative Analysis provided with the permit application packet is qualitative and lacks sufficient detail for review. After multiple public meetings were held to discuss the project and involve the public, PREPA published a Public Notice in local newspapers to advise the general public of the availability of the FEIS. The applicant also delivered a copy of this document to the 13 municipalities to benefit from the project and placed the FEIS on its website ([http://www.aeepr.com/viaverde\\_DIAP2.asp](http://www.aeepr.com/viaverde_DIAP2.asp)). Concurrently, the EQB posted the

Mr. Edgar W. García  
Page 3  
January 28, 2011

complete FEIS on its webpage to allow all interested parties to access the document under consideration. Chapter 6 of the FEIS discusses the "Study of Alternatives and Selection of Alignment" PREPA prepared. This Chapter also includes an Annex with Criteria Maps and a Selection Matrix for the pipeline routes that were evaluated. The applicant believes many of the comments directed at the alternatives analysis in the Preliminary EIS were addressed in the FEIS approved by the EQB (which has been available to the general public since November 29, 2010). However, in response to your request, PREPA is rearranging and modifying the Alternative Analysis so it will satisfy the Corps' expectations.

You referred to the U.S. Fish and Wildlife Service letter of December 15, 2010 and asked for clarification on how natural gas will be delivered to the pipeline. As mentioned in PREPA's letter dated December 17, 2010, the evaluation and comments presented by the USFWS were based on the Preliminary (Draft) EIS dated September 9, 2010. Two editions of the EIS (Preliminary and Final) were written, presented and finally approved by all local regulatory agencies. At this time PREPA intends to meet gas delivery requirements for the project using the existing EcoEléctrica Facility. There is no plan to construct a separate barge offload operation. It is the applicant's position that EcoEléctrica will be able to fully meet delivery needs. If the Corps disagrees with this position, a meeting is requested to further discuss these concerns.

Regarding the returned public notices and the list of addresses you provided, PREPA identified updated addresses and hand delivered the documents. The proof of delivery for all delivered letters is attached to this correspondence. We recognize the need for an additional 30-day comment period **exclusively** for these members of the public.

In regard to the concerns of the general public presented in the other letters provided and received by the Corps as part of the PN process, we would like to refer you to Chapter 8 of the FEIS. This Chapter provides a summary of responses related to the comments received from the general public. The Chapter also includes additional responses to comments received from the state regulatory agencies as well as from the Environmental Sub Committee designated by Commonwealth Law 76 of May 5, 2000.

In the following paragraphs we will address the issues you summarized from the comment letters received:

**National Marine Fisheries Service (NMFS)** – The applicant's agent, BCPeabody Consulting (BCP), is responding to the request for additional information in the NMFS letter dated December 19, 2010. As part of this process, BCP staff met with Mr. Miles M. Croom, NMFS Assistant Regional Administrator, on January 6, 2011. The project, as currently designed, will not result in any impacts to estuarine forested or

seagrass habitats and will likely not require an extended NMFS project review. Direct responses to the NMFS December 19, 2010 letter are included in the Attachment.

It is important to clarify one aspect of the NMFS comment letter that resulted from the public notice. A major concern of NMFS was perceived impact to estuarine forested habitats associated with the Via Verde Pipeline alignment. There will be no impacts to estuarine forested habitat from construction of the pipeline. To avoid impacts and to protect the estuarine forested habitats, the Horizontal Directional Drilling (HDD) construction approach will be utilized. In addition, PREPA will undertake a detailed supplemental site evaluation at three areas along the alignment to validate that no threatened or endangered species are located in any estuarine forested area and to establish a baseline in these areas. Data collected as a result of this supplemental field work will be provided to the NMFS and the Corps once it becomes available.

**US Fish and Wildlife Service (USFWS)** – At the present time (with full knowledge of the Corps and the USFWS), the applicant has a team of regional scientific experts conducting site specific, appropriate surveys along the proposed route to determine presence/absence of listed plant and animal species within the project area and the amount of suitable habitat. The survey methodologies developed and the surveys conducted are being carried out by experienced and qualified personnel reviewed by the USFWS. Members of the USFWS staff have been actively involved in the development of the ESA species survey protocols and have participated in some of the field studies. The draft Biological Evaluation (BE) included with the Joint Permit Application will be appended to include the results of all supplemental surveys and will be the basis for future consultations with the Service. Direct responses to the concerns expressed in the USFWS December 15, 2010 letter, are included in the Attachment. Moreover, we must stress that comments presented in the USFWS December 15, 2010 letter appear to be drafted after their evaluation of the Preliminary (Draft) EIS presented back on September 9, 2010 before the EQB. These comments were not based on an evaluation of the FEIS approved on November 30, 2010. A copy of the FEIS was delivered to the USFWS on December 20, 2010.

**Federal Highways Administration (FHWA)** – CMA Architects & Engineers LLP is currently working to collect the detailed pipeline information related to construction within the local highways right-of-way (ROW) as part of the final alignment of the Via Verde project. The applicant's goal is to have the Waiver Application presented before the local Highway Authority (HA) by January 21, 2011. Requisite coordination will be established with the HA so the Via Verde waiver Application will be evaluated as soon as it is received, with an effort to have it approved at the local level by the end of January 2011. Simultaneously, a Draft of the Waiver Application will be delivered to the Federal Highway Administration (FHWA) so that any recommendation can be included in the final application to be filed for necessary approval.

Once local approval is secured for the Waiver Application, the final local endorsement and approval will be delivered to the FHWA for necessary approval. Preliminary information secured from the FHWA personnel indicates it will take approximately 30 days to secure the federal approval required.

**State Historic and Preservation Office (SHPO)** – As recommended by the SHPO, PREPA recently authorized the implementation of a 1B archaeological study aimed to further evaluate the areas and sites recommended in the completed 1A study, included in the Final Environmental Impact Statement approved on November 30, 2010 by the Environmental Quality Board. The results of this additional evaluation will be presented to the SHPO as soon as the 1B report is available.

Efforts related to the 1B Study will be completed by licensed archaeologists Marisol Rodriguez and Carlos Ayes. They are the professionals hired to undertake the efforts related with the recently completed 1A Study.

**Environmental Protection Agency (EPA)** – The EPA letter is fairly general in nature and is a direct result of the evaluation of the Preliminary EIS presented back on September 9, 2010 before the EQB. The agency's comments are not based on the FEIS (available since November 30, 2010). As previously mentioned, the applicant has iteratively worked to avoid high quality wetlands and other jurisdictional aquatic areas. Although there is some confusion as to what aquatic resources should be classified as "aquatic resources of national importance", the applicant feels the ROW selection process has essentially avoided such resources, by any definition.

The applicant continues to work with the USFWS and the NMFS to address outstanding issues regarding threatened and endangered species. As part of these consultations, both agencies have recommended that supplementary studies and field efforts be undertaken. It has been agreed that upon completion of these studies, a revised and updated BE will be provided to the Corps. This updated document will be sufficient to allow for the completion of the project review.

The concerns expressed by the EPA with respect to the use of Horizontal Directional Drilling (HDD) in karst environments have been addressed in Item e) Horizontal Directional Drilling which follows.

**Puerto Rico Engineers and Surveyors Association (CIAPR, in Spanish)** - the overall project purpose is to deliver an alternate fuel source to the three existing electric power generating facilities located on the north coast. Attempting to use the Costa Sur complex in combination with the Aguirre Power Plant would be inconsistent with the overall purpose of this project, and therefore is not a practicable alternative. The operational requirements of the Island's electric system preclude PREPA from generating all or most of its energy only on the south coast. It is our understanding the

scope for an alternatives analysis is driven by the Corps' definition of overall project purpose. On that basis, the applicant does not feel this alternative warrants further review.

With regard to other options to deliver alternative fuel sources to the three power plants on the north coast, 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<sub>2</sub>) and other greenhouse gases emissions. Even using the newest clean technology for burning coal, the amount of CO<sub>2</sub> emissions is approximately 30% lower when natural gas is burned instead of coal. CO<sub>2</sub> 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. The Final Environmental Impact Statement developed by PREPA can be found on the Via Verde website at [http://www.aeepr.com/viaverde\\_DIAP2.asp](http://www.aeepr.com/viaverde_DIAP2.asp), as well as on the EQB website since November 30, 2010.

Additional information on alternative methods of delivery, such as Gravity Based Structures and Floating Storage and Re-gasification Unit (FSRU), aka: boats and buoys system, is provided for the Corps' consideration in the Attachment. This information was also included in Chapter 4 of the approved FEIS.

PREPA wants to reiterate that, considering the modifications already approved by the Federal Regulatory Commission (FERC), the EcoEléctrica facility will be able to supply the Via Verde natural gas needs; determined at full capacity, for the San Juan 5 & 6 and Cambalache Combined Cycled Units. Additional product will be available to fuel the Costa Sur 5 & 6 steam units based on PREPA's operating determination. Moreover, approved FERC modifications will allow PREPA to fully utilize available natural gas to fuel its entire north coast facilities based on the capacity established factor, which considers individual heat rates and predetermined fuel mixtures operating characteristics.

**Sierra Club** – The Sierra Club expressed several concerns that PREPA would like to address. Their first concern involves the number of wetlands and surface waters

allegedly being affected by construction of the pipeline. It is important to stress that all impacts to the wetlands and surface waters will be temporary in nature. Furthermore, some surface waters will not be impacted since they will be crossed using the HDD technology. Also, PREPA will use construction methodologies that will allow the process to advance with minimal impact, such as use of timber mats to gain access for the equipment and using float and pull technique for positioning the pipeline in wetlands. At all times PREPA's concept for this project has included all measures to minimize wetland impacts. More specifically, for forested wetlands, PREPA opted to use HDD technology even when such technology required the investment of additional capital. After the construction and installation of each pipeline segment, wetlands and surface waters will be restored to their original pre-construction state and allowed to naturally recruit with native species. Maintenance and new access roads will not be necessary within wetlands or other areas after construction is completed. All inspections and light maintenance of the pipeline will be conducted using a remote controlled, robotic pipeline inspection gauge (PIG). PIG launchers and receivers will be located outside wetlands and other surface waters.

Additionally, the Sierra Club expressed concern regarding endangered species. PREPA and their consultants are working closely with USFWS to ensure that all necessary surveys for endangered species are conducted. This will ensure that all endangered and threatened species and their habitat are known and quantified within the pipeline corridor.

The Sierra Club form letters also requested the Corps hold public hearings. PREPA recognizes public hearings are held at the discretion of the District Engineer when a hearing provides additional information that is necessary for a thorough evaluation of pertinent issues not otherwise available. The applicant believes the public meetings already held, the detailed information posted on the Corps, EQB and PREPA websites, and the public notice issued by the Corps, as well as those published by the PREPA, Planning Board and EQB, fully address the Sierra Club's reason for a public hearing. No apparent further benefit would be derived from holding public hearings given their cost and logistics. This is validated by the fact that all comments received for the JPA had already been made at the EQB public process for the FEIS approval. No comments on new matters were received by the Corps.

**General public comments** – PREPA provided over 1,867 pages of information in the FEIS it prepared. This document is located on the applicant's website ([http://www.aeepr.com/viaverde\\_DIAP2.asp](http://www.aeepr.com/viaverde_DIAP2.asp)) as well as on the EQB webpage. We believe the issues raised in the comments submitted are fully addressed in this document and in particular in Chapter 8. If the Corps has made a determination that a particular issue raised by a member of the public is not addressed, please identify what that specific issue is, and PREPA will work further with you to provide whatever detailed information may be necessary.

We recognize the Corps' responsibility to consider a range of practical alternatives that would meet the overall project purpose. We also recognize that 40 CFR Part 230.10(a) of the Guidelines for Specification of Disposal Sites for Dredged or Fill Material (Guidelines) states that the amount of information needed to make a determination and the level of scrutiny required by the Guidelines is commensurate with the severity of the environmental impact. The Vía Verde project has been designed to avoid any permanent discharge of fill material in the aquatic resource and PREPA is confident it can demonstrate that impacts from the proposed route will be no more than minimal. We remain committed to work closely with the Corps as it identifies specific unanswered issues of concern.

You have advised PREPA that the Corps "... agrees with the comments from the resource agencies and the general public, and reserves the option to request an EIS and hold a PH." We must take issue with such a broad, generic statement that implies every single comment sent in by the public has been determined by the Corps to constitute a pertinent, substantive issue that the applicant must rebut. Given the volume of information we have reviewed on the CD enclosed with your letter, we must ask if this statement (above) represents the Corps' official position for the administrative record. PREPA also recognizes the decision to hold a public hearing is at the discretion of the District Engineer when a hearing would provide additional information that is necessary for a thorough evaluation of pertinent issues. As was discussed above, when we addressed the comments the CIAPR submitted, multiple public meetings were held to present the project and solicit public input during the local established review process. PREPA is not sure what additional, pertinent issues have been identified by the Corps that dictates the need for a public hearing. However, we are prepared to assist the Corps in any way possible to provide whatever information may be necessary to address those issues once they are identified.

In the remaining part of this correspondence we will address the requests you made for information on the following topics:

- a. **Alternatives Analysis:** The overall project purpose is to deliver an alternate fuel source to the three existing electric power generating facilities located on the north coast of Puerto Rico. Attempting to use the *Gasoducto del Sur* would be inconsistent with the overall purpose of the project, and therefore is not a practicable alternative. Unless the Corps officially disagrees with our understanding of the scope for an alternatives analysis, and officially notifies PREPA what additional review is required, *Gasoducto del Sur* will not be discussed further.

Regarding other options to deliver an alternative fuel source to the three power plants, PREPA updated Chapter 4 after multiple public meetings were held and it believes many of the comments directed at the alternatives analysis in the Preliminary DIA have been addressed. The FEIS

can be found on the Via Verde website at [http://www.aeepr.com/viaverde\\_DIAP2.asp](http://www.aeepr.com/viaverde_DIAP2.asp), as well as on the EQB webpage.

Additional information on alternative methods of delivery, such as Gravity Based Structures and Floating Storage and Re-gasification Unit (FSRU), aka: boats and buoys system, is provided for the Corps' consideration in the Attachment. Notwithstanding that, PREPA is working on restructuring and reformatting the Alternative Analysis, so that it can be presented in the forthcoming weeks to the Corps using the format that meets its expectations.

- b. **Avoidance and Minimization:** The location of the pipeline corridor as proposed has been extensively driven by statutory compliance and/or consideration of the following concerns:

**Health, safety, and welfare concerns:** - avoidance of major population centers pursuant to a de facto public policy established by the Honorable Governor of Puerto Rico for the design of this project and regulations and constraints for co-locating a utility line within existing rights-of-way under the jurisdiction of the Federal Highway Administration (FHWA). This public policy will be implemented by maintaining a 150 foot clearance between the pipeline and any residential structure, even when not required by the applicable federal regulation for Natural Gas Pipelines (49 CFR).

**Use of environmentally sound, minimally invasive construction techniques and methodologies:** - the extensive use of horizontal directional drills and trench box cuts, limited sizing of rights-of-way (ROW), allowances for extensive natural vegetative recruitment within the permanent ROW;

**Avoidance of existing conservation lands:** - lands subject to oversight by the Conservation Trust of Puerto Rico (CTPR), the Department of Natural and Environmental Resources (DNER), and/or by the United States Fish and Wildlife Conservation Service (USFWS); and

**Avoidance of historic properties for the Puerto Rico State Historic Preservation Office (SHPO):** - realignment of proposed pipeline corridor to avoid impacts to archeological sites of significance and/or historic properties that are listed or potentially eligible for inclusion in the National Register of Historic Places, as required in Section 106 of the National Historic Preservation Act of 1966.

PREPA believes that Avoidance and Minimization standards for the project have been met through re-alignments and design changes; complying with

health, safety, welfare, and public ROW constraints; and adopting environmentally sound, minimally invasive construction techniques and methodologies (HDD, vertical trenches).

Reductions in the size of the proposed pipeline would not reduce and/or minimize impacts to waters of the United States and the aquatic environment. The minimum size equipment required to install smaller diameter pipelines (< 24-inch) is currently proposed and the trench width differential on the near vertical cuts proposed is negligible. The number and distance between valve and PIG locations and access points is regulated by the USDOT Pipeline and Hazardous Materials Safety Administration (PHMSA). The project's direct, indirect, and cumulative impacts have effectively been restricted to the limits of the established construction ROW, with future maintenance limited to within the 50-foot wide permanent utility easement except in wetlands where no maintenance to the utility easement will be done.

- c. **Compensatory Mitigation:** From the very beginning of planning for this project, avoidance and minimization were central goals around which alternative routes for the pipeline were reviewed and then selected. Indeed, in the ongoing effort to avoid and minimize, the applicant continues to look at alignment changes in some areas to further this goal. Examples can be found in Chapter 4 of the FEIS PREPA prepared ([http://www.aeepr.com/viaverde\\_DIAP2.asp](http://www.aeepr.com/viaverde_DIAP2.asp)), as well as on the EQB webpage.

Each crossing of Corps jurisdictional areas has also undergone a series of reviews to propose construction methods to absolutely minimize any temporary or permanent alterations. A primary method adopted was diagonal drilling from upland to upland, and placing the pipeline crossing outside all Corps jurisdiction. Where trenching was found to be the only practicable method of construction (in the Guidelines definition of the concept), PREPA will ensure the selected contractor takes special precautions regarding the construction area, width of trench, use of native refill material, and minimum requirements for ROW maintenance to be employed.

The 369 acre of temporary impact you identify in your letter is more accurately represented as approximately 152 acres. This is derived from multiplying the length of each expected jurisdictional crossing by the 50-foot width we will operate within when locating the pipeline in WoUS. In addition, it must be remembered that most of the jurisdictional crossings are lands declared wetlands, but historically manipulated for agricultural purposes. These practices will not be allowed in the ROW, allowing native vegetation to become reestablished within one or two growing seasons. The only

exception will be the periodic management of a 50-foot wide ROW in uplands to regulate vegetation with deeply penetrating root systems.

Many of the components of your proposed mitigation and monitoring plan request are already built into the proposed plan. It is on these bases, PREPA does not feel a comprehensive mitigation plan is warranted. However, the applicant is certainly willing to entertain any specific, concrete suggestions the Corps feels are necessary to provide additional measures to those already incorporated into the designs. PREPA has already started working on draft mitigation plans for the different impacts to essential habitats, trees and wetlands. These plans will be turned in for the Corps approval in the forthcoming weeks.

- d. **Wetlands:** An assessment and listing of wetland impacts was previously provided in the documentation provided to the USACE. Please reference the Tables listed below:

Table 5- Temporary Impacts to Waters of the US (Page 44 to 46)

Table 6- Temporary Impacts to Wetlands (Page 46 to 50)

Discussions of avoidance and minimization, project design considerations, and best management practices (BMPs) to be used were also included with the original submittal. Additional turbidity and erosion control measures and BMPs to be implemented during the project construction, to avoid and/or minimize wetland impacts in and adjacent to the construction right-of-way, are discussed in Item I - Water Quality section of this document. All these measures will be implemented during the construction phase, since the operation phase carries no impacts. PREPA is currently working to develop a more specific assessment of all possible direct, indirect, and secondary impacts to the jurisdictional wetland areas related to Vía Verde, including both on and off the project impact site, which fall within 300 feet of the development footprint. This assessment will be presented to the Corps in the forthcoming weeks.

- e. **Horizontal Directional Drilling (HDD):** It is recognized due care must be taken to ensure contractors 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 reduce the incidence of hydro fractures (frac-outs) in karst environments. Hydro fractures, or frac-outs, result when fluid pressures built up in the borehole exceed the overburden effect of the surrounding 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;

backream rate; borehole pressure; depth of cover; reamer type; reamer diameter; soil composition; and soil density.

To insure the Horizontal Directional Drilling (HDD) operations to be conducted with the Vía Verde Pipeline will comply with all regulatory permits and standards, proper pre-construction geotechnical investigations will be conducted on the *in situ* soil formations along the proposed installation route. Tooling used in HDD installations will then be matched to the soil medium to be encountered

The Frac-Out Plan and will be amended to stipulate lined pits; and all environmental details which depict the sedimentation ponds will be revised.

In summary, 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 pressure increases until the midpoint of the installation is attained, and insure proper containment, recycling, and/or reuse of drilling mud. All HDD operations for the Vía Verde Pipeline will be conducted in accordance with the guidelines and recommendations of the North American Society for Trenchless Technology (NASTT) for karst environments.

- f. **Fish and Wildlife Values:** Direct responses to the comments provided by the USFWS (December 15, 2010 letter) and by the NMFS (December 19, 2010 letter) are included in the Attachment.
- g. **Threatened and Endangered Species:** Direct responses to the concerns expressed in the USFWS December 15, 2010 letter and in the NMFS December 19, 2010 letter are included in the Attachment.
- h. **Cultural resources:** As recommended by the State Historic and Preservation Office, PREPA recently authorized the implementation of a 1B archaeological study aimed to further evaluate the areas and sites recommended in the completed 1A study included in the Final Environmental Impact Statement approved on November 29, 2010 by the Environmental Quality Board. The results of this additional evaluation will be presented to the SHPO as soon as the 1B report is available.

Efforts related to the 1B Study will be completed by licensed archaeologists Marisol Rodríguez and Carlos Ayes. They were the professionals hired to undertake the efforts related with the recently completed 1A Study.

- i. **Infrastructure and Utilities:** PREPA will provide all water, water disposal, communications and electrical needs of the project with its own permanent or temporary infrastructure or equipment. There will be no need to coordinate with other agencies and companies, except for the Highway Authority (both federal and state) and the Port Authority, for the use of their infrastructure. Coordination of excavations as required by the Public Service Commission Regulation for Coordination of Excavations and Demolitions will also occur. All excavations will be coordinated through the "One Call Service", by calling 811 and complying with all requirements of the applicable regulation. Regarding the Highway and Ports Authorities, PREPA will comply with all requirements including a waiver from the Highway Authority (federal and state) for locating natural gas pipelines within a highway ROW and a Management of Traffic Plan when major highways and roads are to be impacted.
- j. **Cumulative Impacts:** As indicated earlier, wetlands impacts during construction have been repeatedly evaluated to minimize direct aquatic resource impacts. Also, as mentioned, native vegetation should reestablish naturally after construction and site restoration. Many of the proposed temporary wetland impacts within the ROW are to agricultural fields or farmlands; which while designated as wetlands are routinely maintained, planted, harvested, and drained. The post construction ROW will have restrictions on the types of activities allowed during the active life of the project thereby improving wetland quality and functions in these areas. Temporal loss of wetland function during construction will be addressed and will be weighed against the net gains associated with restricted activities and elevated levels of protection afforded within the post construction ROW. Potential aquatic resource impacts at some distance in time, or reasonably certain to occur are difficult to imagine, much less predict. PREPA will evaluate cumulative impacts considering other major projects like PR-10 and PR-22, even when a preliminary assessment was made and it was determined that no cumulative impact will occur. This assessment will be presented to the Corps within the forthcoming weeks.
- k. **Map depicting staging areas and access roads:** PREPA is working with the contractor, Gulf Interstate Engineering (GIE)/Ray Engineering, to procure the information the Corps requested regarding the proposed staging areas and the access roads. This information is incorporated in the Erosion and Sedimentation Control (CES) Plan. The data will be presented to the Corps as soon as it becomes available.
- l. **Water quality:** A discussion of the measures to avoid accidental leaks of bentonite mud into aquatic environments associated with the HDDs has been included in Item e) above. Turbidity and erosion control measures are

addressed in the project Stormwater Pollution and Prevention Plan (SWPPP). BMPs for individual pipeline installation methods have been included in the FEIS and the JPA document. Additional construction notes have also been provided on the Environmental Detail Sheets.

The following additional measures turbidity and erosion control measures and BMPs may be implemented during the project construction to avoid and/or minimize sediment entering the water body from the construction right-of-way.

**Temporary Erosion and Sediment Control:** - The Contractor shall install sediment barriers across the entire construction right-of-way at all flowing waterbody crossings in accordance with an EQB approved CES Plan. The Contractor shall install sediment barriers immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers will be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Where waterbodies are adjacent to the construction right-of-way, the Contractor shall install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way.

The Contractor shall place all spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas. No trench spoil, including spoil from the portion of the trench across the stream channel, shall be stored within a waterbody unless the crossing cannot be reasonably completed without doing so.

The Contractor shall install and maintain sediment barriers around spoil piles to prevent the flow of spoil into the waterbody. Spoil removed during ditching shall be used to backfill the trench usually with a backhoe, clamshell or a dragline working from the waterbody bank. Sand, gravel, rockshield, or fill padding shall be placed around the pipe where rock is present in the channel bottom. As required, monthly inspections will be scheduled by an independent professional engineer to ensure the control measures and practices included in the approved CES Plan are followed and observed. A compliance Monthly Report will be prepared and provided to the EQB as required by the applicable regulation.

**Trenching** - The following requirements apply to all waterbody crossings except those being installed by non-flowing open cut crossing methods. All equipment and materials shall be on site before trenching in the active channel of all waterbodies. All activities shall proceed in an orderly manner without delays until the trench is backfilled and the stream banks stabilized.

The Contractor shall not begin in-stream activity until the in-stream pipe section is complete and ready to be installed in the waterbody. The Contractor shall use trench plugs at the end of the excavated trench to prevent the diversion of water into upland portions of the pipeline trench and to keep any accumulated upland trench water out of the waterbody. Trench plugs must be of sufficient size to withstand upslope water pressure.

The Contractor shall conduct as many in-stream activities as possible from the banks of the waterbodies. The Contractor shall limit the use of equipment operating in waterbodies to that needed to construct each crossing. This will be done in full compliance with the approved CES Plan for the Vía Verde Project. As indicated previously, monthly inspections will be scheduled by an independent professional engineer to ensure the control measures and practices included in the approved CES Plan area followed and observed. A compliance Monthly Report will be filed before the EQB as required by the applicable regulation.

**Trench Dewatering** - During the course of construction activities, the open pipeline trench will, on occasion, accumulate water, either from groundwater intrusion or precipitation. The trench may be periodically dewatered, as necessary to prevent sedimentation of perennial waterbodies or rivers and allow for proper construction. Generally, a pump will be placed alongside the trench with an intake hose suspended into the water-filled trench. In areas with a very high water table and soils prone to sloughing, a well point system may have to be installed. Water may be pumped from the trench into vegetated upland areas within the ROW to prevent sediment-laden water from flowing directly into any waterbody. All dewatering areas will include suitable temporary turbidity and erosion controls. If adequately vegetated areas are too far removed from the dewatering site, the water may be discharged into straw bale or sediment fence containment areas, or into sediment bags.

The Contractor shall preserve as much vegetation as possible along the waterbody banks while allowing for safe equipment operation. Clearing and grubbing for temporary vehicle access and equipment crossings shall be carefully controlled to minimize sediment entering the waterbody from the construction right-of-way. This will be done in accordance with the CES Plan approved for the Vía Verde Project. Clearing and grading shall be performed on both sides of the waterbody prior to initiating any trenching work. All trees shall be felled away from watercourses. Plant debris or soil inadvertently deposited within the high water mark of waterbodies shall be promptly removed in a manner that minimizes disturbance of the waterbody bed and bank. Excess floatable debris shall be removed above the high water mark from areas immediately above crossings. Vegetation adjacent to waterbodies

which are to be installed by horizontal directional drill or boring methods shall not be disturbed except by hand clearing as necessary for drilling operations.

**Grading** - The construction right-of-way adjacent to the waterbody shall be graded so that soil is pushed away from the waterbody rather than towards it when possible. To minimize disturbance to woody riparian vegetation within extra workspaces adjacent to the construction right-of-way at waterbody crossings, the Contractor shall minimize grading and grubbing of waterbody banks. Grubbing shall be limited to the ditchline plus an appropriate width to accommodate the safe installation of vehicle access and the crossing to the extent practicable and in accordance with the approved CES Plan approved for the Vía Verde Project.

**Pipe Installation** - The following requirements apply to all waterbody crossings except those being installed by the non-flowing open cut crossing method. A "free stress" pipe profile shall be used at all minor, intermediate, and major waterbodies with gradually sloping stream banks. The "box bend" pipe profile shall be used for intermittent and major waterbodies with steep stream banks. The trench shall be closely inspected to confirm that the specified cover and that adequate bottom support can be achieved, and shall require construction inspection and on-site approval prior to the pipe being installed. Such inspections shall be performed by visual inspection and/or measurement by PREPA and or by its designated construction manager. In rock trench, the ditch shall be adequately padded with clean granular material to provide continuous support for the pipe. The pipe shall be pulled into position or lowered into the trench and shall, where necessary, be held down by weights, as-built recorded and backfilled immediately to prevent the pipe from floating.

The Contractor shall provide sufficient approved lifting equipment to perform the pipe installation in a safe and efficient manner. As the coated pipe is lowered in, it shall be prevented from swinging or rubbing against the sides of the trench. Only properly manufactured slings, belts and cradles suitable for handling coated pipe shall be used. All pipes shall be inspected for coating flaws and/or damage as it is being lowered into the trench. Any damage to the pipe and/or coating shall be repaired.

**Backfilling** - The following requirements will apply to all waterbody crossings except those being installed by the non-flowing open cut crossing method. Trench spoil excavated from waterbodies shall be used to backfill the trench across waterbodies. After lowering-in of the pipeline has been completed, but before backfilling, the line shall be re-inspected to ensure that no skids, brush, stumps, trees, boulders or other debris is in the trench. If discovered, such materials or debris shall be removed from the trench prior to backfilling.

For each waterbody crossed, the Contractor shall install a trench breaker at the base of slopes near the waterbody and in full accordance with the CES Plan approved, unless otherwise directed by the Project Engineer based on site specific conditions. The base of slopes at intermittent waterbodies shall be assessed on-site and trench breakers installed only where necessary. Slurred muck or debris shall not be used for backfill. At locations where the excavated native material is not acceptable for backfill or must be supplemented, the Project Engineer shall review and approve any granular material to be used.

If specified in the Construction Drawings, the top of the backfill in the stream shall be armored with rock riprap or biostabilization materials as appropriate as described in the approved CES Plan by the EQB.

**Stabilization and Restoration of Stream Banks and Slopes:** - The stream bank contour shall be re-established. All debris shall be removed from the streambed and banks. Stream banks shall be stabilized and temporary sediment barriers shall be installed within 24 hours of completing the crossing if practicable and as required in the approved CES Plan. Approach slopes shall be graded to an acceptable slope for the particular soil type and surface run off controlled by installation of permanent slope breakers. Where considered necessary, the integrity of the slope breakers shall be ensured by lining with erosion control blankets. Immediately following reconstruction of the stream banks, the Contractor shall, at the discretion of the Project Engineer, install a native seed mix to aid in bank stabilization.

If the original stream bank is excessively steep and unstable and/or flow conditions are severe or if specified on the Construction Drawings, the banks shall be stabilized with rock riprap, gabions, stabilizing cribs or bio-stabilization measures to protect backfill prior to reestablishing vegetation. Stream bank riprap structures, if required, shall consist of a layer of stone underlain with approved filter fabric or a gravel filter blanket. Rip rap shall extend from the stabilized streambed to the top of the stream bank, where practicable, native rock shall be utilized. The Contractor shall remove equipment bridges as soon as possible after final clean up.

- m. **Water Quality Certification (WQC) and Coastal Zone Management (CZM) Consistency Certificate:** These certificates were requested through submittal of the JPA. In regard to the CZM, the applicant was advised the Puerto Rico Planning Board is already working on the evaluation and final approval of the CZM Certification. In relation to the WQC, PREPA will present all necessary documentation before the EQB. We will keep you

informed as we work with the Environmental Quality Board and Planning Board, CZM office.

You also requested information pursuant to Section 176(c) of the Clean Air Act regarding emissions that may result from the project. Section 6.18.2 of the FEIS approved on November 30, 2010 by the Environmental Quality Board considered a summary of Air Impacts related with the proposed conversion of PREPA's power plants located in the northern part of Puerto Rico. The results achieved through the analysis represent a significant reduction in the criteria's pollutants covered under the federal and state regulations.

Emission estimates developed were based on the AP-42 Emission Factors and based on a 100% percent operating load. All emission factors considered in the analysis included in the FEIS will be validated once contracts related with the plants fire box modifications are issued. Emission factors will be specifically evaluated considering specific design considerations associated with the particular burners and fire box configuration selected.

In the event that, after detailed evaluation and fire box design considerations, it is determined any of the plant modifications are affected by the applicable Prevention of Significant Deterioration (PSD) regulations or by the New Source Performance Standards, necessary pollution control strategies will be considered by PREPA. These additional/new pollution controls, if required, and /or modifications related to the existing operating conditions if needed, will be part of the operation permits requested and part of Title V permit conditions for said facilities.

To assist in the evaluation of the analysis developed below please find three tables that summarize the changes (reduction / increases) related with the modifications of the Cambalache Combine Cycle plant as well as the Palo Seco and San Juan Steam Plants. These are the plants that will be connected to the Via Verde Pipeline Project.

Table # 1 Palo Seco Steam Plant PSD Emissions Evaluation

Preliminary PSD Analysis for Palo Seco Units 3 & 4 Fuel S, % 1.5						
Pollutants	Existing Allowable Emissions (One Unit)* (ton/yr)	Existing Allowable Emissions Units 3 & 4 (ton/yr)	Projected NG Emissions (ton/yr)**	Increment Netting (ton/yr)	PSD Significant Emission Rate (ton/yr)	PSD, Yes or No
PM	979.00	1,958.00	32	-1,925.8	25	No
PM10	118.00	236.00	129	-107.3	15	No
SO2	13,554.00	27,108.00	10	-27,097.8	40	No
H2SO4	602.80	1,205.60	16	-1,190.0	7	No
Nox	2,417.00	4,834.00	4,740	-94.3	40	No
CO	288.00	576.00	1,422	845.9	100	Yes
VOC	44.00	88.00	93	5.1	40	No
Pb	0.24	0.48	0	-0.5	0.6	No
Fluoride	2.16	4.32	-	-	3	-

Table # 2 San Juan Steam Plant PSD Emissions Evaluation

Preliminary PSD Analysis for San Juan Units 7, 8, 9, 10 & San Juan Combined Cycle Units 5 & 6									
Pollutants	SJ 7, 8, 9, & 10		SJCC5 & 6		Total Emissions NG Conversion (ton/yr)	PSD Significant Emission Rate (ton/yr)	Existing Allowable Emissions***	Increment Netting	PSD Applicability
	Natural Gas Emission Factors* (lb/106 scf)	Emissions NG Conversion (ton/yr)	Natural Gas Emission Factors (lb/106 scf)	Emissions NG Conversion (ton/yr)					
PM	1.9	32.87	1.94	28.19	61.07	25	2,946.22	-2,885.15	No
PM10	7.6	131.49	6.73	97.94	229.43	15	1,430.51	-1,201.08	No
SO2 **	0.6	10.38	3.47	50.45	60.84	40	7,619.76	-7,558.92	No
H2SO4	0.92	15.9	5.31	77.26	93.15	7	1,592.26	-1,499.11	No
NOx	280	4,844.52	326.4	4,748.62	9,593.14	40	6,739.20	2,853.94	Yes
CO	84	1,453.36	83.64	1,216.83	2,670.19	100	1,654.73	1,015.46	Yes
VOC	5.5	95.16	2.14	31.16	126.32	40	190.7	-64.38	No
Pb	n/a	n/a	n/a	n/a	n/a	0.6	3.54	-	-
Fluoride	No info	No info	No info	No info	No info	3	-	-	-

Table # 3 Cambalache Combine Cycle Plant PSD Emissions Evaluation

Preliminary PSD Analysis Cambalache 1, 2 & 3						
Pollutants	Emission Factors (lb/106 scf)*	Emissions NG Conversion (ton/yr)	PSD Significant Emission Rate (ton/yr)	Baseline Actual Emissions (ton/yr)	Increment Netting	PSD Applicability
Cambalache 1, 2 & 3						
PM	1.94	21.15	25	113.9	-92.76	No
PM10	6.73	73.46	15	290.45	-216.99	No
SO2	3.47	37.84	40	780.23	-742.39	No
H2SO4	5.31	57.94	7	182.24	-124.3	No
NOx	326.4	3561.47	40	120.28	3,441.18	Yes
CO	83.64	912.63	100	207.75	704.87	Yes
VOC	2.14	23.37	40	71.8	-48.43	No
Pb	n/a	n/a	0.6	0.12		n/a
Fluoride	No info	No info	3	-		No info

The construction and maintenance activities associated with this project will use conventional construction equipment and procedures. We do not feel this activity will

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contribute more than *de minimis* direct and indirect pollutant emissions above levels already existing due to regular private and commercial road transportation activities.

In summary, the applicant and its consultants remain most willing to do what we can to help the Corps review pertinent issues and information relevant to the Corps regulatory review under its' decision making criteria. If the information provided in this letter does not fully address your request for a comprehensive and detailed response, please do not hesitate to let us know. We remain committed to continuing to provide information as the review process moves forward to enable the Corps to expeditiously complete its evaluation process.

Cordially,

  
Francisco E. Lopez Garcia, Head  
Environmental Protection and  
Quality Assurance Division

## ATTACHMENT - Public Notice Comment letters

### Sierra Club Form Letter/Email:

Issue - there appeared to be two versions of a form letter. For the purpose of this response we place both in this category. The first, a Spanish version, was comprised of four principle issues:

- a. Request denial of a permit because impacts outweigh benefits.
- b. Request a public hearing for the single reason that the project is extensive and the public must have the opportunity to learn about impacts and express an opinion
- c. Request an Environmental Impact Statement be prepared because 32 Threatened and Endangered Species may be impacted
- d. Expressed concern that the local review process was "rushed"

### PUERTO RICO ELECTRIC POWER AUTHORITY (PREPA) response –

- a. With respect, the statement that impacts outweigh benefits is vague and does not provide a specific substantive concern we can respond to. The FEIS posted on the Via Verde webpage provides a detailed analysis of the project and presents information on the steps PREPA will take to minimize impacts. In aquatic areas the pipe will be placed with no permanent impact, and we expect the environment to fully grow back within one or two seasons. In the upland sections, only a 50-foot wide corridor will be maintained to regulate the growth of large, deep rooted vegetation. The initial 100-foot wide construction and maintenance corridors required to safely install and maintain the pipeline will be allowed to revegetate and will be utilized in the reforestation / mitigation areas for the project. Further details of the construction steps, and benefits the pipeline will provide, can be found in the FEIS.
- b. The reason(s) for holding a public hearing as requested in the form letter have already been met and addressed. First, the public notice and the information posted on both PREPA's and the US Army Corps of Engineers' (Corps) website provide detailed information to the public about the project. Multiple public meetings were also held by PREPA across the island as part of the local review process (as evidenced by several of the comments submitted by people who participated in those meetings). The public notice issued by the Corps clearly has provided the public the opportunity to express opinions, as did the multiple public meetings PREPA participated in.
- c. PREPA is working closely with the US Fish and Wildlife Service (USFWS) and the Corps to address possible effects the project may have on listed Threatened and Endangered Species and/or critical habitat. The list of 32 species initially identified by the USFWS was never meant to be a final determination of those species presence. Instead, it was a guidance list that was used by the biologist contracted by PREPA to undertake a Flora and Fauna Study. The study and its findings were included in the FEIS. Also, the list has been used as PREPA works collaboratively with both

agencies in a supplementary effort to identify what species may actually be found within four specifically identified sections of the project corridor and what the true potential for effect may be. PREPA believes the Corps, through its review authority and consultation with USFWS, will fully supplement the Biological Assessment included in the FEIS, approved by the EQB, and will also consider it adequate, allowing the completion of the evaluation under the JPA.

- d. PREPA disagrees with the opinion that the local process was rushed. It questions what direct knowledge many of the individuals who submitted the form letter/email actually have regarding the process conducted by the Commonwealth agencies regarding the project. As we are all aware, the public comment process completed by the EQB, as well as the Planning Board, provided ample opportunity to all interested parties to participate in said process and provide any comments prior to the final approval of the EIS drafted and approved on November 30, 2010. The commenting period of thirty days allowed for the EIS by the EQB, as requested by PREPA, was equal to the period required by the EQB regulations.

Puerto Rico Engineers and Surveyors Association (CIAPR, in Spanish)

Issues – the CIAPR sent in two letters (Nov and Dec) and a 22 page evaluation of the Preliminary Environmental Impact Statement (DIA-P). Points raised by CIAPR that appear to be pertinent to this project include:

- a. Concurrence that with today's technology it is possible to build and install a safe pipeline, provided that appropriate measures are taken during the design, manufacture of pipe and components, construction and operation.
- b. The possibility of using buoys and / or transfer platforms, particularly in the areas of San Juan, Aguirre and Arecibo should be reassessed.
- c. A request that the three alternative land routes considered in the Alternatives Analysis be depicted on maps.
- d. Converting the South Coast complex (Costa del Sur) by modifying permits, converting the boilers, possibly constructing a second tank, and increasing frequency supplied. Parallel with this project, converting the Port of "Las Mareas" (formerly Phillips Petroleum Corporation (PPC)) to receive gas (LNG) by modifying connection points, additional piping, constructing a storage tank and dredging the west side of the bay. To supply Aguirre from this port, it would take only one route (approximately 5 km.), primarily using abandoned cane fields and an old train route. With these two changes CIAPR estimates 73% of the production capacity of electric power to gas Puerto Rico could be achieved.

PREPA response –

- a. PREPA appreciates CIAPR's acknowledgement that a pipeline can be installed safely if appropriate measures are taken during construction and installation. We want to emphasize that the pipeline will adhere to all

safety standards set by the Pipeline and Hazardous Materials Safety Administration (PHMSA) and/or 49 CFR 192 regulations.

- b. PREPA has conducted a thorough analysis of the alternative of using buoys and/or transfer platforms and this analysis is in Chapter 4 of the FEIS. Additional information for consideration is:

### **Gravity-Based Structure**

GBS technology is potentially useable in water depths from about 60 to 85 feet, in areas with appropriate seafloor topography and substrates for placement of the structure. In addition, GBS facilities must be located in areas with no substantial shipping activities. Use of this technology involves the transfer of LNG to the terminal from a carrier located directly alongside the terminal. GBS terminals involve LNG storage in tanks within the GBS structure and, thus, allow continuous gas transportation out of the terminal, even when LNG carriers are not offloading at the terminal. A critical requirement of GBS terminals is the unloading of LNG from the carrier to the terminal using articulated loading arms under a range of wind and wave conditions. These arms have movement limits that can be exceeded by high winds and large waves.

Availability is also limited by the wind and wave forces reacting against the ship and the fixed GBS structure. GBS structures are typically constructed using steel or concrete. Use of this technology requires construction of the GBS structure at a graving dock at a coastal location. Following construction, the GBS structure is towed to the location of the terminal and placed on the sea bottom. The topside facilities, including vaporization facilities, unloading facilities and other terminal components, are then installed on the top of the GBS structure. The conditions suitable for a GBS have not been identified in the region, and if such a site were available, the environmental impacts are not likely to be lower than the proposed PREPA project. Also, as considered in the FEIS for Vía Verde, the receiving and regasifying system could be installed offshore and a holding tank of CNG could be installed on land. This alternative also has significant environmental impacts and thus, was not the selected alternative.

Issues of concern for a GBS option:

- Increased security risks, i.e. terrorism
- Interruption to delivery and operation due to inclement weather
- High construction costs due to requirement for more than one structure (to serve three separate power plants)
- Does not address principal public concern over safety of pipeline since pipeline still needed to deliver gas to onshore facility and/or to other facilities from point of delivery

- Significant environmental impacts to sensitive marine environment including coral reefs
- Additional impacts to T&E species (marine and anadromous) and/or critical habitat
- Risks to, or conflict with, commercial sea traffic,
- Time required to complete the construction and permit process will be 5 to 7 times longer than the Construction and Permit process associated with Via Verde.

### **Floating Storage and Re-gasification Unit**

The FSRU technology involves the use of specialized ships as LNG terminals. Use of this technology involves the transfer of LNG to the ship from a carrier located directly alongside the FSRU. This technology involves the use of mooring facilities using anchor leg systems and swiveling connections to allow the movement of the ship in response to changing wind and current conditions. They generally need to be located in areas with water depths of at least 160 feet to allow for a flexible gas pipeline connection between the FSRU and the subsea sendout pipeline. The specialized ships include all required terminal facilities, including vaporization units, offloading facilities, gas storage, and other components. FSRU systems have some significant operational limitations based on wind and wave conditions and potential adverse effects on the use of the loading arms and mooring systems under poor conditions. Although FSRU's have been proposed, no FSRU has been constructed and operated in North America. The conditions suitable for a FSRU have not been identified in the region, and if such a site were available, the environmental impacts are not likely to be lower than the proposed PREPA project.

In some locations, an offshore receiving terminal may provide a better alternative due to the use of existing offshore facilities and pipelines, easier access for LNG tankers, and more flexibility to adapt to regulated exclusion zones. None of these apply at any of the three power facility sites. There are also some possible drawbacks or hurdles such as limited or distant access to natural gas distribution pipelines, lack of onshore services and in most instances, higher initial investments. One key issue is that offshore facilities are "new". Crude oil has been produced, stored and transported from offshore fields for many decades. Advances in technology, marine operations know how, safety and environmental protection, and onshore support for construction and maintenance are among the many aspects of accumulated experience that can be and are being borrowed from the crude oil industry in support of offshore LNG development. However, the newness of offshore LNG introduces new complexities, costs, and questions about feasibility.

A number of distinct challenges affect offshore LNG operations. Marine operations for offshore LNG facilities present new and different hazards and design specifications that must be dealt with and accommodated. This can increase the cost associated with LNG import operations. If subsea pipeline connections must be developed, additional design and cost considerations are introduced. Offshore LNG operations also face a different jurisdictional environment under the Deepwater Port Act (DWPA).

Issues: building two or more offshore facilities would not remove the safety concerns expressed by the public since interior pipelines would still be required to transport compressed natural gas between power plants. Costs of constructing multiple facilities would far exceed cost of a single pipeline for delivery to multiple locations. Increased risk associated with exposed facilities, i.e. terrorism, vs. buried pipeline. US Coast Guard (USCG) requires a 500m safety zone surrounding an offshore LNG terminal and the facility must be located away from shipping fairways and other areas of activity on the Outer Continental Shelf (OCS) to avoid interference.

Issues of concern for a FSRU option:

- Increased security risks, i.e. terrorism
  - Interruption to delivery and operation due to inclement weather
  - High construction costs due to requirement for more than one structure (to serve three separate power plants)
  - Does not address principal public concern over safety of pipeline since pipeline still needed to deliver gas to onshore facility and/or to other facilities from point of delivery
  - Significant environmental impacts to sensitive marine environment including coral reefs
  - Additional impacts to T&E species (marine and anadromous) and/or critical habitat
  - Risks to, or conflict with, commercial sea traffic,
  - Time required to complete the construction and permit process will be 5 to 7 times longer that the Construction and Permit process associated with Via Verde.
- c. The Attachments (Anejos) in Chapter 4, FEIS includes in section 4.1 "Mapas de Criterios" which depict the land routes considered for the project.
- d. The overall project purpose is to deliver an alternate fuel source to the three existing electric power generating facilities located on the north coast. Attempting to use the Costa Sur complex in combination with the Aguirre Power Plant would be inconsistent with the overall purpose of the project, and therefore is not a practicable alternative. It is not practicable because generating most of the energy the island needs on the south coast would create a situation which destabilizes the electrical system and

could cause frequent collapses of the electric network. This, in turn, would adversely affect Puerto Rico's economy. Unless the Corps officially disagrees with this understanding of the Via Verde scope for an alternatives analysis, as approved in the FEIS back on November 30, 2010 by the EQB, and officially notifies PREPA that additional review is required, *Gasoducto del Sur* will not be discussed further.

Finally, PREPA would submit the following as additional information regarding the "No-Action Alternative" since there was some critique of this option's write-up.

### **No-Action Alternative**

The No-Action Alternative would result in not constructing the project. The No-Action Alternative would eliminate the short- and long-term project environmental impacts identified in the resource reports. However, selection of the No-Action Alternative would mean that the energy supply benefits of the project would either go unrealized or would have to be accomplished through other means with potentially greater environmental impacts elsewhere. A no-action alternative although required under the state EIS regulations, is not germane to the alternatives analysis under the Clean Water Act 404 (b) (1) guidelines because it is, by definition, inconsistent with the overall purpose of the project, and therefore not a practicable alternative.

The No-Action Alternative does not achieve the stated overall purpose of the project, which is to deliver an alternate fuel source to three existing electric power generating facilities located in Arecibo, Toa Baja and San Juan Steam plant operated by PREPA. If adequate supplies of natural gas are not available, PREPA would have forced to maintain the existing dependency on the use of petroleum derived fuels resulting in potentially more costly and environmentally damaging fuels options, with their deleterious local economic consequences. Alternative approaches to finding and delivering sources of energy to supply the growing demand for electricity in the Puerto Rico present very real adverse environmental impacts and are neither superior nor preferable to the proposed project. Moreover the Via Verde project is consistent with the Energy Diversification Policy developed for Puerto Rico by the Administration of Energy Affairs.

### **National Marine Fisheries Service (NMFS):**

The following is information developed in response to the NMFS request for additional information.

Issues –

1) Please clarify what is meant by "ALL wetland impacts will be temporary". The proposed ROW of 150 feet seems to imply that impacts to wetlands are not temporary.

RESPONSE: As the statement implies, all impacts associated with the construction of the pipeline will be temporary in nature within wetlands and other surface waters. After the construction and installation of each pipeline segment, all wetlands and surface waters will be restored to their original pre-construction state and will be allowed to naturally recruit with native species.

The proposed right-of-way (ROW) is necessary only for the purposed of entitlement. PREPA will have entitlement rights for the entire ROW. Maintenance and new access roads will not be necessary within wetlands or other surface after completion of construction. All maintenance in wetlands and other surface waters will be conducted using a computerized robotic system identified as PIG. PIG launchers and receivers will be located outside wetlands and other surface waters. It will allow the data gathering efforts as well as the identification of any area where additional preventive or regular maintenance efforts are required.

2) Based on the answer to #1, please provide the total square footage of resource impacts (seagrass, other submerged vegetation, mangroves and other benthic resources). The public notice indicates a total of 28.5 acres of EFH will be impacted but does not indicate the acreage for each habitat type.

RESPONSE: The following is a breakdown of proposed temporary impacts to wetlands and other surface waters:

- Canals 0.67 acre
- Canals with Mangrove shorelines 0.00 acre
- Estuarine Forested- Mangroves 0.00 acre
- Estuarine- Supratidal Saltflat 0.56 acre
- Rivers, Creeks, Tributaries 1.39 acres
- Unnamed Creeks (in Karst Region) 0.90 acre
- Ditches (within herbaceous wetlands) 0.08 acre

Our calculated total temporary impact to EFH is approximately 3.8 acres. Forested estuarine habitat will not be impacted because Horizontal Directional Drilling (HDD) will be utilized in those systems.

3) Please provide additional explanation that can help us determine if HDD will be utilized with encountering "Estuarine Forested Wetland" and the other types of EFH habitats, such as seagrasses and submerged vegetation. This would help NMFS evaluate alternatives to the proposed action.

RESPONSE: Table 7 of the JPA Report, which was submitted with the Joint Application, has been modified. The table includes only those temporary impacts

associated with potential EFH impacts. The crossing methods, including HDD, are identified for each habitat type. Type 1= HDD, Type 2= Open Cut Waterbody Crossing, Type 3= Open Cut Waterbody Crossing (Minor Waterbody), and Wetland= Open/Box Cut Crossing.

*4) Please provide results of an actual survey of the organisms in the estuarine areas that the proposed project impacts.*

RESPONSE: Results from the Flora and Fauna study conducted by Coll Environmental were included in the Joint Application Package. Additionally, surveys are currently being conducted at the request of USFWS. Any further survey results that involve estuarine organisms will be provided promptly upon completion.

U.S. Fish and Wildlife Service (USFWS):

Before addressing USFWS specific comments included in the December 15, 2010 letter, it is important to point out that comments presented were based on the Draft of the EIS (Sept. 9, 2010) and not on the FEIS approved by the EQB on November 30, 2010. However in an effort to address them out we are presenting the following comments, clarifications and responses aimed to address pertinent issues pulled from the aforementioned USFWS letter.

Issues –

**1. Purpose of the Project, Single and Complete Project, Federal Involvement and compliance with the National Environmental Policy Act (NEPA)**

- The PN fails to discuss necessary changes to EcoElectrica's currently authorized facilities and operations to supply natural gas to PREP A's three facilities in the north. Because the Via Verde pipeline would require additional storage and modifications to the EcoElectrica terminal, these projects are interrelated and should be viewed as one single and complete project. Should EcoElectrica fail to obtain FERC authorization for the physical and / or operational modifications that might be necessary to serve the pipeline, the Corps would be permitting a fragment of a project that could not fulfill the stated purpose and need and would have irreversible resource impacts.

RESPONSE: Additional modifications to the EcoElectrica terminal which may be required to provide natural gas to the Via Verde project have previously been reviewed and permitted by Federal Energy Regulatory Commission (FERC) during 2009 as parts of past projects. These modifications to be completed during the last quarter of 2011 can be constructed independent of the existence of the Via Verde project. The overall project purpose is to deliver an alternate fuel source, which already

exists at the EcoElectrica terminal, to the three existing electric power generating facilities located on the north coast of Puerto Rico. This will allow PREPA to select based on power demand and heat rates characteristics the most efficient unit to be utilized to meet the daily power generation demands to be serviced by PREPA.

- This project should be evaluated as a major construction activity since it would affect about 1,672 acres of land, including about 369 acres of wetlands, several Commonwealth Forests or Reserves, forested mountain and karst areas, and known habitat for more than 30 federally listed threatened or endangered species.

RESPONSE: The proposed project will result in only temporary impacts to approximately 152 acres of waters of the U.S. (WoUS) with no permanent fill or net loss. This is derived from multiplying the length of each expected jurisdictional crossing by the 50-foot width the contractor will operate within when locating the pipeline in WoUS. The limits of the project area (1,672 acres of land) reflect the limits of an enlarged utility right-of way (ROW) to be established for safety purposes. The ROW is required to ensure that no future encroachment occurs adjacent to the gas transmission line and should not be construed as cleared ROW corridor such as that required for a transportation project. All but 50 feet of this ROW will be allowed to naturally revegetate to preconstruction conditions and at the same time areas located in up lands will be utilized to plant trees as part of the Mitigation efforts required by the Department of Natural & Environmental Resources (DNER). Within the remaining 50-foot zone, only deep rooted vegetation, i.e. large trees, will be restricted. As such, the applicant questions how the Service has determined the project constitutes a "major construction activity or the criteria's utilized to reach such conclusion."

Surveys for federally Threatened and Endangered species **that may be present** in the project area, have been carefully refined to address species of concern and key habitat areas through several meetings with the Service. Presently, field surveys (including the participation of USF&WS personnel) are being performed (utilizing regional experts and protocols approved by the USFWS) within the project ROW. These surveys have been and continue to be closely coordinated with the USFWS to ensure that all species of concern (flora and fauna) are assessed. To date, no threatened and endangered plant species have been identified and only six faunal species of concern have been identified; two of which (PR Nightjar and PR boa) have been positively identified as occurring within the ROW. Surveys for the following six species remain on-going; Puerto Rican (PR) broadwinged hawk, PR sharp-shinned hawk, PR crested toad, PR Nightjar, PR Boa, and the Coqui Illanero.

## 2. Alternatives Analysis

- The applicant's alternative analysis does not include PREPA's original plan to build a new natural gas combined cycle power plant close to the existing Costa Sur facility, and to retro fit both Costa Sur and Aguirre power plants to use natural gas. This was the applicant's preferred alternative in the past and now is not mentioned in the applicant's alternatives analysis.

RESPONSE: The overall project purpose is to deliver an alternate fuel source to the three existing electric power generating facilities located on the north coast of Puerto Rico. Attempting to use the *Gasoducto del Sur* would be inconsistent with the overall purpose of the project, and therefore is not a practicable alternative. It is not practicable because generating most of the energy the island needs on the south coast would create a situation which destabilizes the electrical system and could cause frequent collapses of the electric network. This, in turn, would adversely affect Puerto Rico's economy. Also, at the time the *Gasoducto del Sur* was considered, natural gas prices were similar to those of Bunker C. This meant the conversion of the South Coast Plant units would not be practicable. Therefore, converting the Aguirre's Combined Cycle was selected because natural gas would replace the more expensive and polluting Diesel Fuel. With natural gas prices plunging, even lower than Bunker C prices, it is preferable today to convert the Bunker C fired units which have a greater generating capacity. Today, with the South Coast completely converted to natural gas, and the geographical limitations imposed by our electric system, Aguirre's conversion is not a priority for PREPA, and is therefore not considered as part of Vía Verde. Unless the Corps officially disagrees with this understanding of the Via Verde scope for an alternatives analysis, as approved in the FEIS back on November 30, 2010 by the EQB, and officially notifies PREPA that additional review is required, *Gasoducto del Sur* will not be discussed further.

The alternatives analysis provided reflects and supports the project purpose and scope provided in the current Joint Permit Application presently under review by the USACE (SAJ 2010-02881 (IP-EWG), Via Verde Pipeline Project. PREPA's previous plan to build a new natural gas combined cycle power plant close to the existing Costa Sur facility, and to retrofit both Costa Sur and Aguirre power plants to use natural gas are not part of this project and is not being considered. Moreover the construction of a combine cycle plant close to the existing Costa Sur facility is a project that will be developed by a private entity to be selected under an independent bid process being developed by the Private Public Alliance Office outside the PREPA.

### 3. Habitat Impacts

- The construction right of way (ROW) width ranges from 100 to 150 feet, and more if needed, with a final permanent ROW of 50 feet. The "Declaracion de Impacto Ambiental Preliminar"(DIA-P) states that all vegetation within the construction ROW will be cut and that the permanent 50 foot ROW will be maintained as a no-root zone with no woody vegetation. The DIA-P does not propose mitigation for impacts to previously undisturbed forested areas in this long corridor that will create an avenue for invasive and noxious species to enter previously isolated areas of wildlife habitat. The DIA-P also does not describe methods for maintaining a 92-mile, 50-foot-wide no-root zone corridor through karst and mountainous topography.

RESPONSE: The no-root zone was incorrectly described in the DIA-P and has subsequently been revised in the FEIS approved on November 30, 2010 by the EQB. The original right-of way (ROW) design allowed for only shallow rooted herbaceous and/or shrub vegetation within the permanent right-of-way. PREPA as clearly indicated in the FEIS will be utilizing the ROW to implement the Mitigation Plan requested by the DNER. This concept has since been modified to allow for the natural recruitment of all native vegetation (herbs, shrubs, and trees) within the ROW corridor. Only within the 50-foot zone immediately above the pipeline will vegetation be regulated to restrict the growth of deep rooted trees.

All inspections and light maintenance of the pipeline will be conducted internally, using a remote controlled robotic pipeline inspection gauge (PIG). PIG launchers and receivers will be located outside wetlands and other surface waters, typically in disturbed upland areas within the project ROW. If surface supported maintenance is required for any section of the pipeline, only vegetation clearing in that limited area will occur. The area would then be allowed to naturally recruit or be reforested as part of the Mitigation Plan developed.

- The Service is concerned that the clearing of all vegetation in the 150 foot ROW as stated in the DIA-P, in areas of highly erodible or unstable lands would cause excessive erosion that could impair water quality and channel stability in streams and rivers along the route. Trenching is likely not feasible in many steep areas within the corridor, yet DIA-P includes no discussion of how these areas will be traversed.

RESPONSE: We must advise that all comments included in the USFWS were based on the evaluation of the first Draft of the EIS and not on the evaluation of the FEIS approved by the EQB on November 30, 2010. Sediment and Erosion control methods will be utilized throughout the construction of the pipeline to prevent excessive erosion that could impair

water quality and channel stability in streams and rivers along the route. Specific information related with the sediment control options is included in section 6.4.2 of the FEIS. We must alert the USF&WS that the sediment control options were developed utilizing criteria's that had being approved by the EQB and the EPA in the past for similar projects and that had met and address all the USF&WS concerns in this particular area.

- Generalized drawings as seen on sheet 2 of the PN do not clearly represent what is written in the DIA-P. The proposed permanent 50 foot ROW and its associated no root zone will require either mechanical or chemical maintenance, which implies construction of a permanent maintenance road with associated stream crossings along most of, if not the entire, ROW length. This is not addressed anywhere in the documents. Utilizing the full estimate of ROW impacts should also help account for staging areas along the project route.

**RESPONSE:** As previously stated, the proposed pipeline does not require a no-root zone. At no point was it implied that permanent maintenance roads will be required for any water body crossing; stream, wetland, river, or otherwise. A permanent maintenance road has never been considered as part of the project and there is no plan, intent or need for such a road. After the pipeline is built, PREPA will use alternative methods, such as helicopters, to reach remote or isolated sections of the project. The idea of a "maintenance highway" is far from what PREPA envisions, and has never been part of the project.

- The Service is concerned about the possible impacts of directional drilling in the karst portions of the pipeline corridor. Voids in the rock matrix may lead directly to the aquifer, and a "frac-out" of drilling muds in this type of terrain and geology could contaminate underground waters and adversely affect human health, unique subterranean fauna, and commerce.

**RESPONSE:** It is recognized that due care must to taken to ensure that contractors 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; backream rate; borehole pressure; depth of cover; reamer type; reamer diameter; soil composition; and soil density.

To ensure the Horizontal Directional Drilling (HDD) operations to be conducted in association with the Via Verde Pipeline will comply with all

regulatory permits and standards, proper pre-construction geotechnical investigations will be conducted on the insitu 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 FEIS approved on November 30, 2010) will be enhanced to stipulate lined pits and all environmental details depicted for the sedimentation ponds.

In summary, the HDD operation to be utilized on the Via Verde pipeline will include proper pre-construction 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 Via Verde Pipeline will be conducted in accordance with the guidelines and recommendations of the North American Society for Trenchless Technology (NASTT) for karst environments. Regardless, PREPA is willing to include any specific recommendations provided by the USCOE to improve the Frac-Out Plan included in the FEIS.

#### **4. Endangered Species**

- The Service also continues to recommend surveys of the coqui llanero (*Eleutherodactylus juanariveroi*) where the project crosses wetlands in Toa Baja.

RESPONSE: The applicant has met and/or engaged in teleconferences with the Service on six occasions to date. Surveys for federally listed Threatened and Endangered species, utilizing regional experts approved by the USFWS, have been and continue to be performed by PREPA within the project ROW. These site specific field surveys have been coordinated with the USFWS as to protocols and individual species to be assessed. To date, no threatened and endangered plant species have been identified and the list of faunal species of concern have been narrowed to six species, two of which have been positively documented as occurring within the ROW. Surveys for the six species previously identified remain on-going.

- The Corps needs to make an effect determination with regards to the endangered Antillean manatee (*Trichechus manatus*). The Corps' biological assessment (BA) should include an analysis of any necessary changes to current facilities and/or operation of the EcoElectrica LNG terminal needed for the Via Verde project.

RESPONSE: A response to the USFWS position regarding the EcoElectrica facility was provided above and PREPA sees no valid reason why a BA would include this analysis. Since no construction that has the potential to harm or disturb the manatee is proposed as part of this project, the applicant believes a "no effect" determination by the Corps is appropriate for the endangered Antillean manatee (*Trichechus manatus*). Moreover this concern was to be considered and evaluated at the time EcoElectrica requested a Plant Modification Permit that was granted in 2009 with the endorsement of the Service.

- USFWS recommended the development of a Biological Assessment, since it considered the project a major construction activity under NEPA.

RESPONSE: On October 18, 2010, the Service provided technical assistance to the Corps regarding information included in the draft Biological Evaluation for the project. It was concluded that additional biological evaluations to be provided by the applicant must rely upon survey methodologies that maximized detection probabilities for federally-listed species and must include site-specific habitat characterization. On November 10, December 2, and December 8, 2010, the Service provided additional technical assistance to the project applicant regarding appropriate survey methods for listed species along the proposed route.

The proposed project will result in only temporary impacts to approximately 152 acres of wetlands and no permanent fill or net loss to Waters of the United States (WoUS) will occur. After completing the environmental assessment and developing a plan to address the temporal loss of wetland functions (if required) the applicant believes the project will not result in any substantial effects on the aquatic environment and therefore a Finding of No Significant Impact (FONSI) is appropriate.

At the present time, with full knowledge and approval of the Service, the applicant has a team of regional scientific experts conducting site specific, appropriate surveys along the proposed route to determine presence/absence of listed species within the project area and the amount of suitable habitat. The survey methodologies developed and the surveys being conducted are being carried out by experienced and qualified personnel, and in close coordination with the Service. The draft Biological Assessment (Evaluation) will be appended to include the results of such surveys and will be the basis for all future consultations with the Service.

In addition to the above, the DNER requested that, to further ensure no federally-listed species is affected as a result of this project, a regional Biologist be assigned to each of the segments of Via Verde to be constructed. He, as well as an interdisciplinary group of professionals (Soil experts, Geologist and Hydrologist), will inspect the construction areas to ensure federally-listed species are fully protected.

- USFWS would like to provide technical assistance for the planning and implementation of the surveys to inform the Biological Assessment.

RESPONSE: The applicant wishes to thank the USFWS for the technical assistance provided to date and includes the information (below) as an update to on-going surveys and project research. The applicant recognizes that some of the information included has previously been provided to the Service and/or the USACE.

#### **Habitat characterization for the Puerto Rican sharp-shinned hawk and Puerto Rican broad-winged hawk**

- USFWS wanted to meet with the species experts and discuss, during a working meeting, the areas to be included in the analysis to ensure that all available information is considered for the effects determination. USFWS also wanted to have the opportunity to visit the areas with contracted personnel. The agency did not concur with the applicant that it is possible to avoid impacts to breeding habitat and breeding behavior without first identifying the breeding territory. Under the assumption that suitable habitat is occupied for breeding, possible take as defined by the ESA would be anticipated.

RESPONSE: PREPA committed to complete the requested raptor studies using Mr. Derek Hengstenberg, an acknowledged expert acceptable to the USFWS. As requested, Mr. Hengstenberg and the PREPA Team participated in working meetings (December 2010 to date) with the USFWS and agreed to field survey protocols, site locations, survey locations and times. Prior to the December USFWS meeting and teleconference, Mr. Hengstenberg prepared a GIS map with proposed raptor observation locations for review and approval by USFWS. In addition, Mr. Hengstenberg has agreed to share any and all available relevant raptor data with USFWS in dbf/xls file format. Mr. Hengstenberg commenced field surveys the week of January 10, 2011. The surveys were completed on January 27. The results of the surveys will be provided to the USFWS on or about February 11, 2011. Upon receipt of the surveys, the applicant will meet with the USFWS to evaluate the number of breeding territories that could be affected by the project construction (if any).

#### **Potential presence of endangered plants**

- USFWS did not agree with the Applicant's proposal of surveying at intervals of 100 m within suitable habitat. It recommends that personnel trained to recognize the listed species systematically search all areas of suitable habitat within the project footprint. It proposed a working meeting

between its staff and the applicant's contracted personnel to share information and delineate together the survey areas.

**RESPONSE:** The field review protocols to be utilized by Dr. Frank Axelrod and a team of qualified professionals were revised, with prior concurrence of the USFWS, to maximize the likelihood of locating special status plant species or special status natural communities that may be present. The protocols include intensive, systematic surveys targeted to detect the rare plant species in areas that harbor suitable habitat in the regions identified by USFWS. The target species will include those species identified in the USFWS letter to the applicant dated June 30, 2010. The level of effort required per given area and habitat will be dependent upon the vegetation and its overall diversity and structural complexity, which will determine the distance at which plants can be identified. Biologists will walk parallel transects spaced 5 to 10 meters (16 to 33 feet) apart throughout the entire site (in areas where suitable habitat exists) thereby entirely and systematically screening the area. Transects will be stratified by topography or plant community for convenience. All field survey crews will include at least one member who has the ability to identify sterile specimens of listed plant species and who has seen the target species growing in its natural habitat. Other team members may be trained using photographs and/or herbarium specimens but all must be accompanied in the field by the aforementioned experienced crew member during all surveys. Prior to conducting the field surveys, a working meeting will be held between the PREPA team and the USFWS. The purpose of this meeting will be to share information and to clearly identify the limits of those areas to receive intensive, systematic surveys.

Survey reports to be prepared will document the locations that were visited, the date of the visit, and the observability and phenology of the target species at that time, plus the date of the survey, the abundance and distribution of all rare species in the survey area. The current status and abundance of any known populations visited as well as any new populations discovered will also be reported. The surveys performed in accordance with the agreed upon species-specific guidelines to be developed by Dr. Axelrod will suffice to provide reasonable evidence that the specified plant taxa do or do not occur in the project area. Surveys that employ methods or timing other than those agreed upon or recommended herein may be used as evidence of the presence (but not absence) of rare plant species.

Final determination as to whether voucher specimens are to be collected will be the responsibility of Dr. Axelrod. All voucher specimens collected will be shared amongst the PREPA Team and the USFWS.

To date, Dr. Axelrod and his team have not found any federally listed species of concern within the limits of, or adjacent to, the Via Verde

Pipeline right-of-way. Dr. Axelrod's fieldwork is currently being completed and a final copy of the team's findings will be presented to the Service in February, 2011.

#### **Potential presence of coqui llanero in Toa Baja**

- USFWS wanted the opportunity to visit the proposed project ROW within other wetland areas in northern Puerto Rico to identify whether habitat suitable for the coqui llanero is present in other areas of the route.

**RESPONSE:** The locations for the surveys for this species have been coordinated with the Service will be limited to that segment of the project located at the Rio Cocal flood plain in the Toa Baja Municipality at this time. Ms. Vega and Mr. Puente will conduct the field surveys after having conferred with Dr. Rafael Jogular, Dr. Neftali Rios, and the Department of Natural & Environmental Resources of Puerto Rico as to the likelihood that this species exists within other sections of the northern ROW. Based upon the guidance of these leading experts; other areas of the ROW may be examined. A written report will be submitted to the USFWS in February 2011. This report will address all concerns and recommendations on this species. This species is presently listed as Critically Endangered by The Department of Natural & Environmental Resources of Puerto Rico and its critical habitat has been identified, PREPA will comply with all State requirements for this species until such time as its review status under the Endangered Species Act has been finalized (Reference: DEPARTMENT OF THE INTERIOR, Fish and Wildlife Service, 50 CFR Part 17, [FWS-R4-ES-2009-0022; 92210-1117-000-B4], Federal Register: July 8, 2009 (Volume 74, Number 129)). The concerns and recommendations generated in the final report will be incorporated into the project design, construction plans, and final permits issued for the project. We must consider that in this particular regard, the DNER evaluated and approved the assessment presented for this particular specie included in the FEIS approved on November 30, 2010.

#### **Potential presence of the Puerto Rican crested toad**

- USFWS agreed with PREPA's approach to search for the Puerto Rican crested toad in both the southern and northern limestone forest areas. It recommended that before surveys are initiated, survey areas are discussed and delineated between its staff and contracted species experts. The agency wanted the opportunity to visit the areas with contracted personnel.

**RESPONSE:** Specific field evaluations for the Puerto Rican Crested Toad (PRCT) - Sapo Concho de Puerto Rico (*Peltophryne lemur*) have been initiated within the municipalities of Vega Baja (Rio Indio), Manatí (karst area south of town), and Peñuelas dry karst as recommended by the

USFWS. The surveys are being conducted by a team of biologists, led by Ms. Sondra Vega and Mr. Alberto Puente. The survey methodologies and protocols have been discussed and approved by the USFWS. The results of the final study, including all survey data, will be submitted to the USFWS in February 2011. This report will address all concerns and recommendations on this species.

#### **Puerto Rican night jar**

- USFWS recommended intensive surveys during the breeding season for the endangered Puerto Rican night jar to determine the amount of suitable habitat and the number of singing males or territories that the project may affect.

RESPONSE: Field surveys for Puerto Rican Nightjar were agreed to by the applicant. In light of this agreement, the applicant presented a detailed protocol and methodology to implement the field work agreed upon. This protocol was commented by the USFWS and applicant is incorporating those recommendations to the final protocol which will be filed in the near future. All field work will be conducted and completed during the month on February 2011. All field surveys will be conducted by a regional expert with prior approval of the USFWS. All field findings will be presented in a report to the USFWS for final review and approval.

The amount of dry forest to be cleared within the limits of the project ROW will be carefully calculated and these areas will be surveyed in their entirety. It is conceivable that no nightjar will be technically harmed by the PREPA Vía Verde pipeline. Existing published and USFWS accepted data available from the WindMar project together with the field data to be collected as part of the study to be carried out by PREPA will be used to develop an impact analysis for this species. It has been previously documented that nightjars at the WindMar site have already demonstrated that they can adapt positively to cleared roads. Unlike WindMar, the proposed PREPA ROW will remain vegetated, have leaf litter present, and should act as a viable foraging area for the nightjar.

Upon completion of the field surveys by the PREPA Team, the project site plan will be evaluated for its potential impact to the existing PR Nightjar territories identified, and facilitate the development of a mitigation plan.

#### **Puerto Rican boa**

- The applicant should delineate and quantify the amount of suitable boa habitat within the project area. The applicant should first consider alternatives to avoid these areas and develop conservation measures to minimize possible adverse effects where avoidance is not possible. Once possible effects are appropriately minimized, the Service would work with

the Applicant to develop a search and rescue protocol for relocating individual animals to suitable habitat outside of the project area prior to project construction.

RESPONSE: As requested, the PREPA Team has agreed to quantify the potential habitat for the boa. The project will not result in any habitat loss to the snake; although direct impacts to forested systems may result in changes to community structure. Mr. Alberto Puentes will review the pre- and post-project conditions for potential habitation by the boa. Since the boa is found in all habitats; a weighted number could be generated for individual habitat types (based upon existing species occurrence data). Habitat conversion (i.e. forested to herbaceous ROW) could then be addressed by taking the pre- and post-construction acreage for each habitat type times the habitat utilization value to ascertain net change. Any habitat compensation required could be similarly assessed should non-type for type offsets be proposed. Relocation of the pipeline within the proposed ROW will not result in any significant impact and further re-alignment of the ROW is not a viable option due to the need to avoid major population centers pursuant to the requirements of the USDOT Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations and constraints for co-locating a utility line within existing rights-of-way under the jurisdiction of the Federal Highway Administration (FHA). The standard boa construction and preservation conditions provided with the original JPA submittal will address on-going construction once the permit is issued.

## **5. Impacts to Landowner Incentive Programs**

- The present project goes throughout properties under the Service's Partners for Fish and Wildlife Program (PFWP). USFWS identified that at least three properties under a current Conservation Agreement with the Service that may be adversely affected by the proposed project: Hacienda Pellejas in Adjuntas, Hacienda Esperanza in Manati, and the US Navy Radio Station in Toa Baja. Current efforts at these highly ecologically valued properties include restoration of forest, riparian habitat and restoration of wetland areas. The Service has invested close to \$180,000 of federal funds on these restoration activities, and we recommend modifying the project to avoid these areas. If avoidance is not practicable, the conservation investment in these properties must be compensated with comparable restoration efforts on other similar properties.

RESPONSE: As a result of both public comments and regulatory agency concerns, the pipeline was relocated to avoid impacts within the Hacienda Esperanza in Manati. In regard to Hacienda Pellejas and US Navy Radio

Station in Toa Baja, the selected pipeline route avoids the areas where Conservations Agreements have been developed.

## 6. Wetland Impacts

- USFWS recommended using a 150-foot construction corridor width to estimate temporary impacts.

RESPONSE: PREPA does not agree that a 150-foot wide width should be used to calculate impacts. Best Management Practices (BMP) for construction techniques for the overall project have been provided. In addition, construction techniques and stabilization techniques for individual water crossing types and upland installations were included together with the JPA documentation. The Service has accepted these techniques for past and recent construction activities. If these are no longer acceptable, the Corps should define which specific elements of the BMP, SWPPP and or Frac-Out Plan are deficient and the applicant will gladly meet with the Corps to develop revised conditions based upon current industry standards.

It has been repeatedly stated within multiple sections of the local Environmental Impact Statements approved back on November 30, 2010 and the Joint Permit Application that all disturbed areas within WoUS will be restored to natural (pre-construction) grades and the areas will be restored using the native topsoil. Native seed mixes will be used as necessary to ensure these areas are properly restored.

- The USFWS stated some of the wetlands the project may affect are within areas designated by the Commonwealth of Puerto Rico as Natural Reserves and Critical Wildlife Areas, including: the Cucharillas Marsh PCA, San Pedro Swamp PCA, Cano Tiburones Natural Reserve, and Hacienda la Esperanza Natural Reserve. These areas lie within the northern karst, an area known for its underground streams, springs and shallow aquifer.

RESPONSE: The USFWS comment and concerns are noted. All work conducted in the northern karst area will use due care with respect to disturbance of underground streams, springs and the shallow aquifer. The trenches required to embed the pipeline are in most cases shallower than the surrounding agricultural ditches and canalized streams in the areas of concern. A large percentage of the wetland areas the project corridor crosses are previously disturbed wetlands used in the past for ranching, cattle grazing and/or farming activities.

- The Service is very concerned with the use of HDD in karst topography, where voids in the substrate are common and often connected to ground- and surface-water systems.

RESPONSE: It is recognized that due care must be taken to ensure that contractors 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; backream rate; borehole pressure; depth of cover; reamer type; reamer diameter; soil composition; and soil density.

To ensure that the Horizontal Directional Drilling (HDD) operations to be conducted in association with the Via Verde Pipeline will comply with all regulatory permits and standards, proper pre-construction geotechnical investigations will be conducted on the insitu soil formations along the proposed installation route. Tooling used in HDD installations will then be matched to the soil medium to be encountered. The Frac-Out Plan and will be amended to stipulate lined pits and all environmental details which depict the sedimentation ponds will be revised.

In summary, the HDD operation to be utilized on the Via Verde pipeline will include proper pre-construction 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. Strict adherence to the North American Society for Trenchless Technology (NASTT) guidelines for HDD operations in karst environments will be maintained.

- The pipeline route crosses multiple low-order streams in mountainous areas. These streams are the headwaters of larger rivers and support a marine-derived native stream fauna composed of several species of freshwater shrimp, crabs and gobies. Excessive erosion and sedimentation during construction or maintenance of the ROW could cause long-term or permanent impacts to these important wildlife areas.

RESPONSE: The agency's concerns are noted. Due to the relatively small sizes of the low-order streams to be crossed, the extent and duration of the temporary impacts to these areas will be minimal. The applicant will utilize all applicable turbidity and erosion control measures to insure water quality parameters are in compliance with permit standards. Erosion and sedimentation during construction within the ROW is not expected to cause long-term or permanent impacts to these important

wildlife areas. If the contractor operates improperly the Corps as well as the EPA and the EQB has the authority to bring an appropriate enforcement action aimed to correct any deficiency or deviation into the approved Sedimentation and Erosion Plan noted.

- It is not clear whether the 50-foot permanent ROW in forested wetlands could be used to access the pipeline in the future. If so, then this should be considered a permanent wetland impact. Because of the muck soils associated with some of these wetland types, additional staging areas will be needed for the drill rig, pipe, etc. There is no mention of how drilling mud will be managed, since there will be a need for sumps and other ground disturbances at the drill site to store drill muds.

RESPONSE: Drilling mud management will be accomplished through lined ponds located in upland areas whenever possible. Access to the pipeline through the ROW for surface based maintenance will not occur since the project has been designed so that all inspections and light maintenance of the pipeline can be conducted using a remote controlled, robotic pipeline inspection gauge (PIG). PIG launchers and receivers will be located outside wetlands and other surface waters. After the construction and installation of each pipeline segment, wetlands and surface waters will be restored to their original pre-construction state and allowed to naturally recruit with native species. No permanent fill, net loss of wetlands, or significant changes to community types will occur as a result of the construction of the pipeline.

Construction considerations - Where wetland or special constraints exist, the drilling contractor has the option to use closed containerized vessels for drill mud storage and segregation. Any required staging areas for tanks etc. will be located in upland areas.

## 7. Mitigation

- The Applicant proposes a .01-to-1 compensatory mitigation ratio. This would amount to 4 acres of compensatory mitigation for an estimated 369 acres of "temporary" wetland impacts, which is inappropriate and unacceptable to the Service. A much higher ratio is necessary to compensate for the: 1) temporary loss of wetlands functions and values; 2) likely permanent loss of functions and values due to contractor errors; and 3) permanent habitat alteration by species such as cattails that rapidly invade disturbed wetland areas and compete with more beneficial wetland plants.

### RESPONSES:

1) As indicated in the JPA information and materials provided, wetland disturbance during construction has been repeatedly evaluated to minimize direct aquatic resource impacts. After construction and site

restoration, native vegetation should reestablish naturally. Many of the proposed temporary wetland impacts within the ROW will occur in agricultural fields or farmlands; which while designated as wetlands are routinely maintained, planted, harvested, and drained. The post construction ROW will have restrictions on the types of activities allowed during the active life of the project thereby improving the wetland quality and functions in these areas. Temporal loss of wetland function during construction will be addressed and will be weighed against the net gains associated with restricted activities and elevated levels of protection afforded within the post construction ROW. Potential aquatic resource impacts at some distance in time, or reasonably certain to occur are difficult to imagine, much less predict. The applicant disagrees with USFWS' general statement that a higher ratio of mitigation is required. Notwithstanding, PREPA has agreed to develop a plan requested by the DNER. This is established in the FEIS, at a 3:1 mitigation ratio, for any permanent impact to be done in wetland areas.

2) Losses due to contractor errors will be unacceptable to the applicant and constitute an enforceable violation to the regulatory agencies. As required by law, the applicant will notify all appropriate regulatory agencies with its Notice of Intent to commence construction and will make all contractors working on the project aware of the limitations and constraints contained in all permits issued for the project.

3) The applicant recognizes that cattails can rapidly invade disturbed wetland areas and compete with more beneficial wetland plants. The applicant will be amenable to any reasonable restrictions that the Corps may require regarding maintenance and minimum acceptable standards for percent cover by non-native and/or nuisance wetland species.

- The project area includes the mitigation area for the *Gasoducto del Sur* project, despite our repeated requests during the technical assistance process to avoid this area. This area was selected as a mitigation area to preserve its large amount of undisturbed, quality habitat. The Corps needs to assure compliance with previous permit conditions as part of considering this new permit action.

#### RESPONSE:

The Via Verde project WIL NOT impact the mitigation area selected for the *Gasoducto del Sur*. At this time PREPA is requesting the DNER to complete the purchase of the identified property, according to the survey completed may house an additional parcel of land that could be utilized as a mitigation site for the Via Verde project as well. PREPA has complied with all actions required on its part by the mitigation plans for the *Gasoducto del Sur*.



## REQUEST FOR PROPOSAL (Q037473)

### MAJOR MATERIALS ACQUISITION VÍA VERDE NATURAL GAS PIPELINE

#### REQUEST FOR PROPOSAL REQUIREMENTS

The intention of this Request for Proposal (RFP) is to receive responses from Proponents to furnish all services required for the supply of natural gas pipes and pipe bends for the Vía Verde Natural Gas Pipeline Project (the Project ) as described in the following RFP Documents: Request for Proposal Requirements, Instructions to Proponents, Contract, Special Conditions, Technical Specifications and Proposal Form.

Proponents shall comply with this document regarding the RFP Process. A meeting will be celebrated to discuss the requirements of this RFP. Proponents shall attend to the Meeting in order to continue the participation in this RFP process. Proposals shall include a Lump Sum price for the scope of work described in the RFP documents, itemized as indicated in the Proposal Form.

#### Introduction – Puerto Rico Electric Power Authority

The Puerto Rico Electric Power Authority (PREPA) was created by Act 83 of May 2, 1941, as amended, 22 L.P.R.A. Sections 191, et. seq. PREPA is authorized to enter into construction contracts (22 L.P.R.A. Section 196-f), and desires to facilitate the execution of construction agreements as part of its Generation Improvement Plan. In addition, PREPA has direct control and authority to purchase fuel for all of its facilities and has the power to create, acquire and maintain corporations, partnerships or subsidiary corporations, as needed.

#### The Project Strategy

The Project considers the construction of a state of the art underground pipeline system to transfer natural gas from a gas storage facility in the vicinity of EcoEléctrica located in Peñuelas to PREPA's Cambalache, Palo Seco and San Juan Plants, located on the north shore of Puerto Rico. The Project is part of PREPA's efforts to diversify the types of fuels used for power generation on the island and reduce the cost of energy. The construction of the proposed pipeline will also reduce the amount of Green Gases discharged into the atmosphere, along with other combustion related pollutants and expenses.

The Project will be developed with an expedited process by virtue of Executive Order # OE-2010-034<sup>1</sup> issued July 19, 2010 pursuant Act 76 of May 5, 2000. The Government of Puerto Rico acknowledges the high cost of power generation due to the significant fuel oil consumption at a high cost, and the Project is part of the government's efforts to reduce such costs.

The Project will be developed in full compliance with all applicable laws, rules and regulations related to environmental and operational safety standards. The pipeline route will be divided into four (4) segments and PREPA may choose to sign construction Contracts with up to four (4) contractors. Specialty Works including, among other works, telecommunications and control systems shall also be contracted. Long lead items and major materials, like pipes, mainline valves, meter station skids' will be procured by PREPA. This RFP includes the skids and miscellaneous materials inside the metering station and mainline valves stations. Prequalified companies for the Construction and Specialty Works RFPs for the Project may choose to participate in this RFP. In addition, said companies may choose to offer options including the items stated in this RFP. Accordingly, PREPA may opt to cancel this RFP if the inclusion of the services requested in this RFP with the services requested in construction and Specialty Works RFPs results in the best interest of PREPA. Moreover, procurement contracts may be assigned to one construction contractor should said assignment result in the best interest of PREPA.

Proponents should be register at the Bidder's Registry of the General Services Administration or in PREPA's Suppliers Registry.

#### PREPA Advisors

PREPA has retained the engineering services of Ray Engineers, P.S.C. (RAY), which is further advised by Gulf International Corporation, Houston, TX, and SOCOIN Puerto Rico, Inc. New Star Acquisitions Group, provide professional services to PREPA for the right of way and easements acquisitions required for the Project. UNIPRO Architects, Engineers and Planners, a professional partnership represents PREPA as the Construction Manager of the Project. In addition, professional environmental and technical services have been retained by PREPA from Asesores Ambientales y Educativos to deal with the environmental issues. All mentioned companies will assess PREPA and will be considered as PREPA's representatives during this RFP process and the construction of the Project; and will participate in the resolution of corresponding issues that may arise up to and including the commissioning of the Project.

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<sup>1</sup> PREPA has adopted this Executive Order by means of PREPA's Governing Board Resolutions #3760 and # 3766, dated August 24, 2010 and September 21, 2010, respectively.

#### Project Resources

The Proposal shall identify the Project team that will perform the work. PREPA expects the Proponents to present experienced resources in performing the work described in the RFP Documents.

In the event in which a Proponent intends to form a partnership with one or more parties to satisfy these requirements, the Proponent must demonstrate the feasibility of the supply chain for the partnership and include information about the qualifications of each party that will be associated with in the Proposal. This information will include, but not be limited to, each party's technical, operational and commercial capabilities and relevant experience. In addition, the Proponent must include in its Proposal evidence of the commitments made by each party in the partnership to deliver the materials on time as requested in this RFP.

#### Proposal Form

The Proponent shall fully complete all the Proposal Forms included herewith. The Proponent shall also submit the information required elsewhere in the RFP.

#### PREPA's Public Disclosure Requirements

PREPA is required by law to file with the Puerto Rico Comptroller's Office (PRCO) a copy of the final executed Contract. Upon filing, the Contract will become subject to open records' requirements. The Proposals submitted pursuant to this RFP are not subject to mandatory public filing. Nevertheless, PREPA may be required to disclose certain information from the Proposals to comply with a future audit of the RFP process by PRCO.

#### Attachments

All attachments and appendixes, if any, shall be fully completed by the Proponent and be included as part of the Proposal. If additional space is needed for clarification, additional pages may be added if necessary. Each separate page shall be properly identified and numbered with reference to the page where the information is requested.

#### Exceptions

No exceptions shall be accepted in the Proposal. All specifications, terms and conditions shall be met by the Proponent in order to be responsive.

#### Omissions

The Proponent shall be held responsible for the fulfillment of the scope of work described in this RFP. The Proponent shall notify PREPA in the Proposal when, in its experience, omissions have been made in this RFP which would prevent the completion of the scope of work. Otherwise, the Proponent assumes full responsibility for completing the work to the best standards of the industry in promptly and timely manner, in compliance with each and every requirement of the project.

Disclaimers

PREPA reserves the right to modify the terms of this RFP, prior to the proposal submission of the Proposals, or to cancel it at any time. PREPA reserves the right to reject any or all Proposals, to postpone at any time the date and time of the Proposal submission, by written notice, if it is in the best interest of PREPA.

PREPA will not assumed any responsibility about the proponent's interpretations regarding the accuracy or completeness of the information contained in this RFP package or any other written information provided to the Proponents by PREPA or any of its agents, employees, consultants, advisors or representatives. Any representations and warranties concerning any such information will be only those, if any, made in a definitive agreement entered into with the Selected Proponent. PREPA is under no obligation whatsoever to Proponents to enter into the Contract.

Each Proponent shall bear the costs for all consulting, legal, accounting fees and any other expenses incurred in connection with this RFP process. PREPA shall not be responsible for any such costs.

Bonds, Insurances, Taxes and Customs Fees

Proposals shall include in an itemized format all applicable cost including, but not limited to, bonds, insurances. Bonds shall be delivered as required in the Instructions to Proponents.

By virtue of Section 22 of the Act, 22 LPRC sec 212, PREPA shall not be required to pay any taxes or assessments on any property acquired by it or under its jurisdiction, control possession or supervision. All unemployment, retirement, and other Social Security contributions and taxes, all privilege, business and occupational taxes, and any other taxes or fees payable by the Contractor, shall be Contractor's responsibility. Contractor shall not include as part of its price any tax, contributions or fees payable by it and PREPA will not reimburse these monies. Pursuant to Section 25 and 27 of the Act, PREPA shall not reimburse contractor for any taxes or assessments levied by the Commonwealth of Puerto Rico or any municipality of Puerto Rico. Contractor shall not be liable to either the Commonwealth of Puerto Rico or any municipality of Puerto Rico for taxes or assessments pursuant to Section 22 above. PREPA contributes to the Municipalities in lieu of taxes a yearly amount of money pursuant to Section 22c.

RFP Schedule / Deadlines

<b>Milestone</b>	<b>Period or Deadline</b>
RFP Issued by PREPA	January 31, 2011 – February 7, 2011
Compulsory Meeting Conference Rooms - 4 <sup>TH</sup> Floor NEOS Bldg. 1110 Ponce De León Ave. 16 ½ Bus Stop – Santurce	February 8, 2011 1:30 pm Atlantic Time
Due Date for Submitting Questions or Requests for Clarifications	February 15, 2011 2:00 pm Atlantic Time
Submission of Proposals <b>(Personally Delivered Mandatory)</b> Mail Office 310 – 3 <sup>rd</sup> Floor NEOS Bldg. 1110 Ponce De León Ave. 16 ½ Bus Stop – Santurce	February 28, 2011 9:30 am Atlantic Time
Selection Notice	March 8, 2011
Contract Execution	<b>March 18, 2011</b>

It is anticipated that any Contract resulting from this RFP will be executed within fifteen (15) calendar days after selection notice. Final contract execution date will be subject to Project's permit approval process. Proposals shall be valid for a period of one hundred and twenty (120) calendar days for Contract execution, and could be extended by mutual agreement, as needed. Services included in this RFP shall not be commenced by the Selected Proponent until the execution and registration of Contract. Services requested in this RFP shall not be initiated by the Selected Proponent until the execution of the Contract.

Communications with PREPA

All communications regarding this RFP shall be submitted according to the schedule described above and shall be completed using the following website:

<http://www.aeepr.com/rfpviaverde.asp>.

Proponents shall not communicate with or contact any PREPA employee with regards to this RFP. Communications during the RFP process shall only be addressed in the designated website.

Proponents' questions or requests for clarifications shall be considered only through written request prior to submission of the Proposal. PREPA's Selection Committee will determine if it is reasonable to answer or clarify such requests. PREPA will provide an Addendum with answers or clarifications to all Proponents.

Proposals shall be submitted in a sealed envelope labeled as follows:  
MAJOR MATERIALS ACQUISITION (Q037473)  
VÍA VERDE NATURAL GAS PIPELINE  
Att: Linette Alfonso González  
Material Management Division Head

Proposals shall be personally delivered at the following Delivery Address:

Puerto Rico Electric Power Authority  
Mail Office - Material Management Division  
NEOS Building – Third Floor  
1110 Ponce De León Ave. Suite 310  
16 ½ Bus Stop - Santurce  
San Juan, PR 00907

Proponents shall submit the quantities of originals, copies and electronic versions of the Proposal as required in the Instructions to Proponents.

#### Evaluation of Proposals

PREPA's Selection Committee shall select only one Proponent (Selected Proponent). Proposals shall be evaluated as a whole and not individually for the delivery of materials and storage facility selected.

#### Evaluation Process & Criteria

- A. Initial Screening Criteria - PREPA will evaluate all Proposals that meet all the criteria stated below and will disqualify any or all Proposals that do not meet one or more of the criteria indicated which shall be considered mandatory but not limited.
- i) Proposal(s) submitted on time
  - ii) Proposal (s) submitted at the designated submission place.
  - iii) Proposal(s) submitted in a manner consistent with RFP instructions.
  - iv) Proposal(s) including all information requested in RFP.
  - v) Proposal(s) using all Proposal Forms.
  - vi) Proposal(s) that meet the specifications for materials.
  - vii) Proposal (s) consistent with the terms and conditions stated in the Contract.
  - viii) Proposals stating willingness to sign the Contract included herein.
- B. Pricing Analysis  
PREPA will evaluate pricing Proposals only on a US dollar basis.

#### .Non-Pricing Analysis

PREPA will also evaluate the following key conditions of the submitted Proposals:

- i) Experience of the Proponent and its resources.
- ii) Location and adequacy of storage facilities proposed.

- iii) Proponents must demonstrate the capacity of their supply chain to deliver the materials described in the RFP, including logistics.

**Weights for Pricing and Non-Pricing Evaluation Elements**

PREPA has assigned percentage weights to the pricing and non-pricing considerations of each Proposal for its evaluation, as indicated below.

<b>Component</b>	<b>Percent</b>
Price	50%
Experience	10%
Storage Facilities and Logistics	10%
Proposed Major Materials specifications	30%
<b>TOTAL</b>	<b>100%</b>

The Proponents, Subcontractor or fabrication shop shall have at least ten (10) years of experience in the design, integration, manufacturing and construction of the Materials applied to transmission natural gas lines and/or process natural gas lines.

The fabrication shop shall have an established Quality Program (such program and documents shall be provided). Shall have at least the following quality certifications and authorizations:

- A. Fabrication in accordance with ASME B31.1 Power Piping
- B. ISO 9001:2000 Quality System; Certified Quality Management System, for manufacturing, order execution, contract acceptance, purchasing, vendor qualification, product development, and quality control.
- C. ISO 14001 Certified Environmental Management System, for managing operations to protect the health and safety of employees, customers, contractors, the public and the environment, and improving energy and resource use in its manufacturing and test center facilities.
- D. OSHA 18001 Occupational Health and Safety Assessment Series for independent accreditation for Management System, and integration of quality, environmental, and occupational health and safety management systems.
- E. STAR Voluntary Protection Program (VPP), recognizing outstanding efforts at developing and implementing systems to effectively identify, evaluate, prevent and control occupational hazards to prevent employee injuries and illnesses.

Protests and Reconsideration of the award of the RFP

Any party adversely affected by the award of the RFP may request that the award be reconsidered. The person signing the Motion for Reconsideration of the award of the RFP (Motion) must be the applicant or his authorized representative.

In order for the Motion to be considered on its merits, the applicant must meet the following requirements that are jurisdictional in nature:

- A. File a written original and three (3) copies of the Motion with the Secretariat of Adjudicative Procedures (SAP) of PREPA, within a period of ten (10) calendar days from the date of the letter of notice of award RFP. The Motion must be filed during working hours (7:30 a.m. to 11:30 am and 12:30 pm to 4:00 p.m.) in the SAP, located at 1110 Ponce De León Avenue, Suite 602, NEOS Building, San Juan, Puerto Rico.
- B. State the RFP number and date of opening in the Motion.
- C. Send a copy of the Motion to all Proponents that participated in the RFP and certify it in the Motion.
- D. Establish clear, reasonable and precise grounds for which reconsideration is sought. The applicant must also include the letter of notice of award and any other documentary evidence that the applicant understands is pertinent for reconsideration.

The SAP shall refer the Motion to an Administrative Law Judge (ALJ).

The ALJ in charge of resolving the Motion should consider the same within a period of (10) calendar days from the date of its filing in the SAP.

If the ALJ rejects the Motion or fails to act within this period of ten (10) calendar days, the applicant of the Motion may request judicial review in accordance with Section 4.2 of Act 170 of August 12, 1988, as amended. The term to apply for judicial review shall commence on the date of the notification of the denial or upon the expiration of the term of ten (10) days from the date of its filing in the SAP.

If within ten calendar (10) days from the date of filing the Motion in the SAP, the ALJ considers the Motion or makes any determination thereof, the term to apply for judicial review pursuant to the provisions of the Act 170 of August 12, 1988, as amended, shall begin from the date of the filing of a copy of the notice of the Resolution that finally resolves the Motion.

The Motion is a jurisdictional requirement in order to request judicial review pursuant to the provisions of Act 170 of August 12, 1988, as amended.

## INSTRUCTIONS TO PROPONENTS

### REGARDING THE REQUEST FOR PROPOSAL (RFP)

#### Major Materials Acquisition - Via Verde Natural Gas Pipeline Project

Please read and follow these instructions carefully. There will be no excuse for failing to comply with them.

1. Proponents shall guarantee the Proposal for one hundred twenty (120) calendar days. Expiration of this period will not invalidate the Proposal unless it is revoked in writing by the Proponent no less than ten (10) calendar days prior to its expiration date.
2. The terms, materials, products, equipment or machinery provided by the Proponent must comply with federal and local laws with regard to environmental quality, occupational safety and health and hazards standards.
3. Proponents must submit all required information on or before the deadline and shall meet all the requirements specified in the RFP. The estimated materials and equipment needed for the work must be specified and complete sets of manufacturer specifications, technical information, designs, photos or samples of materials, if applicable must be submitted with the Proposal. When required, the time necessary for the submission of designs for approval should be indicated once the Contract is signed. Also, any deviation or changes from PREPA's specification requirements or designs must be clearly stated. Failing to do so shall mean that all equipment and materials being offered are EXACTLY THE SAME as those specified by PREPA, independently of what is stated in the literature or catalogs submitted.
4. The Proponents shall submit reliable guarantees for material, labor and equipment along with their Proposals.
5. The Proponent shall identify those points in the specifications that in his experience vary from common practice that would add to the cost of the Project or might affect the reliability of the materials.
6. Proposal Submission - Unless otherwise indicated in the RFP, the Proponents shall submit the following or they may be rejected:
  - One (1) hard copy, signed in blue ink and marked "Original", of the printed Proposal including all attachments (set). All pages of the set shall be numbered (i.e. 1 of "the total number of pages"). Pages in blank shall be marked with the phrase "Intentionally Left Blank".

- Three (3) additional hard copies marked "Copy", of the printed Proposal including all attachments (set). Copied sets shall be certified to be exactly the same as the original set.
  - Three (3) electronic copies of Proposal including all attachments, each in separate flash drives. A non-editable format, such as PDF, is acceptable. In addition, the Proposal Form shall be included in each flash drive in MS Word format or MS Excel format.
7. The Forms provided by PREPA for this RFP must be used. In addition, all RFP forms must be filled out and submitted for the Proposal to be evaluated.
8. Proposals that have conditions or limitations by Proponents may be considered informal and may be rejected. Erasures or other changes in the Proposal must be explained and initialized by the Proponent.
9. Proponents shall submit a duly signed sworn statement that certifies no conflicts of interest. Proponents shall certify that they do not receive payment or benefit of any nature for services rendered regularly through an appointment to a governmental agency, body, public corporation or municipality of Puerto Rico. Proponents shall also certify that they may have consulting services contracts with other governmental agencies or bodies, but such condition does not constitute a conflict of interest for the Contractor. Proposals that fail to comply with this requirement may be rejected.
10. Proposal Guarantee (Bid Bond)
- Proponents shall submit  
Proposals together with a Bid Bond for 10 percent (10%) of the total estimated cost.  
Proposals that fail to include this guarantee will be rejected.
- a. PREPA's Bid Bond Form must be completed by an insurance company authorized to do business in Puerto Rico and accepted by PREPA for individual participation.

11. Insurance and Bonds

The Selected Proponent shall submit the enumerated insurance policies stated in ARTICLE 19 - Insurance and Bonds of the Major Materials Acquisition Contract within ten (10) calendar days after receipt of the official Contract award notification.

The Contractor shall furnish at any time before the execution of the contract:

- a. A PREPA's Performance Bond Form shall be prepared in the amount of one hundred percent (100%) of the contract price, with good and sufficient surety satisfactory to the Authority guaranteeing that the contractor will well and

faithfully perform the contract work within the time specified in the contract. The bond shall be issued by an insurance company authorized to do business in Puerto Rico and acceptable to PREPA.

The Performance Bond shall include all warranties stated in the construction contract.

- b. A PREPA's Payment Bond Form shall be prepared in the amount of one hundred percent (100%) of the contract price, with good and sufficient surety satisfactory to the Authority to guarantee the prompt payment of all labor, equipment and materials required in the performance of the work. The bond shall be issued by an insurance company authorized to do business in Puerto Rico and acceptable to PREPA.
- c. Power of Attorney must be provided with the Payment and Performance Bonds to certify its legitimacy.

All policies and bonds shall be issued by insurance carriers having an A.M. Best's Guide rating of A- or better.

The Selected Proponent will not begin mobilization in the project prior to PREPA's evaluation and acceptance of all Bonds and Insurance policies.

## 12. Costs

- a. The prices will be considered FIXED. Proposals that indicate "price in effect at shipping time" term or "inventory subject to previous sale" term will not be considered. PREPA will not consider any printed information indicating price fluctuations with the Proposal as exceptions.
- b. PREPA does not accept Letter of Credit payment terms. PREPA's payment term is included in Contract.

## 13. Total Costs

Proposals submitted through this RFP must contain the itemized cost(s) requested in the Proposal Form. Besides itemized cost(s), Proponents must also provide the TOTAL COST for each of the items for the competitive evaluation of these terms. PREPA reserves the right to reject TOTAL COST which does not include the unit costs for each line item. The evaluation of Proposals will be based on the prorated adjusted TOTAL COST.

#### 14. Withdrawal of Proposals

Requests for Proposals to be withdrawn will be considered when in writing and before the submission deadline. These Proposals will be returned unopened to the Proponent.

#### 15. Personal Delivery of Proposals

**Proposals shall be personally delivered to the following physical address:**

Puerto Rico Electric Power Authority  
Mail Office - Material Management Division  
NEOS Building – Third Floor  
1110 Ponce De León Ave. Suite 314  
16 ½ Bus Stop - Santurce  
San Juan, PR 00907

Att: Linette Alfonso González  
Material Management Division Head

#### 16. Interpretation of Documents

- a. Those interested in responding to this RFP may submit a WRITTEN REQUEST FOR INTERPRETATION of points in the specifications or Contract documents as provided under Communications with PREPA within the deadline specified in the RFP. PREPA is not responsible for other explanations or interpretations of the RFP documents that are not submitted pursuant to these instructions. Request for Interpretation submitted out of the specified time or form shall not be considered as submitted and requesting proponent assumes full responsibility for its reply and interpretation. The Head of the Material Management Division will prepare the requested interpretation as an appendix, if necessary, and will mail or deliver copies of said appendix to all Proponents.
- b. PREPA will not be responsible for requests for other explanations or interpretations not submitted as indicated in the previous paragraph, "a".

#### 17. Firms, Partnerships, Consortiums and Corporations

- a. Proposals from partnerships should be signed in the name of the partnership by its authorized person and the designation of that person to do so must be certified.

- b. Proposals from corporations or consortiums should be signed in the name of the corporation or consortium followed by the signature and identification of the authorized person.
- c. The names of all the signatories shall be properly identified below their signature. A signatory that does not identify its parent company may be held responsible for the Proposal.
- d. An identification of the officer of the firm, corporation, consortium, or partnership signing the Contract may be requested by PREPA to its satisfaction.
- e. Proposals must include the Proponent's complete physical, postal and electronic addresses.

#### 18. Selection and Rejection

- a. The Contract will be granted to the Selected Proponent meeting the requirements specified in this RFP. The Contract shall not be assigned, mortgaged or in any other way transferred except upon PREPA's written authorization for such actions.
- b. PREPA reserves the right to reject any or all of the Proposals containing irregularities or deviations.
- c. Proposals with insufficient information for identifying or qualifying the materials or equipment offered may be rejected.
- d. The selection/award made will be informed through written notice to all Proponents that submit a Proposal. Guaranties of those not selected will be returned by PREPA.

#### 19. Request for Postponements by Proponents

Requests for postponement of the opening date will be considered by PREPA only when done in writing, stating the reasons for the request. Requests shall be submitted seven calendar days in advance of the proposal submission deadline. Postponements will only be granted when PREPA considers them to be in the best interest of PREPA.

#### 20. Non-collusion Certification

When submitting a Proposal, the Proponent must certify that:

- a. The Proposal was prepared independently and not in collusion with any other supplier of materials or equipment of the type described in the RFP, and;
- b. The Proposal contents have not being divulged by the Proponent or any of their employees, to outside sources other than the Proponent's employees or agents, his guarantee insurer and no one else before the official RFP opening date.

#### 21. Materials Inspection

Materials and/or equipment will be subject to inspection by PREPA's employees or Advisors any moment or any time from the manufacturing process, to delivery including storage and transportation.

PUERTO RICO ELECTRIC POWER AUTHORITY

CONTRACT

MAJOR MATERIALS ACQUISITION  
VIA VERDE NATURAL GAS PIPELINE

AS FIRST PARTY: The Puerto Rico Electric Power Authority, hereinafter referred to as PREPA , a public corporation and government instrumentality of the Commonwealth of Puerto Rico, created by Act 83 of May 2, 1941, as amended, employer's social security 66-0433747, represented in this act by its Executive Director, engineer Miguel Ángel Cordero López, of legal age, married and resident of Caguas, Puerto Rico.

AS SECOND PARTY: [Contractor's name], hereinafter referred to as the Contractor , a [partnership or corporation] organized and existing under the laws of [State], authorized to do business in Puerto Rico, employer's social security \_\_\_\_\_ represented in this act by its [title], [name], of legal age, [civil status], [profession], and resident of [domicile], by virtue of [document that certifies representative powers], dated as of \_\_\_\_\_.

WITNESSETH

IN CONSIDERATION of the mutual covenants hereinafter stated, the parties agree themselves, their personal representatives, successors, and assignees, as follows:

ARTICLE 1. Scope of Contract

The Contractor shall provide all labor, supervision, materials, tools, equipment, and all work required for the Major Materials acquisition for the PREPA's Vía Verde Natural Gas Pipeline (the Project). The Contractor shall supply the materials described in the Major Materials Breakdown included in the Special Conditions and Technical Specifications.

The Contractor shall deliver the materials per the schedule prepared by PREPA and shall provide supervision, security, storage and dispatch administration at San Juan Marine Port, Ponce Marine Port and/or selected site near those ports. Major Materials shall be transferred by Contractor to PREPA's Construction Contractors to complete the Project. All work previously described shall be done per the Project requirements and in strict accordance with the provisions of this Contract, Special Conditions and Technical Specifications.

Provided that, before the term of this Contract has expired, as part of its obligations herein stated, the Contractor shall deliver to PREPA a true and exact copy of all diagrams, plans, sketches, maps, and other documents used in the performance of contracted works and for which a third party copyright or patent right would not be an impediment for such delivery.

## ARTICLE 2. Definitions

Whenever the words defined in this article or pronouns used instead are mentioned in this Agreement, they shall have the meanings here given:

**Construction Manager** – shall mean a designated person or firm from a third party contracted by PREPA that will be responsible for the management of the Pipes and Induction Bends Contract and any other material procurement and construction contracts.

**Contracting Officer** - shall mean the Executive Director of PREPA, acting directly or through his properly authorized representatives.

**Contract Documents**- shall mean collectively, all the covenants, terms, and stipulations in these articles of agreement and in all supplementary documents hereto attached which constitute essential parts of the agreement and are hereby made part thereof, to wit:

- Contract
- Invitation to RFP and RFP Advertisement
- Contractor's Proposal Including Proposal Form, Data and Schedules
- Special Conditions and Technical Specifications with Appendix
- Proposal Forms
- RFP, Performance, and Payment Bonds
- Letter of Award
- Owner Controlled Insurance Program (OCIP)
- All Change Orders and other written amendments to the Contract

**Change Order**- A written agreement between the parties that sets out changes in price, time, or scope of work to the Contract, which has been approved by the appropriate official pursuant to the general authorization for approval.

**Delivery of Materials** – shall mean the date of receipt of the materials at the Storage Facility according to the delivery schedule included in Contract. Contractor shall notify in advance of the arrival and PREPA personnel shall witness the receipt of materials and coordinate its inspection.

**Engineer** - shall mean the Generation Director, acting directly or through his properly authorized representatives.

**Major Materials** – shall mean the following materials required for the construction of the Via Verde Project: Mainline Valves, Gas Chromatographs, CO2 and Moisture Analyzers,

Metering Skids, Control Valves Skids, Filter Separator Skids, Indirect Fire Heaters and Pressure Regulating Skids.

**PREPA's Construction Contractors** – shall mean the Contractors selected by PREPA to construct the Project.

**Storage Facility** - shall mean the San Juan Marine Port, Ponce Marine Port and/or a selected site near those ports where the materials will be in storage for a maximum period of three hundred and fifty (350) days and where the transference to PREPA's Construction Contracts will take place. Contractor shall have a storage facility in the north coast and one in the south for the quantities established in the Major Materials Breakdown included in the Special Conditions and Technical Specifications

**Superintendent** – shall mean a competent person designated by Contractor which shall be a Certified Project Manager by the Project Management Institute.

**Transfer of Materials** – shall mean the date in which PREPA's Construction Contractors collect the Major Materials at the Storage Facility and the act of property transfer from Contractor to PREPA.

### ARTICLE 3. Consideration

In accordance with the terms and conditions contained herein, PREPA agrees to pay and the Contractor accepts, as full payment for the complete performance of this Contract, the firm price of \_\_\_ dollars (\$\_\_\_), plus any additional amount to be paid due to extra work ordered and accepted by the Engineer and approved by the Contracting Officer, according to ARTICLE 9, Changes and/or Extra Work, below. The cost of Insurance policies will be shared as stated in ARTICLE 19, Insurance and Bonds.

The demand of the obligations of either party under this Contract will be subject to the filing of the Contract at the office of the Comptroller of the Commonwealth of Puerto Rico, in compliance with Act 18 of October 30, 1975, as amended.

The Contractor shall submit its invoices for work already done according to the payment schedule as provided in ARTICLE 36, Payment to Contractor, together with the technical supporting documents.

During the life of the Contract, invoices for partial payments shall be made based on equipment delivered and accepted and/or services rendered and work performed during the month, as herein provided.

Major Material delivered on the storage site may be taken into consideration; provided that, the Contractor submits evidence that the materials have been paid for by him and that said materials have been properly housed or stored in a manner which will insure

the preservation of their quality and fitness for the work and that the Contractor shall not withdraw said material for any purpose other than incorporation into the Project by others.

PREPA shall retain ten percent (10%) of each payment. After the terms of the Contract have been fully complied, and all of the pipes delivered to PREPA's Construction Contractors to the satisfaction of the Contracting Officer, the balance of the total Contract price will be paid upon the presentation of a properly executed and duly certified invoice, therefore, after the Contractor shall have furnished PREPA with a release of all claims against PREPA (a Letter of Release) arising under and by virtue of this Contract and all final supporting documents.

All invoices submitted by the Contractor shall be subject to PREPA's approval before being paid, and its payment shall be done within thirty (30) days after the date of invoice receipt by PREPA.

All payments made by PREPA for equipment and/or materials delivered and accepted and/or services rendered and work performed under this Contract will be charged to construction project number \_\_\_\_\_.

All invoices submitted by the Contractor shall include the following Certification in order to proceed with its payment. This is an essential requirement and those invoices without this Certification will not be processed for payment.

No Interest Certification:

Under penalty of absolute nullity, I hereby certify that no employee, official or director of PREPA is a party or has any interest in the profits or benefits to be obtained under this Contract, or if any employee, official or director of PREPA has any interest in the profits or benefits under this contract a waiver has been previously obtained. I, also certify that the only consideration to (furnish the goods) or (provide the services) under this Contract is the payment agreed with PREPA'S authorized representative.

The total amount of this invoice is fair and correct. The (works) were completed, (the products) were delivered or (the services) were provided and no payment has been received for said concept.

\_\_\_\_\_  
Contractor's Signature

#### ARTICLE 4. Commencement and Completion of Work

This Contract shall be in effect for one year after the date it has been signed by both parties. The Contractor shall receive a General Mobilization Letter indicating that the Contractor shall begin to execute the work. Mobilization shall be completed in ten (10) days after receipt of the letter of mobilization. All manufacturing work, materials transportation and delivery shall be completed in strict accordance with the following delivery schedule and the quantities specified in the Materials Breakdown included in the Special Conditions and Technical Specifications:

First Delivery of Materials - 42 days from Mobilization  
Second Delivery of Materials - 56 days from Mobilization

#### ARTICLE 5. Suspension of Work

The Contracting Officer or the Engineer may, at any time, suspend the whole or any portion of the work under this Contract, but this right to suspend the work shall not be construed as denying the Contractor actual reasonable, and necessary expenses due to delays, caused by such suspension, it being understood that expenses will not be allowed for such suspension when ordered by the Contracting Officer or the Engineer on account of a Force Majeure Event, as defined in ARTICLE 14, Force Majeure, herein. The cause of such suspension shall be put in writing by the Contracting Officer or the Engineer within two (2) working days after the suspension or as soon as practicable.

#### ARTICLE 6. Other Work at the Site

PREPA reserves the right to perform other work by force account and/or enter into other contracts in connection with this project. The Contractor shall afford PREPA and other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with theirs.

If any part of the Contractor's work depends for proper execution or results upon the work of PREPA or of any other Contractor, the Contractor shall inspect and promptly report to PREPA any defects in such work or any conflicts between such work and that of the Contractor, for PREPA to decide, if necessary, the course to be followed by each party.

#### ARTICLE 7. Specifications and Drawings

PREPA reserves the right to review and approve all documents including, but limited to, drawings, specifications, methods and data, which the Contractor develops hereunder. Such review or approval shall in no way relieve the Contractor from its responsibilities,

obligations or liabilities under this Contract. The Contractor shall obtain such reviews or approval in writing from PREPA.

The Contractor shall keep at the working area a copy of the Contract, its supplementary documents, specifications and drawings and shall, at all times, give the Engineer access thereto. Anything called for in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications shall be of like effect as if called for or shown on both. In case of discrepancy in the specifications and drawings, the matter shall be immediately submitted to the Engineer, without whose decision said discrepancy shall not be adjusted by the Contractor, and the Contractor shall not proceed with the work so affected until it has received written order from the Engineer. The Engineer will furnish, from time to time, such additional detailed drawings and other information as he may consider necessary for the conduction of the work.

#### ARTICLE 8. Equipment to be Furnished and Installed by the Contractor

All equipment called for in the Specifications to be furnished by the Contractor shall be in strict accordance with the requirements of the Special Conditions and Technical Specifications.

#### ARTICLE 9. Changes and/or Extra Work

PREPA may, at any time, make changes or order extra work within the Scope of Work contracted, subject to previous written acceptance by PREPA'S Contracting Officer. If such changes or extra work require a price and/or schedule revision, such revision(s) shall be negotiated and agreed in writing by both parties before the commencement. Changes and/or Extra Work must be approved by the appropriate official pursuant to the general authorization for approval in order for payment of such change or extra work is made.

#### ARTICLE 10. Inspection

##### Periodic Inspection

All material and workmanship (if not otherwise designated by the specifications) shall be subject to inspection, examination, and test by PREPA's inspectors' at all reasonable times, during manufacture and/or at Storage Facility. PREPA shall have the right to reject defective material, equipment or workmanship or require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material and equipment furnished by the Contractor shall be satisfactorily replaced with proper material, and equipment without charge to PREPA. The Contractor shall promptly remove rejected material from the premises. The Contractor shall furnish promptly all reasonable facilities, labor, materials, and equipment necessary for the safe and convenient

inspection and tests that may be performed in such manners as not to unnecessarily delay the work.

Final Inspection

Final inspection of individual materials will take place at the Storage Facility before Transfer of Materials to PREPA's Construction Contractors. Transfer of Materials shall be completed at any time during the storage period.

ARTICLE 11. Superintendence by the Contractor

The Contractor shall have a competent Superintendent, satisfactory to the Engineer, on the work site at all times during progress of the work, with authority to act for him. The Superintendent shall represent the Contractor on his absence and all directions given to him by the Engineer or Manager shall be as binding as if given to the Contractor. In order to be binding on the Contractor, all directions from PREPA to Superintendent shall be made in writing when given, or if given orally, confirmed in writing within one (1) day of such oral direction. The Superintendent shall not be changed during the progress of the Work without the consent of PREPA, which shall not be unreasonably withheld, unless proven to be unsatisfactory to Contractor.

The Contractor shall, at all times, enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him. In addition, the Contractor shall be fully responsible for the negligent or wrongful acts or omissions of subcontractors or of persons both directly or indirectly employed by the Contractor, and shall be liable to PREPA and/or any affected third parties for such acts or omissions.

ARTICLE 12. Sworn Statement

Previous to the signing of this Contract, the Contractor will have submitted a sworn statement to the effect that, as of the Effective Date, neither Contractor nor any of its partners or owners, directors, officials, employees, parent company, subsidiaries or any entity that constitutes the alter ego of Contractor have been convicted of, nor have they pled guilty, in Puerto Rico, in the federal jurisdiction, in any state or territory of the United States of America or in any country, to any crime or its equivalent, as enumerated in Article 3 of Public Law 458 of December 29, 2000 of the Commonwealth of Puerto Rico, as amended. In accordance with Article 6 of Public Law 458 of December 29, 2000 of the Commonwealth of Puerto Rico, as amended, Contractor acknowledges that its conviction or guilty plea for any of the crimes as enumerated in Article 3 of such Act shall entail, in addition to any other applicable penalty, the automatic rescission of this Agreement. In addition, but only to the extent required by Public Law 458, PREPA shall have the right to demand the reimbursement of payments made pursuant to this Agreement that directly result from the committed crime.

ARTICLE 13. Access to Work

The Contractor shall permit all persons appointed or authorized by PREPA to visit, audit, inventory and inspect the materials at all times and places during the progress of the scope of work.

ARTICLE 14. Force Majeure

The parties hereto shall be excused from performing hereunder and shall not be liable in damages or otherwise, if and only to the extent that they shall be unable to perform, or are prevented from performing by a Force Majeure event. For purposes of this Contract, Force Majeure means any cause without the fault or negligence, and beyond the reasonable control of, the party claiming the occurrence of a Force Majeure. Force Majeure may include, but not be limited to, the following: Acts of God, industrial disturbances, acts of the public enemy, war, blockages, boycotts, riots, insurrections, epidemics, earthquakes, storms, hurricanes, floods, civil disturbances, lockouts, fires, explosions, interruptions of services due to the acts or failure to act of any governmental authority, provided that these events, or any other claimed as a Force Majeure, and/or its effects, are beyond the reasonable control and without the fault or negligence of the party claiming the Force Majeure, and that such party, within ten (10) days after the occurrence of the alleged Force Majeure, gives the other party written notice describing the particulars of the occurrence and its estimated duration. The burden of proof as to whether a Force Majeure has occurred shall be on the party claiming the Force Majeure. An Act of God is construed herein to mean an earthquake, hurricane or other cataclysmic phenomenon of nature not ordinarily occurring. Rains, windstorms, floods or other natural phenomenon of normal intensity for the particular locality shall not be construed as an Act of God. The Engineer shall be the sole judge as to whether a particular phenomenon shall be classed as an Act of God or as a normal occurrence.

ARTICLE 15. Penalty for Delays

If the Contractor fails to comply with the delivery schedule established in ARTICLE 4, Commencement and Completion of Work, the Contractor shall pay to PREPA a penalty for each calendar day of delay as follows:

DAY	DAILY
1 - 7	\$ 15,000
8 - 14	\$ 25,000
15 - 28	\$ 40,000
29 - 60	\$ 60,000

Penalty shall be applied until completing the work up to a maximum of \$1,260,000. The Contractor and his sureties shall be joint and several liable for such amount. In the

event that the Contractor had to pay the total amount of the penalty as above mentioned due to this delay or had a delay of more than sixty (60) days for any Delivery of Materials dates, said circumstances could be considered a breach of contract and PREPA may terminate the Contract, execute the performance bond and pursue any other remedies under this Contract, law or equity.

In case of delay, the Contractor shall within ten (10) days from the beginning of any such delay notify the Engineer in writing of the causes of delay, who shall ascertain the facts and the extent of the delay and extend the time for completing the work when in his judgment the findings of facts justify such an extension, and his findings of facts thereon shall be final and conclusive on the parties hereto, subject only to appeal by the Contractor as provided in ARTICLE 35, Disputes hereof; provided that, no claim shall be made by the Contractor against PREPA, its agents, contractors, subcontractors, employees, successors, assignees, for any cause whatsoever, during the progress of any portion of the work embraced in the Contract. Any damages caused by delays or hindrances exclusively by PREPA shall be considered as fully compensated for by the extensions of time as provided above.

If PREPA does not terminate the right of the Contractor to proceed, the Contractor shall continue the work, in which event shall pay to PREPA a penalty in the amount set forth above for each calendar day of delay until the work is completed, and the Contractor and his sureties shall be liable for the amount thereof; provided that, the right of the Contractor to proceed shall not be terminated or the Contractor charged with a penalty because of any delays in the completion of the work due to Force Majeure events or situations, or failures on the part of PREPA to carry out its obligations.

PREPA shall have the right to the payment or to the withholding of Contractor's payments in case of Contractor's delay in completion of the work. The Contractor agrees that the penalty shall not be subject to reduction, moderation or modification, since this penalty is a pecuniary punishment for the delay, and not a liquidation of damages.

## ARTICLE 16. Liabilities

### Liability

The appearing parties agree that their respective responsibilities for damages under this Contract will be governed by the Puerto Rico Civil Code and its case law, as dictated by the Supreme Court of Puerto Rico.

### Protection against the Occurrence of Damages

The Contractor agrees to make, use, provide, and take all proper, reasonably necessary and sufficient precautions, safeguards, and protection against the occurrence or happenings of injuries, death and/or damages to any person or property during the progress of the work.

Save and Hold Harmless Clause

The Contractor agrees to save and hold harmless and to indemnify PREPA for all expenses and costs of any nature (including attorneys' fees) incurred by PREPA arising out of any claim made by any person for personal injuries, including death, or for property damage, caused by Contractor, by act or omission, in the performance or nonperformance of its obligations under the Contract.

The Contractor agrees to indemnify PREPA for all expenses and costs of any nature arising out of a claim due to an environmental violation, caused by its agents, employees, subcontractors or assigns during the performance or nonperformance of its obligations under the Contract.

ARTICLE 17. Independent Contractor

The Contractor shall be considered as an independent contractor, for all material purposes under this Contract, and all persons engaged or contracted by the Contractor for the performance of its obligations herein, shall be considered as its employees or agents or those of its subcontractors, and not as employees or agents of PREPA. In consequence, the Contractor is not entitled to any fringe benefits, such as, but not limited to vacations, sick leave, and other.

ARTICLE 18. Termination

If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will insure its completion within the term specified in ARTICLE 4, Commencement and Completion of Work, or any extension thereof, or does not complete the work within such terms; or incurs in negligence in the performance of its obligations; or if he should persistently or repeatedly refuse or should fail to supply enough properly skilled workmen or proper materials; or if he should fail to make prompt payments to a subcontractor or for materials or labor; or persistently disregard laws, ordinances or the instructions of the Engineer, or otherwise be guilty of a substantial violation of any provision of the Contract, PREPA may, by written notice to the Contractor, and without prejudice to any other right or remedy in law or in equity, terminate the employment of the Contractor and take possession of the work by whatever method it may deem expedient. In such event, PREPA may take over the work and prosecute the same to completion by contract or otherwise, and the Contractor and his sureties shall be liable to PREPA for any excess cost incurred by PREPA. The expense incurred by PREPA as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Engineer.

If either party is adjudicated bankrupt under the Bankruptcy Laws of the United States, or if either party makes a general assignment for the benefit of creditors, the other party may, by written notice, terminate this Contract, without prejudice to any of such party's rights hereunder.

Notwithstanding anything to the contrary in this Contract regarding its term, PREPA may, in any moment, terminate, cancel or accelerate its expiration, after giving the Contractor not less than thirty (30) days prior notice, when in PREPA'S judgment such action responds to PREPA'S best interests. If this Contract is so terminated, the Contractor shall be compensated for actual, reasonable, and necessary expenses caused by such termination. The exercise of its right to terminate, cancel or rescind the Contract shall not be understood as a waiver by PREPA to any other remedy it may have under this Contract or under the law for delays or breach incurred by the Contractor in the performance of its obligations under the Contract.

ARTICLE 19. Insurance and Bonds

The Contractor shall secure and maintain in full force and effect during the life of this Contract as provided herein, policies of insurance covering all operations engaged in by the Contract as follows:

A. Insurances

Commonwealth of Puerto Rico Workmen's Compensation Insurance:

The Contractor shall provide Workmen's Compensation Insurance as required by the Workmen's Compensation Act of the Commonwealth of Puerto Rico. The Contractor shall also be responsible for compliance with said Workmen's Compensation Act by all its subcontractors, agents, and invitees, if any.

The Contractor shall furnish the Authority a certificate from the Puerto Rico's State Insurance Fund showing that all personnel employed in the work are covered by the Workmen's Compensation Insurance, in accordance with this contract.

Employer's Liability Insurance (EPLI):

The Contractor shall provide Employer's Liability Insurance with minimum bodily injury limits of \$1,000,000 for each employee and \$1,000,000 for each accident covering against the liability imposed by Law upon the Contractor as result of bodily injury, by accident or disease, including death arising out of and in the course of employment, and outside of and distinct from any claim under the Workmen's Compensation Act of the Commonwealth of Puerto Rico.

Comprehensive General Liability (CGL)

The contractor shall provide a comprehensive general liability for the warehouse (s) where the materials will be stored with a limit of at least \$1,000,000 CSL for bodily injury, personal injury & property damage.

Trucker's Liability (TL)

The contractor shall provide a trucker's policy covering public liability due to accidents for bodily injury and property damage with limits of at least \$1,000,000 per occurrence and \$1,000,000 aggregate for the transportation of the materials from the pier of entry to the warehouse.

Umbrella Coverage

The contractor shall provide umbrella coverage in the amount of \$10,000,000 CSL in excess of the following policies; EPLI, CGL and TL.

Open Cargo

PREPA shall provide ocean cargo insurance to cover materials in transit in a cargo vessel, and provided by contractor. The limit of this insurance must be at a minimum the cost of the materials with the highest value to be transported during the term of the Contract.

The policy will cover warehouse to warehouse and will also provide coverage to materials at the storage facility up to 355 days from the entry of the first materials to the warehouse storage facility. The valuation clause of the policy will include hull value of materials plus 25% in excess for expediting expenses in case of loss.

The Contractor will be additional insured with Hold Harmless and Waiver of Subrogation endorsements to be provided by PREPA.

**B. Contractor's Responsibilities**

The Contractor shall provide PREPA a monthly transportation report in PREPA'S official form provided in this contract which states all movements of materials from warehouse to warehouse. This report shall be sent to the following address;

Puerto Rico Electric Power Authority  
Risk Management Office  
PO Box 364267  
San Juan, PR 00936-4267

**C. Cost of policies**

The cost of all insurance policies will be shared as follows: Contractor 65% /PREPA 35%.

**D. Requirements under the policies**

The Comprehensive General Liability and Trucker's Liability Insurance required under this Contract shall be endorsed to include:

1. As Additional Insured: Puerto Rico Electric Power Authority  
Risk Management Office  
PO Box 364267  
San Juan, PR 00936-4267
2. A 30 day cancellation or nonrenewable notice to be sent to the above address.
3. An endorsement including this contract under contractual liability coverage and

identifying it by number, date and parties to the contract.

4. Waiver of Subrogation in favor of PREPA.
5. Breach of Warranties or Conditions:  
"The Breach of any of the Warranties or Conditions in this policy by the Contractor shall not prejudice PREPA'S rights under this policy."

E. Bonds

As a contract security, the Contractor shall furnish at the time of the execution of the contract:

1. A Performance Bond in the amount of one hundred percent (100%) of the contract price, with good and sufficient surety satisfactory to PREPA guaranteeing that the Contractor will well and faithfully perform the contract work.
2. A Payment Bond in the amount of one hundred percent (100%) of the contract price, with good and sufficient surety satisfactory to PREPA to guarantee the prompt payment of all labor, supervision, equipment and materials required in the performance of the work.
3. All bonds shall be issue in the official form of PREPA provided as part of this contract.
4. Power of Attorney must be provided with the Payment and Performance Bonds to certify its legitimacy.

F. Furnishing of Policies and Bonds:

All required policies of insurance and bonds shall be in a form acceptable to the Authority and shall be issued only by insurance companies authorized to do business in Puerto Rico.

The Contractor shall furnish a certificate of insurance in original signed by an authorized representative of the insurer in Puerto Rico, describing the coverage afforded.

This certification shall be in the "Acord" form, in general use by the insurers. Also, original of the endorsements shall be furnished."

All policies and bonds shall be issued by insurance carriers having an A.M. Best's Guide rating of A- or better.

The Selected Proponent will not begin mobilization in the project prior to PREPA's evaluation and acceptance of all Bonds and Insurance policies.

ARTICLE 20. Transfer of Title

Title, ownership, risk of loss and the right to possession and use, and care, custody and control of the materials shall transfer from Contractor to PREPA following the Transfer

of Materials, or if the Contract is terminated before this date, for any reason other than Contractor's default upon payment in full of the amounts due.

Contractor shall be responsible for the care, custody and control of materials delivered to the Storage Facility until Transfer of Title and, shall be responsible as part of the Work to properly manage, administer and schedule with reasonable foresight, the Delivery of Materials and their storage and dispatch.

#### ARTICLE 21. Permits and Licenses

The Contractor shall obtain and maintain all the licenses, permits, and authorizations required to perform all services and tasks under this Contract, and shall send all notices, pay all fees and related costs, and will comply and will have its subcontractors and agents comply with all laws, ordinances, rules, and regulations applicable to the work, in accordance with the drawings and specifications. Should the Contractor find any discrepancy between the drawings and specifications and the permits, laws, ordinances, rules, and regulations referred to herein, the Contractor shall proceed immediately to notify PREPA of the discrepancy and shall not continue with the work until PREPA issues and notifies an order informing the Contractor what changes are necessary and when to proceed with the work as changed.

#### ARTICLE 22. Minimum Wage Rates

Laborers and other employees engaged under this Contract shall be paid not less than the minimum wages rates prescribed by law. PREPA may withhold from any monies due to the Contractor any sum necessary to make up the full amount of wages due under this Contract and may distribute it directly to those entitled thereto hereunder.

#### ARTICLE 23. Contingent Fees

The Contractor guarantees that he has not employed any person to solicit or secure this Contract upon any agreement for a commission percentage, brokerage or contingent fee. Breach of this guarantee shall give PREPA the right to annul the Contract or, at its discretion to deduct from the Contract price or consideration the amount of such commission, percentage, brokerage or contingent fees. This warranty shall not apply to commission's payable by contractors upon contract or sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

#### ARTICLE 24. Other Contracts

PREPA may award other contracts for additional work, and the Contractor shall fully cooperate with such other contractors, in accordance with ARTICLE 6, Other Work at the Site, of this Contract, and carefully fit his own work to that provided under other

contracts as may be directed by the Contracting Officer. The Contractor shall not commit or permit any acts which interfere with the performance of work by any other Contractor.

ARTICLE 25. Official not to Benefit

No officer, employee or agent of PREPA, or of the Government of the Commonwealth of Puerto Rico or Municipal Governments, shall be admitted to any share or part of this Contract or to any benefit that may arise there from, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

In addition to the restrictions and limitations established under the provisions of Act 12 of July 24, 1985, as amended, retired or former officers or employees of PREPA, whose work was in any way related to the award or management of contracts, shall in no way benefit from any contract with PREPA for a period of two (2) years after leaving employment with or ceasing services to PREPA.

ARTICLE 26. Conflict of Interest

The Contractor certifies that he does not receive payment or benefit of any nature for services rendered regularly through an appointment to a governmental agency, body, public corporation or municipality of Puerto Rico. The Contractor also certifies that he may have consulting services contracts with other governmental agencies or bodies, but such condition does not constitute a conflict of interest for the Contractor.

ARTICLE 27. Claims for Labor and Materials

The Contractor shall, at his own expense, assume the defense of and save harmless PREPA from claims for labor and materials and not suffer any mechanics or other liens to remain outstanding against any of the property used in connection with the work; and shall, on request, furnish satisfactory evidence that all persons who have done work or furnished materials have been fully paid. If the Contractor fails to comply with his obligations in this respect, PREPA may take such liens or claims and may withhold from any monies due to the Contractor such amounts as may be necessary to satisfy and discharge any such claims and any cost and expenses incidental thereto.

ARTICLE 28. Unfair Labor Practice

In the event that the Contractor or any of his subcontractors or agents do not comply with an order issued by the Puerto Rico Labor Relations Board and/or the National Labor Relations Board upon their finding that the Contractor or any of his subcontractors or agents have committed an unfair labor practice, no further payments shall be made by PREPA to the Contractor after the date of said order. In addition, the Contract may be terminated by PREPA, in which case PREPA may take possession of

the materials, tools, and appliances on the job site and finish the work by whatever method it may deem expedient. Any declaration by the Puerto Rico Labor Relations Board and/or by the National Labor Relation Board that the contractors or agents have not complied with an order issued by the Board relating to any unfair labor practice, shall be binding, final and conclusive unless such order is reversed or set aside by a Court of competent jurisdiction.

#### ARTICLE 29. Transfer of Funds Agreements

This Contract or any interest therein or any monies due or to become due hereunder, shall not be assigned, mortgaged or otherwise disposed of without the previous consent in writing of the Contracting Officer.

PREPA has no legal obligation to accept Transfer of Funds Agreements between the Contractor and thirds parties by reason of the goods or services rendered under this Contract. However, Contractor may request PREPA, in writing, the acknowledgment and acceptance of a Transfer Funds Agreement between Contractor and a third party, by submitting said Agreement for evaluation pursuant to the rules and procedures in force at PREPA. PREPA reserves the right to accept or not the application for the acknowledgement of the Transfer. The Assigner will pay PREPA \$200 per annum to be discounted from the first payment of the Transfer, for administrative expenses.

Contractor accepts that the acknowledgment of the Transfer of Funds by PREPA will be subject to the following terms and conditions: (a) PREPA keeps its preferential right to retain and discount, from all payments owed under this Contract, all and any sum owed by the Assigner to PREPA, whether under this Contract or under any other contract or purchase order or by a right of compensation (set off) that PREPA has against the Assigner, and to apply the amount of the sum retained and discounted to its claim against the Assigner; (b) PREPA keeps its preferential right to retain and discount, from all payment due under the Contract and payable to the Assignee, all and any sum owed to PREPA by the Assigner, including, but not limited to, any right of compensation (set off) PREPA may have against the Assigner, and apply the amount of the retained and discounted sum from its claim against the Assigner; (c) PREPA keeps its unlimited right to retain the payments in cases where: (i) the Assignee does not comply with all the contractual obligations and responsibilities that it may have toward PREPA; (ii) that there are in existence claims of any kind or nature from PREPA against the Assignee arising in relation to said Contract or purchase order and/or in relation to any other contract between the Assigner and PREPA, including, but not limited to warranty claims of products sold or because of defects or vices on said products and/or of construction and irrespective of whether said obligations of the Assigner toward PREPA may or not be liquid and capable of being demanded.

The Assigner and the Assignee acknowledge and accept that it will be the Assigner's responsibility to pay the Assignee any amount of money object of the Transfer that may

be received by PREPA while the debt object of the same is not covered by the Assigner. Moreover, the Assigner and the Assignee release PREPA from any claim related with said payment. The Assigner and the Assignee acknowledge and accept that in order to comply with said acknowledgment, PREPA will issue all the payments, regardless of whether said payments had been transferred or not, to the name of the Assigner and the Assignee.

The Assigner and Assignee acknowledge and accept that PREPA will automatically cease from having any obligation of any nature whatsoever under the transfer, in any of the following circumstances: (i) as soon as the debt of the Assigner in favor of the Assignee has been paid by the Assigner or collected from him, even when it has not been paid in full with the transferred funds; (ii) as soon as PREPA has paid the sums owed under the Contract or change of order object of this Transfer; (iii) as soon as PREPA has made payments up to the amount owed under the Contract or change of order object of this Transfer; (iv) as soon as a year has transpired from the due and/or payment date of any of the accounts receivable transferred by the Assigner to the Assignee, provided that within said year, the Assigner has not formulated a written statement with acknowledge receipt to PREPA claiming the payment.

The Assigner and the Assignee acknowledge and accept that it will be entirely their responsibility to request PREPA, by means of a document signed by both, to discontinue the payments to the Transfer. The Assigner and the Assignee release the Customer from any claim arising from a breach to this obligation.

#### ARTICLE 30. Contract Assignment

Neither PREPA nor Contractor shall, without the express prior written consent of the other (which consent shall not be unreasonably withheld), assign to any third party this Contract nor any part thereof or any right, benefit, obligation or interest therein.

#### ARTICLE 31. Subcontractors

The Contractor shall not subcontract any part of the work covered by this Contract without the prior approval in writing of said subcontractor and subcontract by the Contracting Officer. In the event that PREPA approves a subcontractor, the Contractor shall, not subcontract any part of the work covered by this Contract without the prior approval in writing of said subcontractor and subcontract by the Contracting Officer. Provided, that no subcontract shall be considered for PREPA's approval, except when the following requirements are met: (1) the Contractor delivers PREPA a copy of the subcontract, not less than thirty (30) days prior to the effective date of the proposed subcontract; (2) the subcontract includes, as a condition for its legal validity and enforceability, a provision whereby PREPA has the right to substitute, subrogate or assume Contractors' rights under the subcontract, in the event that PREPA declares the Contractor in breach or default of any of the Contract terms and conditions; and (3)

the subcontract includes, as a condition for its validity and enforceability, a provision establishing for the subcontractor the obligation to comply with all Contractors' obligations under the Contract (mirror image clause), except for such obligations, terms and conditions which exclusively related with works or services not included under the subcontract.

PREPA may invalidate any of the contracts with the subcontractors if PREPA determines that they are detrimental to its best interests.

#### ARTICLE 32. Novation

The Contractor and PREPA expressly agree that no amendment or change order which could be made to this Contract, during its term, shall be understood as a contractual novation, unless both parties agree to the contrary, specifically and in writing. This previous provision shall be equally applicable in such other cases where PREPA gives the Contractor a time extension for the compliance of any of its obligations under the Contract or where PREPA dispenses the claim or demand of any of its credits or rights under this Contract.

#### ARTICLE 33. Patents and Copyrights

The Contractor, at its own expense, shall defend any suit or action brought against PREPA based on a claim that any equipment or part thereof, for infringement of copyright on any composition, secret process, patented or unpatented invention, article or appliance manufactured or used in the performance of this Contract, including their use by PREPA, constitutes an infringement of any patents and/or copyrights of the United States, if notified promptly in writing by PREPA, and given the authority, information, and assistance for the defense of the same, and the Contractor shall pay all damages and costs awarded therein against PREPA. If, in such suit, the equipment or any part thereof, or the composition, secret process, invention, article or appliance, is held to constitute infringement and its use is enjoined, the Contractor, at its option and expense, shall either procure for PREPA the right to continue using the same. The Contractor, also, can replace at its expense, it with non-infringing equipment; composition, secret process, invention, article or appliance, or modify it so it becomes non-infringing; or remove it and refund the purchase price.

#### ARTICLE 34. Waivers

No waiver of any breach of this Contract shall be held to be a waiver of any other subsequent breach. All remedies afforded by PREPA in this contract shall be taken and construed as cumulative, that is in addition to every other remedy provided herein or by law.

#### ARTICLE 35. Disputes

Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this Contract shall be decided by the Engineering and Technical Services Division Head, subject to written appeal by the Contractor within thirty (30) days to the Executive Director. As soon as practicable thereafter, the Executive Director shall inform each party hereto of his decision regarding the dispute, which decision shall be final and conclusive upon the parties hereto, unless such decision is challenged on the basis of being arbitrary, malicious or capricious. If such challenge is made, either party may pursue its remedy at law or equity. In the meantime, the Contractor shall diligently proceed with the work as directed.

#### ARTICLE 36. Payment to Contractor

During the life of the Contract, invoices for partial payments shall be made as follow:

- 10% upon mobilization
- 15% shop drawings approval
- 25% for the Fabrication of Materials (Factory Acceptance Test as applicable)
- 25% for the Delivery of Materials
- 25% for the Transfer of Materials

Unless otherwise provided in the specifications, partial payment will be made as the work progresses at the end of each month, or as soon thereafter as practicable, on estimates made and approved by the Manager or the Engineer in accordance with PREPA's internal regulations. Upon completion and acceptance of all work required hereunder, the amount due to the Contractor under this Contract will be paid upon the presentation of a properly executed and duly certified voucher therefore, after the Contractor shall have furnished PREPA with a release, if required, or all claims against PREPA arising under and by virtue of this Contract, other than such claims, if any, as may be specifically excepted by the Contractor from the operation of the release in stated amounts to be set forth therein; provided that, the amount of such excepted claims is not included in the voucher for final payment.

All invoices submitted by the Contractor shall be subject to PREPA's approval before being paid, and its payment shall be done within thirty (30) days after the date of its approval by PREPA.

#### ARTICLE 37. Correction of Work after Final Payment

Neither the final certificate for payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for faulty materials or workmanship and, unless otherwise specified, he shall remedy any defects due thereto and pay for any damage to other work resulting there from, which shall appear within a period of one (1)

year after Delivery of Materials or until the Transfer of Materials. PREPA shall give notice of observed defects with reasonable promptness.

All questions arising under this Section shall be decided by the Engineer, subject to appeal by the Contractor, as provided in ARTICLE 35, Disputes.

#### ARTICLE 38. Laws to be Observed

The Contractor shall observe and comply with any and all Federal, Commonwealth and Municipal Laws, by-laws, ordinances, and regulations in any manner affecting the work, the equipment or the materials used in the proposed rehabilitation and/or installation or construction, and those employed on the work or the conduct of the work, and with all such orders and decrees as exist at present or may be enacted prior to the completion of the work by bodies or courts having any jurisdiction or authority over the work. The Contractor shall save harmless and indemnify PREPA and its representatives officers, agents, and servants against any claim or liability arising from or based on the violation of any such law, by-law, ordinance, regulation, order or decree, whether by himself or his employees.

#### ARTICLE 39. Change in Law

During the term of this Contract, any change in law, including, but not limited to changes in applicable tax law, which causes an increase in Contractor's costs when supplying the products or services to be acquired by PREPA, shall be of Contractor's responsibility and PREPA shall not be obliged to make additional payments nor to pay additional sums to the price or canon originally agreed for those products or services.

#### ARTICLE 40. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Puerto Rico. Also, the contracting parties expressly agree that only the state courts of Puerto Rico will be the courts of competent and exclusive jurisdiction to decide over the judicial controversies that the appearing parties may have among them regarding the terms and conditions of this Contract.

#### ARTICLE 41. Separability

If a court of competent jurisdiction declares any of the Contract provisions as null or invalid, such holding will not affect the validity and effectiveness of the remaining provisions of the Contract and the parties agree to comply with their respective obligations under such provisions not included by the judicial declaration.

#### ARTICLE 42. Warranty

The Contractor warrants that all materials, parts, equipment used, and work performed under this Contract comply in all respect with its terms and conditions; that they are free from any and all latent and patent defects in design, materials, and workmanship; that they are suitable and adequate for the purposes for which they were designed and for such other purposes, if any, as are specified in the Contract, and that the services provided under this Contract will conform with the highest standards of care and practice appropriate to their nature. The warranty period will begin on Transfer of Materials and will be in effect for one year. The Contractor will, upon written notice by PREPA, fully remedy, free of expense to PREPA, such defects as may develop on said services, materials, parts or equipment provided that they have been properly stored, installed, maintained, and operated within the specified parameters. The Performance Bond shall cover and serve as guarantee for this warranty.

For those materials, parts, equipment which proves defective or deficient during the warranty period, the Contractor shall, at his own expense, repair or replace, transport-in, from Contractor's facilities to PREPA'S site, and transport-out, from PREPA'S site to Contractor's facilities, such materials, parts, and/or equipment. The Contractor shall pay for the labor and installation associated to such defective or deficient material parts and equipment. The Performance Bond shall cover and serve as guarantee for the Contractor's failure, in whole or in part, to properly perform his obligations under this Contract.

For parts and equipment to be procured by Contractor from other suppliers, and which will be furnished by Contractor to PREPA under this contract, a written warranty shall be obtained by the Contractor from each supplier and legally tendered to PREPA prior to the commencement of work.

#### ARTICLE 43. Correlation of Documents

In case of discrepancy or in the event of conflict among the different Contract documents such as: The Contract, Special Conditions and Technical Specifications, Proposal Forms, and the Proposal, these shall take precedence in the order given.

The terms and conditions contained in the Contract shall prevail over any conflictive terms and conditions contained in the Proposal.

#### ARTICLE 44. Notices

PREPA agrees to give the Contractor immediate notice of any and all claims for which the Contractor may be liable, and the Contractor agrees to give PREPA immediate notice of any and all claims for which PREPA may be liable.

Any notice to be given hereunder shall be in writing and will be sufficiently served when delivered in person or properly mailed to the following addresses:

To PREPA: Puerto Rico Electric Power Authority  
PO Box 364267  
San Juan, Puerto Rico 00936-4267  
Attention: Generation Director  
Facsimile No.: (787) 521-6440  
Telephone No.: (787) 521-6421,6422

To Contractor: [Company Name]  
[Address]  
Attention: [Name]  
[Applicable Title]  
Facsimile No.: (XXX) XXX-XXXX  
Telephone No.: (XXX) XXX-XXXX

#### ARTICLE 45. Certifications or Documents Required by Law

Previous to the signing of this Contract, the Contractor shall have to submit a valid Certificate of Eligibility issued by the General Service Administration, in accordance with Act 85 of June 18 of 2002, as amended or shall register in PREPA's Suppliers Registry. In addition, Contractor shall provide the following documents or certifications:

- A. Certification issued by the Treasury Department of Puerto Rico which indicates that Contractor does not owe taxes to the Commonwealth of Puerto Rico; or is paying such taxes by an installment plan in full compliance with its terms.
- B. An Income Tax Return Filing Certificate, issued by the Treasury Department of Puerto Rico assuring that Contractor has filed his Income Tax Return for the last five (5) tax years.
- C. Certification issued by the Municipal Revenues Collection Center (MRCC), demonstrating that Contractor does not owe tax to such governmental agency.
- D. Certificate, issued by the Department of Labor and Human Resources of Puerto Rico, demonstrating that Contractor has paid to the Department of Labor and Human Resources of Puerto Rico its employee contributions in accordance with the Puerto Rico Employment Security Act (unemployment, temporary disability or sickness or social security for chauffeurs), or is paying such contributions by an installment plan and is in full compliance with its terms.

- E. Certification issued by the Child Support Administration (ASUME, by its initials in Spanish) assuring that Contractor is in compliance with the retention that as an employer should do.

It shall be Contractor's responsibility, also, to require all subcontracted third parties to comply with all the previous Certifications and agrees to notify PREPA of such compliance within ten (10) working days of subcontracting such third party.

If any of the previously required Certifications shows a debt, and the Contractor has requested a review or adjustment to this debt, the Contractor will certify that it has made such request at the time of granting the Contract. If the requested review or adjustment is denied and such determination is final, Contractor will provide, immediately, to PREPA a proof of payment of this debt; otherwise, Contractor accepts that the owed amount be offset by PREPA and retained at the origin, deducted from the corresponding payments.

The Contractor recognizes that submittal of the aforementioned certifications and documents is an essential condition of this Contract; and even in the case that they are partially incorrect, there will be sufficient cause for PREPA to terminate, cancel or rescind the Contract and Contractor have to refund all payments received.

#### ARTICLE 46. Income Tax Withholding

PREPA will deduct and withhold at source to the Contractor the equivalent of seven percent (7%) from payments for services rendered under this Contract, in compliance with the 1994 Puerto Rico Internal Revenue Code, section 1143, as amended. Notwithstanding, the withholding to be done by PREPA as herein stated could be increased to twenty percent (20%) in the event that the Contractor is a non resident individual, which is a U.S. citizen, as provided by the 1994 Puerto Rico Internal Revenue Code, section 1147; or twenty nine percent (29%) in the event that the Contractor is a non resident and non U.S. citizen individual; or a foreign corporation or partnership which is not dedicated to industry or business in Puerto Rico, as provided by the 1994 Puerto Rico Internal Revenue Code, sections 1147 and 1150.

If a Release Letter has been issued to the Contractor by the Treasury Department, the Contractor shall be responsible to submit a copy of said Release Letter to PREPA for every calendar year; otherwise, payments under the Contract shall remain subject to withholding at source. All invoices shall be segregated by concepts (services, materials, equipments, etc.), to identify the amounts subject to withholding, and avoid undue deductions.

#### ARTICLE 47. Discrimination

The Contractor certifies that it is an equal opportunity employer, and does not discriminate by reason of race, color, gender, age, national or social origin, social

status, political ideas or affiliation, religion; for being or perceived to be victim or domestic violence, sexual aggression or harassment; for physical or mental disability or veteran status.

#### ARTICLE 48. Other Taxes

All unemployment, retirement, and other Social Security contributions and taxes; all sales, use and excise, privilege, business and occupational taxes, and any other taxes or fees payable by the Contractor are and shall be included as part of his prices.

#### ARTICLE 49. Cleaning Up

The Contractor shall, from time to time, as directed by the Engineer, remove from PREPA'S property and from all public and private property all temporary structures no longer required, rubbish, and waste materials resulting from his operations.

Upon completion of the work, the Contractor shall remove from the vicinity of the work all remaining rubbish, unused materials, and other like material, belonging to him or used under his direction during the installation of the equipment, and in the event of his failure to do so the same may be removed by PREPA at the Contract's expense, and his surety or sureties shall be liable therefore.

#### ARTICLE 50. Use of Completed Portions

PREPA shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the fact that the time for completion of the entire work may not have expired, but such taking possession and use shall not be deemed an acceptance of the work so taken or used or any part thereof. PREPA may require the Contractor to expedite the completion of any part of the work for provisional use by PREPA and the Contractor shall comply with such request. If such order of completion or prior use increases the cost of the work or delays the work, the Contractor shall be entitled to such extra compensation or extension of time as agreed by the parties.

#### ARTICLE 51. Quality Assurance Clause

The Contractor shall establish an adequate quality control program to satisfy all applicable regulation and requirements specified in the procurement documents. The program shall contain all those measures necessary to assure that all basic technical requisites are fulfilled.

PREPA reserves the right to conduct audits and inspections to the facilities, activities, and/or documents when estimated necessary in order to assure that the quality control program is adequate and is being properly implemented. The Contractor shall provide

PREPA access to its facilities and documents, so that PREPA, through audits and inspections can verify the quality of the purchased products or services.

In every case in which the materials or services to be furnished to PREPA are subcontracted partially or totally by the Contractor, the Contractor shall request the subcontractor to accept and comply with all the requirements of this Article.

ARTICLE 52. Code of Ethics

Contractor agrees to comply with the provisions of Act 84 of June 18, 2002, which establishes a Code of Ethics for the Contractors, Suppliers and Economic Incentive Applicants of the Executive Agencies of the Commonwealth of Puerto Rico.

ARTICLE 53. Complete Agreement

This document, together with all attachments referenced herein, constitutes the complete Agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have executed this Contract this \_\_\_\_\_ day of \_\_\_\_\_ of 2011.

Puerto Rico Electric Power Authority

Contractor's Name

By: \_\_\_\_\_  
Miguel Ángel Cordero López  
Executive Director

By: \_\_\_\_\_  
Contractor's Representative name  
Title

PUERTO RICO ELECTRIC POWER AUTHORITY

SPECIAL CONDITIONS AND TECHNICAL SPECIFICATIONS

MATERIAL ACQUISITION  
VIA VERDE NATURAL GAS PIPELINE

ARTICLE 1. General

- A. The Contractor is required to furnish all labor, materials not provided by PREPA, tools, equipment, facilities, supervision, job administration and superintendence required, as requested by PREPA and shall perform all natural gas pipe manufacturing work expeditiously and to the entire satisfaction of the Contracting Officer. The work shall be conducted in accordance with this specification, as directed by the Contracting Officer; and as described in Contract.
- B. Applicable Standards and Codes

Materials shall conform to the codes and standards identified below and those included in the Appendixes. The codes and standards used shall be of the latest edition including all revisions, supplements and addenda which are in effect as of the date of Mobilization Letter issue.

Department of Transportation (DOT)

- 49 Code of Federal Regulation (CFR) 192

American Petroleum Institute (API)

- API Specification 5L - Pipe shall be manufactured in accordance with the latest DOT referenced edition, and as modified by this Specification No. 1446-000-SP-7004-00.
- API 6D, Specification for Pipeline Valves
- API 1104, Standard for Welding Pipelines and Related Facilities

American Society of Mechanical Engineers (ASME)

- ASME B31.8 – Gas Transmission and Distribution Piping Systems
- ASME Boiler and Pressure Vessel Code Section IX – Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators
- ASME Boiler and Pressure Vessel Code, Section I and Section VIII
- ASME/ANSI B16.5, Pipe Flanges and Flanged Fittings
- ASME/ANSI B16.9, Factory Made Wrought Steel Butt welding Fittings
- ASME/ANSI B16.25, Butt welding Ends
- ASME B.16.49, Factory-Made Wrought Steel Butt welding Induction Bends

C. Appendixes – Technical Specifications

1. Drawings

48.0-Z-302.20	Piping Plot Plan - Key Plan
48.0-Z-302.30	Piping Plot Plan - Filter separator Area
48.0-Z-302.31	Piping Plot Plan - Meter Skid Area
48.0-Z-302.32	Piping Plot Plan - Gas Heater Area
48.0-Z-302.33	Piping Plot Plan - Main Gas Control Valve Skid
48.0-Z-302.35	Piping Plot Plan -Condensate Tank area
48.0-Z-302.41	Piping Sections & Details
48.0-Z-302.42	Piping Sections & Details
48.0-Z-302.50	Mechanical Piping MTO (Bill of Mat)
48.0-Z-303.20	Piping Plot Plan - Key Plan
48.0-Z-303.30	Piping Plan - Launcher Area
48.0-Z-303.31	Piping Plan - Launcher Area
48.0-Z-303.32	Piping Plan - Metering Skid Area
48.0-Z-303.33	Piping Plan - Future Portable Receiver Area
48.0-Z-303.40	Piping Sections & Details
48.0-Z-303.50	Mechanical / Piping MTO (Bill of Mat)
48.0-Z-304.20	Piping Plan - Key Plan
48.0-Z-304.30	Piping Plan - Filter Separator Area
48.0-Z-304.31	Piping Plan - Gas Heater Area
48.0-Z-304.32	Piping Plan - Boiler Regulator Skid Area
48.0-Z-304.33	Piping Plan - Metering Skid Area
48.0-Z-304.34	Piping Plan - Main Gas Control Valve Skid
48.0-Z-304.35	Piping Plan -Condensate Tank area
48.0-Z-304.36	Piping Plan - Gas Heater Area
48.0-Z-304.40	Piping Sections & Details
48.0-Z-304.41	Piping Sections & Details
48.0-Z-304.42	Piping Sections & Details
48.0-Z-304.50	Mechanical / Piping MTO (Bill of Mat)
48.0-Z-305.20	Piping Plot Plan - Key Plan
48.0-Z-305.30	Piping Plan - Receiver Area
48.0-Z-305.31	Piping Plan - Receiver Area
48.0-Z-305.32	Piping Plan - Filter Separator Area
48.0-Z-305.33	Piping Plan - Gas Heater Area
48.0-Z-305.34	Piping Plan - Main Gas Control Valve Skid
48.0-Z-305.35	Piping Plan - Meter Skid area
48.0-Z-305.36	Piping Plan - Boiler Regulator Skid Area
48.0-Z-305.37	Piping Plan - Condensate Tank Area
48.0-Z-305.40	Piping Sections & Details

48.0-Z-305.41	Piping Sections & Details
48.0-Z-305.42	Piping Sections & Details
48.0-Z-305.43	Piping Sections & Details
48.0-Z-305.50	Mechanical / Piping MTO (Bill of Mat)
48.0-Z-306.31	Piping Plot Plan - Typical Intermediate - Mainline Valve Site
48.0-Z-306.34	Piping Plot Plan - Mainline Valve Site NO. 4&5 Tie-In to Cambalache
48.0-Z-306.39	Piping Plot Plan - Mainline Valve Site NO. 10&11 Tie-In to Palo Seco
48.0-Z-306.42	Piping Plot Plan - Mainline Valve Site NO. 13&14 Tie-In to Palo Seco, 1 of 2
48.0-Z-306.42	Piping Plot Plan - Mainline Valve Site NO. 13&14 Tie-In to Palo Seco, 2 of 2

## 2. Specifications

1446-000-SP-7010-00	Pipeline Scraper Traps
1446-500-SK-2000-01	36X24 Fabrication San Juan Trap
1446-300-SK-2000-01	36X24 Fabrication ECO Trap
1446-000-SP-2002-00	Skid Mounted Assemblies
1446-000-SP-2003-00	Protective Coatings
1446-000-SP-7008-00	Monolithic Insulating Joint
1446-000-DS-7008-00	Monolithic Insulating Joint
1446-000-SP-2004-00	Ultrasonic Meter
1446-300-DS-2004-00	Ultrasonic Meter Peñuelas
1446-300-DS-2004-01	Turbine Flow Meter Peñuelas
1446-300-DS-2004-02	Supplementary Requirements for Metering Skid Peñuelas
1446-200-DS-2004-00	Ultrasonic Meter Cambalache
1446-200-DS-2004-01	Turbine Flow Meter Cambalache
	Supplementary Requirements for Metering Skid Cambalache
1446-200-DS-2004-02	Cambalache
1446-400-DS-2004-00	Ultrasonic Meter Palo Seco
1446-400-DS-2004-01	Turbine Flow Meter Palo Seco
1446-400-DS-2004-02	Supplementary Requirements for Metering Skid Palo Seco
1446-500-DS-2004-00	Ultrasonic Meter San Juan
1446-500-DS-2004-01	Turbine Flow Meter San Juan
1446-500-DS-2004-02	Supplementary Requirements for Metering Skid San Juan

1446-000-SP-2005-00	Control Valves
1446-000-SS-2005-00	Scope of Supply Control Valve Skid
1446-000-OP-2005-00	Control Valve Skids Operating Conditions
1446-200-DS-2005-00	Flow Control Valve Cambalache Station
1446-400-DS-2005-00	Flow Control Valve Palo Seco Station
1446-500-DS-2005-00	Flow Control Valve San Juan Station
1446-200-DS-2005-01	Pressure Control Valve Cambalache Station
1446-000-OP-2006-00	Operating Conditions Pressure Regulating Skid
1446-400-DS-2005-01	Pressure Control Valves Palo Seco
1446-400-DS-2006-00	Pressure Control Valves Palo Seco
1446-400-DS-2006-01	Pressure Control Valves Palo Seco
1446-500-DS-2005-01	Pressure Control Valve San Juan Station
1446-500-DS-2006-00	Pressure Control Valves San Juan
1446-500-DS-2006-01	Pressure Control Valves San Juan
1446-000-SP-2001-00	Filter Separator
1446-200-DS-2001-00	Filter Separator Data Sheet Cambalache Station
1446-400-DS-2001-00	Filter Separator Data Sheet Palo Seco Station
1446-500-DS-2001-00	Filter Separator Data Sheet San Juan Station
1446-500-DS-2000-00	Indirect Fire Heaters
1446-000-SP-2000-00	Indirect Gas Fired Heater
1446-000-SS-2000-00	Scope of Supply Indirect Gas Heater
1446-200-DS-2000-00	Indirect Fire Heater
1446-400-DS-2000-00	Indirect Fire Heaters
1446-000-SP-7000-00	Mainline Ball Valves
1446-000-SP-7001-00	Gas Hydraulic Valve Operators
1446-600-DS-7001-00	Main Line Ball Valves
1446-600-DS-7002-00	Gas Hydraulic Valve Operators
1446-600-DS-5001-00	Instruments Main Line Valves
1446-600-DS-5001-01	Instruments Main Line Valves
1446-600-DS-5001-02	Instruments Main Line Valves
1446-600-LT-5000-00	Instrument Index MLV Sites
1446-300-DS-2008-01	Large Ball Valves Penuelas
1446-300-DS-2008-02	Large Ball Valves Penuelas
1446-300-DS-2008-03	Large Ball Valves Penuelas
1446-300-DS-2008-04	Large Ball Valves Penuelas
1446-300-DS-2009-01	Actuators Penuelas
1446-300-DS-2009-02	Actuators Penuelas
1446-300-DS-2009-03	Actuators Penuelas
1446-200-DS-2008-01	Large Ball Valves Cambalache
1446-200-DS-2008-02	Large Ball Valves Cambalache
1446-200-DS-2009-01	Large Ball Valves Cambalache
1446-200-DS-2009-02	Actuators Cambalache
1446-400-DS-2008-01	Large Ball Valves Palo Seco
1446-400-DS-2008-02	Large Ball Valves Palo Seco
1446-400-DS-2008-03	Large Ball Valves Palo Seco

- D. The Contractor shall start his work at the time indicated in PREPA'S General Mobilization Letter and shall at all times during the continuance of the contract, prosecute the work with such force and equipment as, in the judgment of the Engineer, are necessary to complete it within the time specified in ARTICLE 4, Commencement and Completion of Work of the Contract.

## ARTICLE 2. Scope of Work

The extent and general scope of the works required under this Contract are to supply materials, provide storage and dispatch services, in strict accordance with the following specifications and Appendixes.

- A. Materials Breakdown - Contractor shall furnish the following Materials described in more detail in the Materials described in Exhibit A1.
- a. Mainline Ball Valves Stations– Flanged and weld –end API 6D steel ball valves for natural gas pipeline, gas hydraulic valve operators and ancilliary equipment.
    - i. Total Quantity: 18 each
  - b. EcoEléctrica Receipt Meter Station includes:
    - i. One (1) bi-directional pig launcher/receiver (24 inch x 30 inch)
    - ii. Connection for one (1) portable pig receiver
    - iii. One (1) meter skid with three (3) 12-inch ultrasonic multi-path flow meters, one (1) 4-inch gas turbine meter (one of the ultrasonic flow meters is shown on drawings as future).
    - iv. Chromatograph
    - v. CO2 and Moisture Analyzers
    - vi. Flow Computer
    - vii. Two (2) odorization skids (one of them shown on drawings as future)
    - viii. Miscelaneous equipment
  - c. Cambalache Delivery Meter Station includes the following:
    - i. One (1) filter separator skid (with by-pass)
    - ii. Two (2) heater skids (gas fired, water bath type) (one of them shown on drawings as future).
    - iii. One (1) meter skid with two (2) 8-inch ultrasonic multi-path flow meters and one (1) 3-inch gas turbine meter.
    - iv. One (1) control valve skid with two (2) parallel runs each with two (2) control valves
    - v. Flow Computer
    - vi. Miscelaneous equipment
  - d. Palo Seco Delivery Meter Station includes:
    - i. One (1) filter separator skid (with by-pass)

- ii. Three (3) heater skid (gas fired, water bath type) (two of them shown on drawings as future).
  - iii. One (1) meter skid with three (3) 10-inch ultrasonic multi-path flow meters, one (1) 3-inch gas turbine meter (one of the ultrasonic flow meters is shown on drawings as future).
  - iv. One (1) control valve skid with two (2) parallel runs each with two (2) control valves.
  - v. One (1) pressure regulator skid with two (2) parallel runs each with two (2) regulators.
  - vi. Flow Computer
  - vii. Miscellaneous equipment
- e. San Juan Delivery Meter Station includes:
- i. One (1) pig receiver, 24 inch x 30 inch
  - ii. One (1) filter separator skid (with by-pass)
  - iii. Three (3) heater skid (gas fired, water bath type) (two of them shown on drawings as future).
  - iv. One (1) meter skid with three (3) 10-inch ultrasonic multi-path flow meters, one (1) 3-inch gas turbine meter (one of the ultrasonic flow meters is shown on drawings as future).
  - v. One (1) control valve skid with two (2) parallel runs each with two (2) control valves.
  - vi. One (1) pressure regulator skid with two (2) parallel runs each with two (2) regulators.
  - vii. Flow Computer
  - viii. Miscellaneous equipment

#### B. Manufacturers

1. It is PREPA's intention to standardize its inventory. Proponents shall submit, if possible, the specified Materials from the least number of manufacturers.

#### C. Delivery of Materials

1. Storage Facility in the South – Identify also as Segment 1 Materials Delivery as included in Exhibit A1
2. Storage Facility in the North – Identified also as Segment 2 to 4 Materials Delivery as included in Exhibit A1

#### D. Other General Activities included in scope of work.

1. All labor forces and supervision, job administration and superintendence personnel required, as requested by PREPA.

2. Storage Facility in the South Coast, Storage Facility in the North Coast and office facilities for Contractor's personnel as needed.
3. All permits required to perform the work including, but not limited to, permits for material transportation and storage facilities.
4. Necessary tools and equipment to perform the work such as hoists, fork lifts, cherry picker, trailer tractor, chain falls, hydraulic and air jacks, welding machines, ladders, scaffolds, welding equipment, air compressors, and any other appurtenances necessary to complete the work in a satisfactory manner.
5. Adequate field facilities and vigilance to keep safe all materials, tools, equipment and spares. The Contractor shall provide adequate guard vigilance of the Storage Facilities during the working and non-working periods.
6. Sanitary and first aid facilities for his personnel.
7. Safety equipment as per OSHA requirements for its personnel.
8. Adequate and proper identification of Contractor's personnel.
9. Materials and accessories, and expendable materials like cleaning agents, drinking cups, ice, paper towels, toilet paper, etc.
10. Transportation of materials from port to Storage Facilities, as applicable.
11. All other resources or activities needed for performing the job, not furnished by PREPA, according to the Scope of Work.

### ARTICLE 3. Requirements for Contractor

- A. Any material to be welded to a pressure part shall have the Manufacturer Data Report in compliance with ASME and API latest editions.
- B. All materials provided by Contractor shall be manufactured or have warehouse inventory in USA.
- C. All work performed under this Specifications shall be done in a safe and workmanlike manner and in strict conformance with the latest edition of all rules, codes, regulations, ordinances, standards, etc., of government agencies and having jurisdiction and organizations related to the class of work described.

- D. The Contractor and/or subcontractors shall submit the current welding procedures in accordance the API 5L (PSL-2) and shall submit Qualification Records (PQR) for PREPA's evaluation.
- E. Storage Facilities shall be kept in a clean and orderly condition.
- F. The Contractor shall develop a schedule of the activities to be performed in connection with the work of the Contract and shall submit the same to PREPA for the approval of the Engineer.
- G. All work shall be carried out on a continuous schedule following the commencement date specified by PREPA and the proposed work schedule submitted by the Contractor and accepted by PREPA.
- H. The Contractor shall furnish the Engineer summary weekly reports of the various activities pertaining to the work under the Contract, whether in the mills or shops or in the field, stating the existing status, rate of progress, estimated time of completion and cause for delays, if any.
- H. Concurrent to all work, a written report of work performed, clearances and test data recorded should be submitted with each Delivery of Materials. A final report should be submitted within one (1) week after last pipe segment transfer.
- I. The Contractor shall also furnish to the Engineer a detailed weekly report covering the inventory of materials and the quantities dispatched to Construction Contractors. All quantities shall be classified according to the Pipe Segment Breakdown.
- J. The Contractor shall furnish all tools and equipment required to perform the inspection, adjustments, repairs and/or replacements expeditiously and to the satisfaction of the Engineer.
- K. The Contractor shall provide, for all equipment and materials, suitable warehouse or other means of protection including weather protection such as tarps and other proper maintenance, satisfactory to the Engineer. Equipment subject to moisture contamination shall be kept dry, in a manner satisfactory to the Engineer.
- L. The Contractor shall be responsible for picking up and loading the materials and/or equipment from the receiving port and for transporting, unloading, and handling the same at the Storage Facility.
- M. Prior to shipment, as applicable, the Contractor shall submit the following:

Six (6) sets of certified test data to the Engineer.

Fifteen (15) complete sets of manufacturer's instructions, to the Engineer, covering the care, and maintenance of, and directions for handling, storage and shipping of the materials.

Three (3) sets to the Engineer of the following:

- a) Shipping notices.
- b) Packing list for each separate delivery, showing quantities, weight and dimensions.

Two (2) copies of application for shipping instructions.

- N. Handling, storage and shipping shall be in accordance with Standards.
- O. It shall be the Contractor's responsibility to supervise the work of his subcontractors at all times. For additional information refer to Instructions to Proponents.
- P. The Contractor shall coordinate with PREPA and Construction Contractors the Transfer of Materials. Contractor shall be available for Transfer of Materials on a 24 hour basis.
- Q. The Contractor shall be solely responsible for expediting the delivery of all material and equipment to be furnished by him to accomplish the Delivery of Materials described in Contract.
- R. The Contractor shall have all the required annual inspections and certifications of the cranes and lifting equipment that will be used to manage, carry or move the Materials. This includes the operators and riggers certifications.

#### ARTICLE 4. Requirements for Proponents

- A. Proponents shall furnish evidence about theirs, or their subcontractors, capacity and experience manufacturing the materials described in Contract Documents. Proponents shall provide name of the company, telephone and contact person for evaluation by PREPA on similar projects been performed in Puerto Rico, United States and its territories. **Proposals without evidence for this requirement shall be rejected.**

- B. Proponents and/or subcontractors shall submit conceptual drawings of the proposed skids. **Proposals without evidence for this requirement shall be rejected.**
- C. Proponent and/or subcontractors shall certify that they have the capacity to perform the required materials. **Proposals without this requirement shall be rejected.**
- D. The Proponents shall submit in the proposal a complete planning schedule including all applicable information and a preliminary Bar-Chart of Critical Path Method (CPM) progress schedule, utilized for ascertaining for the work progress. **Proposals without these requirements shall be rejected.**

#### ARTICLE 5. Safety Provisions

- A. The Contractor shall have an Occupational Safety and Health Program. A copy of this Program will be delivered to the Safety Division at PREPA for evaluation.
  - 1. The Program shall comply with the following minimum requirements of a health and safety program including, but not limited to:
    - Occupational Exposure to Lead (29 CFR 1926.62)
    - Scaffolds (29 CFR 1926 Subpart L)
    - Confined Spaces (29 CFR 1910.146)
    - Occupational Exposure to Noise (29 CFR 1910.95)
    - Hazardous Materials (29 CFR 1910 Subpart H)
    - Personal Protective Equipment (29 CFR Subpart I)
    - Hazard Communication (29 CFR 1910.1200)
    - HAZWOPER (29 CFR 1910.120)
    - Fire Protection (29 CFR 1910 Subpart L)
    - Materials Handling and Storage (29CFR 1910 Subpart N)
    - Respiratory Protection (29 CFR 1910.134)
    - Fall Protection (29 CFR 1926 Subpart M)
    - Electrical work (29 CFR 1926 Subpart K)
    - Welding (29 CFR 1926 Subpart J)
    - Excavations (29 CFR 1926 Subpart P)
    - Demolitions (29 CFR 1926 Subpart T)
    - Blasting & Explosives (29 CFR 1926 Subpart U)
    - Ventilation (29 CFR 1926.57)
    - Tools, Hand and Powered (1926 Subpart I)
    - Electric Industry (29 CFR 1910.269)
    - Lockout Tagout (29 CFR 1910.147)
    - Asbestos (29 CFR 1926.1101)
    - Cranes and Derricks
    - Work Area Traffic Control

2. The Program shall include an accident or incident investigation procedure. This procedure will always include the preparation of a report, which will be submitted within five days after accident to the Safety Division of PREPA.
  2. A safety inspections and work permit system shall be included.
  3. The Program shall be revised annually.
- B. Before commencement of work, the Contractor shall take part in a coordination meeting with a Safety Officer and the project manager on PREPA's behalf. During this meeting the areas to be worked on will be toured, the site-specific work plan will be discussed and reviewed, and amendments to it could be required.
- C. The Contractor shall submit, prior to commencement of work, for evaluation by the Safety Division the following:
1. A Site Specific Work Plan including, but not limited to, the scope of work, description of the activities to be done, special safety and health considerations, safety procedures to be applied, regulations and guidelines related to safety and health. Also, identify medical services in the municipality of work to maintain communication in case of any medical emergency.
  2. A list of specialized personnel needed. Also, include copy of all training certificates, licenses or certifications required, according to the scope of work. All these certificates and licenses shall be up to date.
  3. Copy of the Material Safety Data Sheets (MSDS) of all chemical products to be used during the project.
  4. Certification of compliance with medical surveillance requirements, according to scope of work.
  5. Certification of training for the use of personal protective equipment.
- D. Contractor and subcontractors shall adhere to a 100% drug/alcohol free work zone.
- E. The Contractor shall be responsible for maintaining good housekeeping in the work and rest, lunch, toilet areas under reasonably sanitary conditions.

- F. The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to all employees on the work site and all other persons who may be affected. This shall include property, material and equipment on or off the site, under the care, custody or control of the Contractor or subcontractors.

#### ARTICLE 6. Environmental Conditions

The Contractor shall inform and coordinate with Manager any work to be done to avoid any environmental violation.

The Contractor agrees to indemnify PREPA for all direct liabilities and expenses arising out of any claim due to an environmental violation, caused by its agents, employees, subcontractors or assigns during the performance of the contract or nonperformance of its obligations under the Contract.

The Contractor shall be responsible to obtain and maintain all required permits, licenses, authorizations and endorsements required to perform all work under this Contract. Copies of mentioned documents shall be submitted to PREPA's Environmental Protection and Quality Assurance Division. Also, the Contractor or subcontractors shall be responsible to request any extensions of permits, licenses, authorizations and endorsements before their expiration, due to work schedule delays. Otherwise, the contractor shall assume the responsibility to pay any late fees or fines. All permits shall be on site available to inspectors from local and federal regulatory agencies.

The Contractor and subcontractor shall comply with all laws, ordinances, rules and regulations applicable to the work, in accordance with the drawings, specifications and obtained permits. Upon completion of the assigned work, the Contractor shall hand in the work area free of contaminants and shall close or terminate any permits that require closing or termination.

All equipment to be used in the work area should be in perfect conditions and shall have a good inspection and maintenance program. All machinery and equipments shall have their emissions filter and noise reduction systems updated to reduce air contaminants due to fuel combustion and noise contamination on commercials and residential areas.

All equipment and vehicles to be used by the contractor must be free of oil, transmission fluid or hydraulic fluid leakages. If the equipment or vehicle develops a leakage during the work process, it should be repaired or replaced immediately. The Contractor will be responsible to contain, sample, analyze and dispose any contaminated soil or water due to leakage of oils and any other chemical substance spoiled. The Contractor should have available, and close to the working area, the

necessary equipment to control and clean any spills that could occur during the performance of the work required by the Contract.

The Contractor shall dispose of all garbage generated because of this work, according to the environmental regulations. The Contractor shall be responsible for all the necessary materials for the garbage disposal. The Contractor shall assure that all wastes are characterized and properly disposed of, in accordance with all applicable Laws and Regulations. The disposal of non-hazardous materials shall be done in a landfill.

The Contractor shall submit evidence of compliance with 49 CFR 172, Subpart H (Federal Department of Transportation). All transportation equipment and qualified personnel must have their updated licenses according with the Puerto Rico Public Service Commission and the Department of Transportation.

The Contractor, upon completion of the work, must leave all the work area clean, organized and free of contaminants. The storage area for the removed equipments and parts must be appropriate to avoid contaminants dispersion to the ground and water.

PUERTO RICO ELECTRIC POWER AUTHORITY  
VÍA VERDE NATURAL GAS PIPELINE  
MATERIALS ACQUISITION

**PROPOSAL FORM**

**I. Qualification of Proponents**

The following data regarding Proponent qualifications:

**Section A - General Information**

- 1. Company Name: \_\_\_\_\_
- 2. Years in Business: \_\_\_\_\_ 3. Federal Tax Id. \_\_\_\_\_
- 4. Number of Employees \_\_\_\_\_
- 5. Authorized Person: \_\_\_\_\_
- 6. Title: \_\_\_\_\_
- 7. Postal Address: \_\_\_\_\_
- 8. Physical Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 9. Business Telephone: \_\_\_\_\_
- 10. Facsimile Number: \_\_\_\_\_
- 11. e-mail address: \_\_\_\_\_
- 12. Proponent Website: \_\_\_\_\_

Note: If the Proponent is a subsidiary, provide all data required in items A (1) through (12) of the Parent Company.

Initials \_\_\_\_\_

PUERTO RICO ELECTRIC POWER AUTHORITY

Section B - Financial Statement

1. Cash in bank or on hand: \$ \_\_\_\_\_

2. Total property value: \$ \_\_\_\_\_

3. Other assets total value: \$ \_\_\_\_\_

4. TOTAL: \$ \_\_\_\_\_

5. Liabilities: \$ \_\_\_\_\_

6. Net: \$ \_\_\_\_\_

Note: If the Proponent is a subsidiary, provide all data required in items B (1) through (6) of the Parent Company.

Initials \_\_\_\_\_

**II. Experience**

Section A

Proponents shall furnish evidence about their or its subcontractors' capacity and experience for

- ❖ Manufacturing natural gas transmission materials

Similar Projects Executed by Proponent

LOCATION	TYPE OF WORK/ PROJECT DESCRIPTION	CONTRACT PRICE	COMPLETION DATES	NOTES

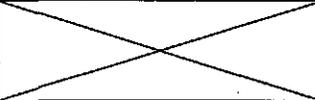
\* REFERENCES: PREPA requires at least two company references for projects similar in complexity, time frame and deliverables. Provide name of the company name(s), telephone(s) and contact person(s). Projects included as reference must be projects performed in Puerto Rico, United States or its territories.

Initials \_\_\_\_\_

**III. QUALITY EVIDENCE – Provide evidence of Compliance of the following:**

- A. ISO 9001:2000 Quality System; Certified Quality Management System, for manufacturing, order execution, contract acceptance, purchasing, vendor qualification, product development, and quality control.
- B. ISO 14001 Certified Environmental Management System, for managing operations to protect the health and safety of employees, customers, contractors, the public and the environment, and improving energy and resource use in its manufacturing and test center facilities.
- C. OSHA 18001 Occupational Health and Safety Assessment Series for independent accreditation for Management System, and integration of quality, environmental, and occupational health and safety management systems.
- D. STAR Voluntary Protection Program (VPP), recognizing outstanding efforts at developing and implementing systems to effectively identify, evaluate, prevent and control occupational hazards to prevent employee injuries and illnesses.

**IV. Storage Facilities Provided**

DESCRIPTION OF SERVICES	NOTES	PRICING	REMARKS
Describe Plan to complete the Storage Facilities Services.	Include a list of equipment to be provided in facilities.		Describe routes available to access the facilities.
Storage Facilities - North	Include addresses. Provide alternates if considered.		Provide evidence of availability and Letter of Intent for space leasing or buying.  Describe the total area and the proposed layout (lay down area, offices, etc.)
Storage Facilities - North	Include addresses. Provide alternates if considered.		Provide evidence of availability and Letter of Intent for space leasing or buying.  Describe the total area and the proposed layout (lay down area, offices, etc.)
TOTAL PRICING for Storage Facilities	Fixed Price		

Initials \_\_\_\_\_

**V. Logistics**

Section A

Organization – Provide organizational charts: Proponent and subcontractors integrated.

Working Hours and Job Organization– Provide work plan with working hours. The Proponents shall submit a complete planning schedule including all applicable information and a preliminary Bar-Chart of Critical Path Method (CPM) progress schedule, utilized for ascertaining for the work progress.

Transportation

Explain the plan to transport the materials to the Storage Facilities including, but not limited to, the type of vessels and quantity of travels (trucks and vessels).







Section E - Work to be Subcontracted

In accordance with paragraph Article 29 of the Contract we, hereby, submit the following information regarding the work we intend to subcontract:

<u>Part of the Work</u>	<u>Name</u> <u>Sub-Contractor</u>
<hr/>	<hr/>

**VIII Complete Proposal**

Section A - Addendum Receipt

**The undersigned certifies that the following addenda have been received and will be made a part of the contract documents:**

Addendum No. _____	Dated: _____

Authorized Person Signature: \_\_\_\_\_

Initials \_\_\_\_\_

Section B – Complete Proposal

In compliance with your price request for the Materials Acquisition of Via Verde Natural Gas Pipeline which includes manufacturing, transportation, delivery and dispatch of materials describe in this RFP and having carefully examined and completely understood all of the included documents, the undersigned proposes to furnish all manufacture, labor, supervision, administration, equipments, tools and materials not provided by PREPA or others, and to perform all work as detailed, indicated or described in said documents, and subject to all conditions stipulated therein including the payment schedule, for the LUMP SUM of \$ \_\_\_\_\_ dollars. Lump sum will be valid for \_\_\_\_\_ calendar days.

Proponent:

Authorized Person Signature:

Authorized Person Name:

Authorized Person Title:

Authorized Person Initials:

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# Stormwater Pollution Prevention Plan

**for:**

Via Verde Pipeline  
Route: Peñuelas to San Juan

**Contact:**

Puerto Rico Electric Power Authority  
Contact: Jose Ricardo Marina, P.E.  
Telephone: (787) 521-6610  
E-mail: [jr-marina@prepa.com](mailto:jr-marina@prepa.com)

## Contents

- Appendix A – Inspection Reports
- Appendix B – Corrective Action Log
- Appendix C – SWPPP Amendment Log
- Appendix D – Subcontractor Certifications/Agreements
- Appendix E – Grading and Stabilization Activities Log
- Appendix F – Training Log
- Appendix G – Delegation of Authority

## SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

### 1.1 Project/Site Information

Project/Site Name: Via Verde Pipeline		
Project Street/Location: The pipeline will run from the EcoEléctrica LNG Terminal in Peñuelas north to the Cambalache Termoeléctricas Authority Central electric power plant (PES) in Arecibo, then east to the Palo Seco facility in Toa Baja and the San Juan facility in San Juan. The pipeline will be embedded (buried) for its entire length and will pass through the municipalities of Peñuelas, Adjuntas, Utuado, Arecibo, Barceloneta, Manati, Vega Alta, Vega Baja, Dorado, Toa Baja, Cataño, Bayamón, and Guaynabo.		
City: Peñuelas	State: PR	ZIP Code:
County or Similar Subdivision: See above		

Latitude/Longitude (Coordinates corresponds to the pipeline middle point)		
Latitude:	Longitude:	
18 ° 27 ' 24.17" N (degrees, minutes, seconds)	066 ° 40 ' 15.93" W (degrees, minutes, seconds)	
Method for determining latitude/longitude:		
<input type="checkbox"/> USGS topographic map (specify scale: _____)	EPA Web site	X GPS
<input type="checkbox"/> Other (please specify): _		
Is the project located in Indian country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." _		
Is this project considered a federal facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
NPDES project or permit tracking number*: _____		
*(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) construction general permit.)		

## 1.2 Contact Information/Responsible Parties

### Description of Roles and Responsibilities:

The following is a description for each of the responsible party's roles and responsibilities:

#### Construction Company:

Gulf Interstate Engineering (GIE) is the leading construction company responsible for the overall construction and construction management of the project. This includes the installation and maintenance of the erosion and sedimentation control as well as the implementation, inspection and maintenance of this SWPPP. GIE is responsible for any changes and the notification of these changes to the owner, inspectors and designer, to reflect them in the drawings. PREPA will inspect and maintain the control measures installed for sedimentation and erosion control. Please refer to Section 4: Selection of Post Construction BMP's

#### Operator - Owner:

PREPA is the owner of the project. PREPA will keep the inspection of the project while final SWPP final measures are implemented.

**Contact(s) Information:**

Operator: Puerto Rico Electric Power Authority  
Project Manager  
Via Verde Project  
Puerto Rico Electric Power Authority-(PREPA)  
Tel.(787) 521-6610/, Celular (787) 692-4650  
e-mail- jr-marina@prepa.com

Name: Jose Ricardo Marina, P.E  
Address: P.O. Box 364267  
San Juan, PR 00936-4267  
Telephone: (787) 521-6610  
E-mail: jr-marina@prepa.com

**Site Supervisor(s):**

Name: Jose Ricardo Marina, P.E  
Address: P.O. Box 364267  
San Juan, PR 00936-4267  
Telephone: (787) 521-6610  
E-mail: jr-marina@prepa.com

**SWPPP Contact(s):**

Company Name: Puerto Rico Electric Power Authority  
Name: José Ricardo Marina  
Address: P.O. Box 364267  
San Juan, PR 00936-4267  
Telephone: (787) 521-6610  
E-mail: jr-marina@prepa.com

**PREPA SWPPP TEAM**

Name	Position	Telephone Numbers
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### 1.3 Nature and Sequence of Construction Activity

Describe the general scope of the work for the project, major phases of construction, etc

As the Via Verde project, PRPEA proposes to construct and install a 24-inch diameter steel natural gas (NG) pipeline for approximately 92 miles from the EcoEléctrica LNG Terminal in Peñuelas north to the Cambalache Termoeléctricas Authority Central electric power plant (PES) in Arecibo, then east to the Palo Seco facility in Toa Baja and the San Juan facility in San Juan. The pipeline will be embedded (buried) for its entire length and will pass through the municipalities of Peñuelas, Adjuntas, Utuado, Arecibo, Barceloneta, Manati, Vega Alta, Vega Baja, Dorado, Toa Baja, Cataño, Bayamón, and Guaynabo. The pipeline route will encompass both private and public lands which include commercial, industrial, and agricultural land uses. The pipeline will be an industrial application, serving only PREPA, and as such will require fewer laterals, metering stations, compressor stations, and access points than a public NG pipeline. This has resulted in significantly fewer impacts, limited right-of-way sizing, and the ability to locate the pipeline outside of population centers and sensitive environmental areas.

*Site Location:* The pipeline will have a length of approximately 92 miles. The 24-inch pipeline will have a right of way (ROW) of 150 feet during construction and a permanent 50 foot maintenance ROW during operation.

What is the function of the construction activity?

The construction activity is related to the installation of a natural gas pipeline.

Residential  Commercial  Industrial  Road Construction  Linear Utility

Other (please specify):

Estimated Project Start Date: January 2011

Estimated Project Completion Date: January 2012

### ***1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns***

**Soil type(s):** Annexes 3.3 and 3.4 in PREPA's Declaraci3n de Impacto Ambientales for the Via Verde Project contain information describing the different soils along the route. The descriptions of the soils were taken from the USDA Soil Conservation Catalogs.

**Slopes: (describe current slopes and note any changes due to grading or fill activities):** The topography of the project corridor varies from flat to semi-level along the north segment (Mile Marker 40 to Mile Marker 92) to mostly steep in the southern segment (MM 4 to MM 40) that crosses the central range from Arecibo to Peñuelas. Since this project is the installation of an underground pipeline, using HDD at certain crossings, no changes are expected to the slopes of the area. The project consists mainly of the clearing and grubbing of the right-of-way of the area where the pipeline will be installed. The only possible changes to any slopes may occur in the southern segment (MM 4-40) where the central range will be crossed. To avoid any erosion and sedimentation of exposed areas, terraces may be constructed on the slopes. These terraces will help to control the runoff and sediment coming from exposed areas. The description of the physical attributes of the Via Verde Project Corridor is found in Coll Environmental Jurisdictional Wetland Report under Project Route Description; found in the PREPA, Via Verde Project, Declaraci3n de Impacto Ambientales.

**Drainage Patterns: (describe current drainage patterns and note any changes due to grading or fill activities):** Drainage throughout the project varies due to the wide variety in topography. Since the project consists of the installation of an embedded pipeline, drainage patterns are not expected to change. Nevertheless, various BMP's will be put in place to manage and redirect runoff. This will prevent any erosion and sedimentation events.

**Vegetation:** A description of the environment along the pipeline route is found in Chapter 3.2 of PREPA's, Via Verde Project, Declaraci3n de Impacto Ambientales.

### ***1.5 Construction Site Estimates***

The following are estimates of the construction site.

Total project area:	1,113.8 acres (92 miles X 100 foot construction zone)
Construction site area to be temporarily disturbed :	1,113.8 acres (92 miles X 100 foot construction zone) Less than 500 acres in upland areas (wetland areas will completely re-vegetate)
Construction site area to be maintained:	completely re-vegetate)
Percentage impervious area before construction:	0 %
Runoff coefficient before construction:	Industrial/ Developed Areas: 0.5-0.8

	Mountain Steep Areas: 0.15-0.20
Percentage impervious area after construction:	0 %
Runoff coefficient after construction	Industrial/ Developed Areas: 0.6-0.9 Mountain Steep Areas: 0.10-0.15

### **1.6 Receiving Waters**

**Description of receiving waters:** All the runoff in the vicinity of the project will ultimately drain to the Caribbean Sea. It is important to mention that the project will not affect any stream reservoirs.

**Stream Crossings:** The proposed project will cross 100 identified linear surface water bodies. These water bodies range from large rivers, i.e. Arecibo River, to small man-made ditches. Table 5 in the Joint Permit Application for the Via Verde Project identifies these water bodies. Crossings of the larger rivers will be performed using Horizontal Directional Drilling (HDD) technology. This technology allows installation of the pipeline under the stream without affecting the river bed and limiting the exposed areas. Crossings of smaller, intermittent streams will be conducted using 1) a dry flume or, 2) a dry dam and pump method. Wetlands and dry, shallow ditches will be crossed with an open trench that will be backfilled once the pipe is placed. Construction details for all crossings are discussed in Section 4 of the Joint Permit Application for the Via Verde Project.

**Description of storm sewer systems:** Most of the pipeline corridor/ will run through sites with no storm sewer water systems. The areas where storm water systems are located consist mostly of curbs and underground pipes owned by the Municipalities the pipeline route will run through. The pipeline will be located so as to not interfere in any way with these existing systems.

**Description of impaired waters or waters subject to TMDLs:** No impaired waters were identified within the project boundary.

### **1.7 Site Features and Sensitive Areas to be protected**

The new gas pipeline route will extend across thirteen (13) Municipalities and will run through a great variety of natural systems. The most important water systems that could be affected by the project are:

- **Coastal Zone:** At the south end of the project, near the EcoEléctrica LNG Terminal in Peñuelas, Puerto Rico, the pipeline will be located near the Caribbean Sea. From there the route runs north, across the island to Arecibo. From Arecibo the pipeline extends east to San Juan along the north coast but the corridor is located sufficiently inland that no impacts to coastal waters are expected. At Levittown and Punta Salina, the route runs near the beach in uplands along PR-165.

- **Estuaries:** The proposed project will begin near Tallaboa Bay and end near San Juan Bay. No impacts are expected to occur to either system since the actual pipeline will not extend into or run under either water body. A third system is the River Cocal Estuary, between the municipalities of Dorado and Toa Baja. Although the pipeline will cross this water body, there will be no direct impact since the HDD method will be used.
- **Wetlands:** The pipeline corridor will transit through emergent wetland systems located primarily along the north coast. The pipeline will be embedded in a trench in these areas and preconstruction contours will be recreated after the trench is backfilled with the original wetland soils. No permanent fill will remain in any wetland areas and all forested wetland systems will be avoided.

At the border with the municipality of Utuado, the pipeline corridor will pass through the eastern boundary of the Río Abajo Forest in two locations for a total distance of approximately 3.5 miles. The project corridor will additionally pass through approximately 1.54 miles of the Caño Tiburones. A part of the Caño Tiburones natural reserve lies in this municipality, approximately 543 meters north of the project corridor right-of-way, at Mile Marker 51.0 to 51.30. This reserve is the longest herbaceous marsh on the Island, and the second largest in the Caribbean. This coastal wetland plays an important role in quantity and quality of storm water treatment. Cataño has several environmentally sensitive areas of high natural value that will be protected. These areas include: La Esperanza Park, the Laguna Secreta, remnant wetlands from channelizing the Bayamón River, and the historic mouth of the River Bayamón. Remnants of wetlands can also be found along the project construction right-of-way at the Hondo River. The vegetation associated with these estuarine wetlands includes black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*). The Laguna Secreta is located 100 meters north of the project right-of-way. This area is dominated by cattail marsh with several remnants of marshy areas occupied by the black mangrove. The project will not result in any impacts to marine or mangrove forested coastal zone habitats and open water crossings will be directionally drilled, therefore no impacts to those federally listed threatened and endangered species identified as marine/coastal are anticipated. All impacts to herbaceous wetlands will be temporary and all disturbed areas will be restored to natural grade and allowed to naturally revegetate.

- **Natural and Artificial Lakes:** Seven natural and artificial lakes were found near the project:
  - in the Municipality of Peñuelas, an artificial water body at Tallaboa Alta Ward, at a distance of 333 meters from the MP 8.8;
  - in the Municipality of Adjuntas: the Adjuntas Lake, in Juan González Ward, approximately 1.5 miles to the west MP 20, Pellejas Lake, in

Pellejas Ward, approximately 350 meters east of MP 20.7, and Garzas Lake, between Garzas and Saltillo Wards, approximately 2.9 miles west of MP 15;

- in the Municipality of Utuado, Dos Bocas Lake at Caniaco Ward, approximately 650 meters east of MP 31;
- in the Municipality of Toa Baja the Matrullas Lagoon at Palo Seco Ward, approximately 337 meters north of PREPA's Warehouse;
- in the Municipality of Cataño, the Secreta Lagoon at Palmas Ward, approximately 134 meters of MP 89.2.

The project will have no impact on any of these lakes.

- **Rivers:** The pipeline will cross several larger river systems, all utilizing the HDD method to avoid any direct impacts.

These river systems are -

- The Tallaboa River at mile point (MP) 2.7 of the project via HDD.
- The Arecibo River (5 times) at MP 27.4, 29.7, 36.7, 37.8 and 41.7. A smaller tributary to the Arecibo (Tanama Creek) will also be crossed.
- The Manati River (3 times) at MP 54.3, 58.4 and 59.2
- The Indio River at MP 67.8
- The Rio de La Plata at MP 77.7
- The Rio Cocal at MP 82.4 and,
- The pipeline will cross the Hondo River (Bayamon) at MP 85.5

Describe measures to protect these features: The proposed project will implement several mitigation and prevention programs, such as this SWPPP, to prevent the erosion and sedimentation of the water bodies along the project.

### **1.8 Potential Sources of Pollution**

Potential sources of sediment to storm water runoff

Item	Location	Potential Sources of Sediments
1	Roads and Access	Cleared and graded areas
2	Construction Site Entrance	Cleared and graded areas
3	Landscaping	Tree removal, reforestation works and ornamental planting
4	Installation of the pipeline	Areas where open excavation is being performed and where HDD will be used

Potential pollutants and sources, other than sediment, to storm water runoff:

Material	Chemical/Physical Description <sup>1</sup>
Cleaning Solvents	Colorless, blue or yellow-green liquid
Asphalt	Black solid
Concrete, cement	White solid
Paints	Various colored liquid
Wastewater from construction equipment washing	Water
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon
Gasoline	Colorless, pale brown, or pink petroleum hydrocarbon
Diesel Fuel	Clear, blue-green to yellow liquid

### **1.9 Endangered Species Certification**

Are endangered or threatened species and critical habitats on or near the project area?

Yes  No

Describe how this determination was made:

A Biological Evaluation (BE) was undertaken to evaluate the effects of the construction of the 24-inch diameter steel natural gas (NG) pipeline. The BE was prepared to assist in consultations with the U. S. Fish and Wildlife Service (USFWS) with respect to Section 7 of the Endangered Species Act (ESA) and developed to accompany the Department of the Army (DA)/ Puerto Rico USACE Joint Permit Application prepared for the proposed project. This document will be used to:

- clarify whether and what listed, proposed, and candidate species or designated or proposed critical habitats may be in the action area;
- determine what effect the action may have on these species or critical habitats;
- explain the ways the project has been modified to reduce or remove adverse effects to the species or critical habitats;
- determine the need to enter into consultation for listed species or designated critical habitats, or conference for proposed species or proposed critical habitats; and

- explore the design or modification of an action to benefit the species.

A total of 36 federally listed plant and animal species (22 plants and 14 animals) have been identified as potentially occurring within the project limits. A species list includes all individual species that are known to exist or have the potential to occur in the pipeline corridor as identified by the USFWS. The lists of protected plants and animals for each municipality were used as a baseline. Subsequent review of the pipeline corridor route by the USFWS in June of 2010 further refined the target species for on-site field reconnaissance. Also a Flora and Fauna Survey was performed Coll Environmental, *Estudio Descriptivo de Flora Y Fauna – Via Verde Pipeline Project, Puerto Rico, August 2010*. A copy of this report is included in the PREPA, Via Verde Project, Declaración de Impacto Ambientales.

If yes, describe the species and/or critical habitat:

- Refer to the Biological Evaluation included with the Joint Permit Application

If yes, describe or refer to documentation that determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service. For concerns related to state or tribal listing of species, please contact a state or tribal official.)

- Refer to the Biological Evaluation included with the Joint Permit Application

### **1.10 Historic Preservation**

*Are there any historic sites on or near the construction site?*

Yes  No

*Describe how this determination was made*

The PREPA Via Verde Pipeline project has been reviewed with respect to potential impacts to properties listed, or eligible for listing, in the National Register of Historic Places in accordance with the requirements of the National Historic Preservation Act (NHPA). Assistance regarding information on the location of, or potential for, the presence of historic resources, including but not limited to archeological sites and historic properties, has been sought from the State Historic Preservation Officer (SHPO) and the National Register of Historic Places in accordance with the requirements set forth in 33 CFR 330.4(g)). The efforts conducted to date include: background research, consultation, oral history interviews, review of prior field investigation, and field surveys.

A Phase 1A archeological research study was conducted over the project area in June 2010. The study was conducted by state certified archeologists Marisol Rodriguez Miranda and Carlos Ayez Suarez. Additional research and field evaluations were conducted by archeologists Rosa Martinez Montero and Federico Freytes. The study methodology included the following objectives:

1. Identify the presence of archaeological resources known within the pipeline corridor and/or within the periphery of the study area;
2. Evaluate the possibility of discovering additional archaeological resources within the limits or on the periphery of the study area;
3. Define any impacts to known or potential archeological resources that lie within or in the periphery of the project corridor; and
4. Offer duly endorsed recommendations for additional studies which may be required to identify sites and/or to make recommendations to minimize impacts to archaeological areas that could be affected by the installation and propose alternatives for preservation of the same.

A detailed written report which documents the historical research of all records available and a preliminary inspection of the pipeline corridor route has been included in the PREPA, Via Verde Project, Declaraciòn de Impacto Ambientales

### ***1.11 Applicable Federal, Tribal, State or Local Programs***

All construction projects in Puerto Rico with an area greater than 900 m<sup>2</sup>, and that remove more than 40 yd<sup>3</sup> of soil and that are adjacent to any water body are subjected to the EQB's Regulation for the Control of Erosion and Sedimentation. This regulation establishes that this kind of project must prepare a plan to control the possible impacts of erosion and sedimentation (CES Plan). This CES Plan then must be submitted to the EQB for its approval.

### ***1.12 Maps***

Include the site maps with the SWPPP.

Project maps are included in the PREPA, Via Verde Project, Declaraciòn de Impacto Ambientales.

## **SECTION 2: EROSION AND SEDIMENT CONTROL BMPS**

### ***2.1 Minimize Disturbed Area and Protect Natural Features and Soil***

**Areas to be disturbed:** The project construction right-of-way will consist of no permanent features along the 92 miles of the pipeline. The following table contains the sequence of areas to be clear and the protection methods to be implemented.

<b>Area to be Disturbed</b>	<b>Description of the Area</b>	<b>Action</b>	<b>Protection Methods</b>

Flat to semi-level along the north segment	MP 40-92	Clear and grade the access area.	<ol style="list-style-type: none"> <li>1. Silt fences will be installed along the perimeter of the project.</li> <li>2. Hay bales barriers and sediment filters will be installed along the storm water inlets along the right of way.</li> <li>3. Only needed ROW will be cleared and graded. All other vegetation will be preserved.</li> </ol>
Mountain Area	Steep terrain, MP 4-40	Clear and grade the machinery access areas and the construction right of way	<ol style="list-style-type: none"> <li>1. Silt fences will be installed along the perimeter of the project.</li> <li>2. Only needed ROW will be cleared and graded. All other vegetation will be preserved.</li> <li>3. Geotextiles will be used in various ways for erosion control on construction sites. Also, geotextiles will be used to protect exposed soils immediately and temporarily, such as when active piles of soil are left overnight. They can also be used as a separator between riprap and soil, which prevents the soil from being eroded from beneath the riprap and maintains the riprap's base. This BMP will be used over the Peñuelas – Arecibo Mountain Area, specifically over slopes across the pipeline alignment</li> <li>4. Straw/ Hay Bale Barriers: Straw or hay bales have historically been used on construction sites for erosion and sediment control as inlet protection, outlet protection, and perimeter control. Hay bales by themselves are not effective to control erosion and sedimentation, nevertheless if the hay bales barriers are used along with geotextiles, filters and other BMP's they can help to prevent minor erosion and sedimentation events. Hay bale barriers will be used in those areas where run off with low velocity and flow could be discharged.</li> <li>5. Velocity Dissipaters/ Check Dams: Check dams/ Velocity Dissipaters are relatively small, temporary structures constructed across a swale or channel. They are used to slow the velocity of concentrated water flows, a practice that helps reduce erosion. These structures are typically constructed out of gravel, rock, sandbags, logs or treated lumber or straw bales. These structures will be constructed along the pipeline alignment and in the temporary construction access at the mountain area.</li> <li>6. Drainage Ditches: A drainage ditch is an earthen channel that consists of a dike or a combination dike and channel constructed along the perimeter of and within the disturbed part of a site. It is composed of a ridge of compacted soil, often accompanied by a ditch or swale with a vegetated lining, at the top or base of a sloping disturbed area. These ditches will be provided with velocity dissipaters and check dams. These BMP's will be constructed along the pipeline alignment and access roads in the Peñuelas – Arecibo Mountain area.</li> <li>7. Sediment Traps: Sediment traps are small impoundments that allow sediment to settle out of construction runoff. They are usually installed in a drainage way or other point of discharge from a disturbed area. Temporary diversions can be used to direct runoff to the sediment trap (USEPA, 1993). Sediment traps detain sediments in storm water runoff to protect receiving streams, lakes, drainage systems, and the surrounding area. The traps are formed by excavating an area or by placing an earthen embankment across a low area or drainage swale.</li> </ol>

An outlet or spillway is often constructed using large stones or aggregate to slow the release of runoff (USEPA, 1992). The sediment traps will be located at the beginning of the slopes and at areas where runoff discharges in high quantities. Also, the traps will be located in the valleys between slopes.

8. Rip- Rap Protection: Riprap is a layer of large stones used to protect soil from erosion in areas of concentrated runoff. Riprap can also be used on slopes that are unstable because of seepage problems. These BMP's will be located at the entrance of several temporary pipe outlets installed to redirect runoff from working areas. These BMP's will be constructed using local rocks removed during the excavation.
9. Slope Stabilization (Terraces): Slope stabilization involves reshaping the ground surface to planned grades or terraces as determined by an engineering survey, evaluation, and layout. Slope stabilization provides more suitable topography for buildings, facilities, and other land uses and helps to control surface runoff, soil erosion, and sedimentation during and after construction.

Slope stabilization measures, such as terraces, are applicable to sites with uneven or steep topography or easily erodible soils, because it stabilizes slopes and decreases runoff velocity. Grading activities should maintain existing drainage patterns as much as possible.

This BMP's will be installed at the ends of the pipeline alignment at the Peñuelas – Arecibo Mountain area.

**Protection of Non-Disturbed Areas:** The areas near and inside the construction right-of-way that will not be disturbed during the installation of the pipeline will be maintained with their respective vegetative cover as a method of protection. Also, they will be isolated using silt fences or hay bale barriers, if necessary.

**Protection of Special Areas:** The following summarizes the areas of special concern along the pipeline route and the protection methods to be used:

Area	Description	Protection Method
Coastal Zones		Silt fence will be installed along the route of the pipeline as well as around any top soil area.
Estuaries		Silt fence will be installed along the route of the pipeline as well as around any top soil area.
Wetlands		Sediment barriers will be installed at the limits of the wetland using material from the trench. Timber rip rap and equipment mats will be also provided. All top soil storage areas will be provided with silt fences and part of the soil will be use to construct the sediment barrier.  Trench will be backfilled once pipe is laid and pre-construction contours re-established  Wetland vegetation will be re-established; no permanent fill will remain.
Lagoons		Silt fence will be installed along the right-of –way of the construction and truck washing stations will be provided at the entrance/exit of the different construction areas.
Rivers		Silt fence will be installed along the right-of –way of the construction and truck washing stations will be provided at the entrance/exit of the different construction areas.

		The crossing of larger rivers will be through HDD technologies, avoiding contact with the river bed.
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**Protection of Topsoil Storage Areas:** Several topsoil storage areas will be placed along the route of the project. The top soil will be used to help establish the vegetative cover at the different areas. These locations will be surrounded by silt fence and hay bales barriers and covered with plastic tarps to prevent contact with runoff.

## 2.2 Control Storm Water Flowing onto and through the Project

<b>BMP Description: <u>Drainage Ditches</u>:</b> A drainage ditch is an earthen channel that consists of a dike or a combination dike and channel constructed along the perimeter of and within the disturbed part of a site. It is composed of a ridge of compacted soil, often accompanied by a ditch or swale with a vegetated lining, at the top or base of a sloping disturbed area. These ditches will be provided with velocity dissipaters and check dams. These BMP's will be constructed along the pipeline alignment and access roads in the Peñuelas – Arecibo mountain area.	
<b>Installation Schedule:</b>	First week.
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inches or greater rainfall event.</li> <li>• Maintenance – When required, to removed any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description: <u>Velocity Dissipaters/ Check Dams</u>:</b> Check dams/ Velocity Dissipaters are relatively small, temporary structures constructed across a swale or channel. They are used to slow the velocity of concentrated water flows, a practice that helps reduce erosion. These structures are typically constructed out of gravel, rock, sandbags, logs or treated lumber or straw bales. These structures will be constructed along the pipeline alignment and in the temporary construction access at the Peñuelas – Arecibo mountain area.	
<b>Installation Schedule:</b>	Third week, after construction of diversion ditches.
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inches or greater rainfall event.</li> <li>• Maintenance – When required, to removed any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Installation of Silt Fence Barriers** – Are used as temporary perimeter controls around

sites where there will be soil disturbance due to construction activities. They consist of length of filter fabric stretched between anchoring post spaced at regular intervals along site perimeter. When installed correctly and inspected frequently, silt fences can be an effective barrier to sediment leaving the site in storm water runoff. The silt fence barriers will be installed along the pipeline alignment and the diversion ditches. Also, silt fence barriers will be used to protect top soil storage areas.

<b>Installation Schedule:</b>	First week, after beginning of soil removal.
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Weekly inspection and after each rainfall</li> <li>• Maintenance When required, replace any section that is thorn or broken.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Installation of Hay Bale Barriers** – Straw or hay bales have historically been used on construction sites for erosion and sediment control as inlet protection, outlet protection, and perimeter control. Hay bales by themselves are not effective to control erosion and sedimentation, nevertheless if the hay bales barriers are used along with geotextiles, filters and other BMP's they can help to prevent minor erosion and sedimentation events. Hay bale barriers will be used in those areas where run off with low velocity and flow could be discharged.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Weekly inspection and after each rainfall</li> <li>• Maintenance – When required. The maintenance will include replacement of any damage hay bale and removal of accumulated sediment.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Geotextiles:** Geotextiles can be used in various ways for erosion control on construction sites. Also, geotextiles can be used to protect exposed soils immediately and temporarily, such as when active piles of soil are left overnight. They can also be used as a separator between riprap and soil, which prevents the soil from being eroded from beneath the riprap and maintains the riprap's base. This BMP will be used over the Peñuelas – Arecibo Mountain Area, specifically over steep slopes across the pipeline alignment.

<b>Installation Schedule:</b>	Second week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall</li> </ul>

	Maintenance – When required, to removed any accumulated sediment
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Installation of truck – tools washing facilities** - Truck and tool washing facilities and stabilized entrances will be constructed where appropriate along the pipeline route. The purpose of this area is to reduce and control the amount of soil released from the construction site by vehicles leaving the area.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Weekly inspection and after each rainfall</li> <li>• Maintenance – When required to remove accumulated sediments.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Control of Fugitive Dust** – Water trucks will be maintained in place to irrigate the exposed areas. This will control fugitive dust.

<b>Installation Schedule:</b>	First Week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Daily inspection of the exposed areas</li> <li>• Daily watering of the exposed areas.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Installation of sediment barriers near wetland areas** – sediment barriers are perimeter sediment control structures constructed of material such as debris left over from site clearing and grubbing. These barriers will be covered with a filter cloth to stabilize the structure and improve barrier efficiency.

<b>Installation Schedule:</b>	First Week, after any soil removal.
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Repair any damage silt fence or barriers and substitution of lost barrier materials.</li> <li>• Weekly inspection of the working areas</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

### 2.3 Stabilize Soils

**BMP Description: Interim seeding with native vegetation** - Local vegetation growth will be stimulated in those areas inside and near the construction area that will not be affected or use in the construction.

**Permanent**    **Temporary**

<b>Installation Schedule:</b>	Last week of soil removal
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance: Water regularly to ensure quick growth and maintain back up BMP's such as silt fence and hay bale barriers.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Geotextiles**: Geotextiles can be used in various ways for erosion control on construction sites. Also, geotextiles can be used to protect exposed soils immediately and temporarily, such as when active piles of soil are left overnight. They can also be used as a separator between riprap and soil, which prevents the soil from being eroded from beneath the riprap and maintains the riprap's base. This BMP will be used over the Peñuelas – Arecibo Mountain Area, specifically over steep slopes across the pipeline alignment.

<b>Installation Schedule:</b>	Second week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance – When required, to removed any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Permanent seeding** – Permanent seeding and planting will be performed in those areas where the work is completed.

**Permanent**    **Temporary**

<b>Installation Schedule:</b>	Last week before soil removal
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection: Weekly</li> <li>• Maintenance: Water regularly to ensure quick growth and maintain back up BMP's such as silt fence and hay bale barriers.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

## 2.4 Protect Slopes

**BMP Description: Geotextiles:** Geotextiles can be used in various ways for erosion control on construction sites. Also, geotextiles can be used to protect exposed soils immediately and temporarily, such as when active piles of soil are left overnight. They can also be used as a separator between riprap and soil, which prevents the soil from being eroded from beneath the riprap and maintains the riprap's base. This BMP will be used over the Peñuelas – Arecibo Mountain Area, specifically over steep slopes across the pipeline alignment.

<b>Installation Schedule:</b>	Second week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance – When required, to removed any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Installation of Silt Fence Barriers** – Are used as temporary perimeter controls around sites where there will be soil disturbance due to construction activities. They consist of length of filter fabric stretched between anchoring post spaced at regular intervals along site perimeter. When installed correctly and inspected frequently, silt fences can be an effective barrier to sediment leaving the site in storm water runoff. The silt fence barriers will be installed along the pipeline alignment and the diversion ditches. Also, silt fence barriers will be used to protect top soil storage areas.

<b>Installation Schedule:</b>	First week, after beginning of soil removal.
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Weekly inspection and after each rainfall</li> <li>• Maintenance – When required. Replace any section that is thorn or broken.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E

	E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>
<b><i>BMP Description: <u>Installation of diversion channels and berms to keep storm water off slopes.</u></i></b>	
<b><i>Installation Schedule:</i></b>	First week, before soil removal
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> </ul> Maintenance – When required, to removed any accumulated sediment
<b><i>Responsible Staff:</i></b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b><i>BMP Description: <u>Installation of dissipation mechanisms at the end of the diversion channel to control erosion.</u></i></b>	
<b><i>Installation Schedule:</i></b>	Third week
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> </ul> Maintenance – When required, to removed any accumulated sediment
<b><i>Responsible Staff:</i></b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

### **2.5 Protect Storm Drain Inlets**

<b><i>BMP Description: <u>Installation of Hay Bale Barriers and Filtering covers</u></i> - over storm water inlets to prevent sediment to enter the inlet.</b>	
<b><i>Installation Schedule:</i></b>	First week
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• Inspection: Weekly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance: Removed accumulated sediment and replace or repair hay bales and protection. Clean surrounding areas.</li> </ul>

<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>
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**BMP Description:** Rip-raps - Rock or other material filtering bags will be placed in various storm water exits and inlets along the line.

<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Removed accumulated sediment from and around the barrier and replace or repair the protection if damage.</li> <li>• Inspection: Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

## 2.6 Establish Perimeter Controls and Sediment Barriers

**BMP Description:** Maintenance of natural vegetation in areas around the project construction right of way.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Water frequently to stimulate growth and maintain a healthy cover.</li> <li>• Inspection: Every 14 days or when needed</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description:** Installation of Silt fences or Fiber Rolls to retain sediment dislodged by runoff.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Remove sediment when it reaches 1/3 of the height of the fence and replace the silt fence or roll if damage.</li> <li>• Inspection: Weekly or after each rainfall</li> </ul>

<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>
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### 2.7 Retain Sediment On-Site

**BMP Description:** Sediment Traps: Sediment traps are small impoundments that allow sediment to settle out of construction runoff. They are usually installed in a drainage way or other point of discharge from a disturbed area. Temporary diversions can be used to direct runoff to the sediment trap (USEPA, 1993). Sediment traps detain sediments in storm water runoff to protect receiving streams, lakes, drainage systems, and the surrounding area. The traps are formed by excavating an area or by placing an earthen embankment across a low area or drainage swale. An outlet or spillway is often constructed using large stones or aggregate to slow the release of runoff (USEPA, 1992). The sediment traps will be located at the beginning of the slopes and at areas where runoff discharges in high quantities. Also, the traps will be located in the valleys between slopes.

<b>Installation Schedule:</b>	Second week, before soil removal
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection: Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance: When required, removed accumulated sediment and clean surrounding areas</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

### 2.8 Establish Stabilized Construction Exits

**BMP Description:** Installation of 27 truck washing facilities along the pipeline route. The wash will be only limited to tires and parts that were in touch with soil. Maintenance cleanings will be outside of the project area.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Replenish or replace aggregate if it becomes clogged with sediment. Sweep street regularly.</li> <li>• Inspection: Weekly or after each rainfall event.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

### 2.9 Additional BMPs

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

## SECTION 3: GOOD HOUSEKEEPING BMPS

### 3.1 Material Handling and Waste Management

<b>BMP Description:</b> <u>Storage of Hazardous Materials</u> - Any hazardous material generated during the on-site construction will be composed mainly of paints, fuel, sealants and other chemical wastes typical of a construction site. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when in use. Excess paint will not be discharged to the storm system, but properly disposed of, according to the manufacturer's instructions.	
<b>Installation Schedule:</b>	Second Week

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Depending on the condition of the shack or covered area, replace wood pallets and spill controls if necessary.</li> <li>• Inspection: Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Petroleum/ Oil Products:** All petroleum products will be stored in tightly sealed containers, which will be clearly labeled. Any asphalt substances used on site will be applied according to the manufacturer's recommendations. Refueling and maintenance of construction equipment will be in place, using a specialized truck, provided with spill prevention equipment. No oil or other petroleum material will be stored on-site. Training will be given to construction personnel on how to handle and manage oil products and on spill control and prevention. If an oil spill occurs the following corrective actions will be taken:

- The first worker on the scene that detects an incident will assess the size of the spill and attempt to shut-off the source, if possible. If not knowledgeable of the type of spill and appropriate safety procedures, he/she should immediately contact the supervisor and the facility emergency coordinator rather than taking any specific action. Also he/she will activate the alarm associated with the emergency. Contact will be made by short-wave radio to activate the emergency response team force.
- Equipment will be brought to the location of the spill to start control and clean-up action until the emergency response brigade arrives.
- The spread of the spill will be contained by damming, diking or blocking by means possible of absorbent material. Storm water drains and gutters will be protected.
- Other sources of manpower and equipment will be deployed at the discretion of the emergency coordinator.
  - Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302, occurs during a 24-hour period:
    1. you must provide notice to the National Response Center (NRC) (800-424-8802; in the Washington, DC, metropolitan area call 202-267-2675) in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 as soon as site staff have knowledge of the discharge; and
    2. you must, within 7 calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. You must also implement measures to prevent the reoccurrence of such releases and to respond to such releases.

<b>Installation Schedule:</b>	Second Week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: If necessary, change equipment or repair equipment.</li> <li>• Inspection; Inspection every 14 days and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Sanitary Wastes** - All sanitary wastes will be collected from portable units located in various areas throughout the construction site. These wastes will be collected and disposed off a minimum of two times per week by an authorized company. This company will discharge the water only to an authorized facility.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: If necessary, change equipment or repair equipment.</li> <li>• Inspection: weekly</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Bentonite Management** – Bentonite will be brought to the construction area in special tank trucks and containers and placed alongside the HDD equipment. Immediately after an emergency situation is observed, all efforts will be directed towards the control of the situation. Emergency spill response procedures for chemical products, oil and bentonite releases were developed specifically for the project. The procedures for the response for bentonite spill will include the following:

- Keep all clean up and containment materials on site.
- If any spill is detected, an alert signal must be given, all personnel removed from the area and the responsible people notified. A determination of the magnitude and extent of the spill must be completed and control procedures must be put in place.
- All drilling activities must be stopped. Once the drilling activities have been stopped, the area where the fissure has been detected must be surrounded by berms, if the fissure exit is on land. If a major spill occurs, the mud must be pumped to the existing pit to be recycled.

If a bentonite spill occurs the following corrective actions will be followed:

- Once the spill has been detected, the first corrective action step is to stop the rig pumps. By stopping the pumps, the pressure in the hole will quickly bleed off, causing the spill to stop.
- In water bodies, spilled drilling fluids will be pumped back into the fluid collection pit using portable vacuum pumps. Spill containment measures must be in place at the moment of the clean up.

- The entry and exit locations of the construction must be protected by a berm before drilling begins. Hay bales and silt fences will be incorporated into the berm and placed at the waterside of the drilling area. To contain and collect any spilled material, equipment such as portable pumps, sand, hay bales and silt fences must be available at all times. Any drilling fluid will be contained first and isolated using soil berms, hay bales and silt fences. It will be immediately cleaned up and pumped into one of the storage pits. To avoid exposure of drilling mud to the surface, the drilling fluid containing bentonite will be switched to fresh water and will be pumped down the hole until the fluid returns appear clean.

For possible oil and/ or chemicals spills, the following procedures will be in place:

- If any spill is detected, an alert signal must be given, all personnel removed from the area and the responsible people notified. A determination of the magnitude and extent of the spill must be completed and control procedures must be put in place.
  - All fueling or refueling activities must be stopped, to prevent any other incident.
  - An evaluation of the spill must be performed by the SWPPP/EHS Coordinator to determine the need to notify the appropriate agencies and the actions to be taken.

<b>Installation Schedule:</b>	Second Week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: All equipment and hoses will be changed when necessary.</li> <li>• Inspection: Daily inspection to equipment before beginning daily works.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

### **3.2 Establish Proper Building Material Staging Areas**

<b>BMP Description: <u>Designate areas for material handling and storage:</u></b> Several material handling areas will be distributed along the route. These areas will be provided with cover sheds and temporary containments such as plastic dikes. The rest of the materials will be stored in a central area, where temporary covered warehouses will be provided as well as temporary containment measures. These materials will be brought daily to the construction area.	
<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Replacement of any damage containment and equipment or containment.</li> <li>• Inspection: Every 14 days to verify for any possible leak or exposure.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b> <u>Train employees and subcontractors in proper handling and storage practices for different materials.</u>	
<b>Installation Schedule:</b>	First week, before soil removal
<b>Maintenance and Inspection:</b>	This training will be held at the beginning of the project and every time a new member is added to the team.
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

### 3.3 Designate Washout Areas

<b>BMP Description:</b> <u>Tool washing facilities will be provided in several points of the pipeline alignment.</u> – These areas will be located at least 50 yards away from any storm drain. They will be provided with washout containers and/ or areas covered with liners. <b>The discharge of any water containing detergents or other chemicals is prohibited.</b> Washing concrete trucks is prohibited in any of these areas	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Daily cleaning and sediment removal from the area. Replacement of liners and other equipment when necessary.</li> <li>• Inspection: Weekly before beginning of works.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

### 3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

**BMP Description: Proper equipment/ vehicle fueling practices** – All maintenance of equipment will be performed in an off-site area. Refueling will be performed on-site using specialized vehicles, provided with spill kits and trained personnel. Clearly designate vehicle/ equipment service areas away from drainage and/or storm water inlets. All personnel must use drip pans, drip cloths or absorbent materials when handling liquids. The spent fluids must be stored in appropriate containers and recycled when possible.

<b>Installation Schedule:</b>	First week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: When required, replace equipment and other parts if necessary, depending upon inspection results.</li> <li>• Inspection: Weekly inspection must be performed before commencement of daily works.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

### 3.5 Control Equipment/Vehicle Washing

**BMP Description: Tool washing and vehicles facilities will be provided in several points of the pipeline alignment.** – These areas will be located at least 50 yards away from any storm drain. They will be provided with washout containers and/ or areas covered with liners. **The discharge of any water containing detergents or other chemicals is prohibited.** Washing concrete trucks is prohibited in any of these areas.

<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Daily cleaning and sediment removal from the area. Replacement of liners and other equipment when necessary.</li> <li>• Inspection: Weekly before beginning of works.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

### **3.6 Spill Prevention and Control Plan**

Immediately after an emergency situation is observed, all efforts will be directed towards the control of the situation. Emergency spill response procedures for chemical products, oil and bentonite releases were developed specifically for the project. The procedures for the response for a bentonite spill will include the following:

- Keep all clean up and containment materials on site.
- If any spill is detected, an alert signal must be given, all personnel removed from the area and the responsible people notified. A determination of the magnitude and extent of the spill must be completed and control procedures must be put in place.
- All drilling activities must be stopped. Once the drilling activities have been stopped, the area where the fissure has been detected must be surrounded by berms, if the fissure exit is on land. If a major spill occurs, the mud must be pumped to the existing pit to be recycled.

If a bentonite spill occurs the following corrective actions will be followed:

- Once the spill has been detected, the first corrective action step is to stop the rig pumps. By stopping the pumps, the pressure in the hole will quickly bleed off, causing the spill to stop.
- In water bodies, spilled drilling fluids will be pumped back into the fluid collection pit using portable vacuum pumps. Spill containment measures must be in place at the moment of the clean up.
- The entry and exit locations of the construction must be protected by a berm before drilling begins. Hay bales and silt fences will be incorporated into the berm and placed at the waterside of the drilling area. To contain and collect any spilled material, equipment such as portable pumps, sand, hay bales and silt fences must be available at all times. Any drilling fluid will be contained and isolated using soil berms, hay bales and silt fences. It will be immediately cleaned up and pumped into one of the storage pits. To avoid exposure of drilling mud to the surface, the drilling fluid containing bentonite will be switched to fresh water and will be pumped down the hole until the fluid returns clean.

For possible oil and/ or chemicals spills, the following procedures will be in place:

- If any spill is detected, an alert signal must be given, all personnel removed from the area and the responsible people notified. A determination of the magnitude and extent of the spill must be completed and control procedures must be put in place.
- All fueling or refueling activities must be stopped, to prevent any other incident.
- An evaluation of the spill must be performed by the SWPPP/EHS Coordinator to determine the necessity to notify concerned agencies and the actions to be taken.

If an oil spill occurs the following corrective actions will be taken:

- o The first worker on the scene that detects an incident will assess the size of the spill and attempt to shut off the source, if possible. If not knowledgeable of the type of spill and appropriate safety procedures, he/she should immediately contact the supervisor and the facility emergency coordinator rather than taking any specific action. Also he/she will activate the alarm associated with the emergency. Contact will be made by short-wave radio to activate the emergency response team force.
- o Equipment will be brought to the location of the spill to start control and clean-up action until the emergency response brigade arrives.
- o The spread of the spill will be contained by damming, diking or blocking with absorbent material. Storm water drains and gutters will be protected.
- o If the amount of oil and/or hazardous material contained is substantial, the SWPPP and/ or emergency team member will arrange for immediate removal using the available equipment, vacuum pumps and/or any absorbent materials.
- o Other sources of manpower and equipment will be deployed at the discretion of the emergency coordinator.

### **3.7 Any Additional BMPs**

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

<b>BMP Description:</b>	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	

### **3.8 Allowable Non-Stormwater Discharge Management**

**List allowable non-storm water discharges and the measures used to eliminate or reduce them and to prevent them from becoming contaminated:**

The following discharges are identified as allowable non-storm water discharges:

- o Waters used to wash vehicles where detergents are not used
- o Water used to control dust
- o Landscape irrigation

As a measure to prevent the contamination of this water, proper building material handling and staging areas will be established to prevent any possible spills and discharges. Also, training will be given to employees and subcontractors on proper handling and storage practices. The project will have designated site areas for storage to provide storage in accordance with secondary containment regulations and provide cover for hazardous materials when necessary. It will be ensure that storage containers are regularly inspected for leaks, corrosion, support or foundation failure, or any other signs of deterioration. Also, when possible, construction material will be reuse and recycle.

**BMP Description: Washing vehicles in specified trucks washing areas, provided with the necessary controls.** Washing will be limited to tires and parts that were in touch with soil. Maintenance cleanings will be outside of the project area.

<b>Installation Schedule:</b>	First Week
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Maintenance: Daily</li> <li>• Inspection: Weekly or after a rainfall event</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Limitation of exposed surfaces to minimize water used to control dust** – Maintain as much as possible the vegetation of the area as a measure to minimize exposed areas. This will minimize the use of water to control dust. .

<b>Installation Schedule:</b>	First Week
<b>Maintenance and Inspection:</b>	Maintenance: Daily Inspection: Weekly or after a rainfall event
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

## SECTION 4: SELECTING POST-CONSTRUCTION BMPs

#### 4.1 Maintenance Activities While Closing Activities Proceed

**BMP Description: Drainage Ditches:** A drainage ditch is an earthen channel that consists of a dike or a combination dike and channel constructed along the perimeter of and within the disturbed part of a site. It is composed of a ridge of compacted soil, often accompanied by a ditch or swale with a vegetated lining, at the top or base of a sloping disturbed area. These ditches were provided with velocity dissipaters and check dams. These BMP's were constructed along the pipeline alignment and access roads in the Peñuelas – Arecibo Mountain Area.

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance – When required, to remove any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Velocity Dissipaters/ Check Dams:** Check dams/ Velocity Dissipaters are relatively small, temporary structures constructed across a swale or channel. They are used to slow the velocity of concentrated water flows, a practice that helps reduce erosion. These structures are typically constructed out of gravel, rock, sandbags, logs or treated lumber or straw bales. These structures were constructed along the pipeline alignment and in the temporary construction access at the Peñuelas – Arecibo Mountain Area.

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance – When required, to remove any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Geotextiles:** Geotextiles can be used in various ways for erosion control on construction sites. Also, geotextiles can be used to protect exposed soils immediately and temporarily, such as when active piles of soil are left overnight. They can be used as a separator between riprap and soil, which prevents the soil from being eroded from beneath the riprap and maintains the riprap's base. This BMP is used over the Peñuelas – Arecibo Mountain Area, specifically over steep slopes across the pipeline alignment.

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance – When required, to remove any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E

E-mail: [jr-marina@prepa.com](mailto:jr-marina@prepa.com)

**BMP Description: Truck – tools washing facilities** - The purpose of these areas is to reduce and control the amount of soil releases from the construction site by vehicles leaving the area.

**Maintenance and Inspection:**

- Weekly inspection while executing maintenance or closing activities and after each rainfall.
- Maintenance – When required to remove accumulated sediments.

**Responsible Staff:**

Name: Jose Ricardo Marina, P.E

E-mail: [jr-marina@prepa.com](mailto:jr-marina@prepa.com)

**BMP Description: Control of Fugitive Dust** – Water trucks will be maintained in place to irrigate the exposed areas. This will control fugitive dust.

**Maintenance and Inspection:**

- Daily inspection of the exposed areas, while maintenance or closing activities are in progress.
- Daily watering of the exposed areas while maintenance or closing activities are in progress.

**Responsible Staff:**

Name: Jose Ricardo Marina, P.E

E-mail: [jr-marina@prepa.com](mailto:jr-marina@prepa.com)

**BMP Description: Diversion channels and berms to keep storm water off slopes.**

**Maintenance and Inspection:**

- Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.
- Maintenance – When required, to removed any accumulated sediment

**Responsible Staff:**

Name: Jose Ricardo Marina, P.E

E-mail: [jr-marina@prepa.com](mailto:jr-marina@prepa.com)

<b>BMP Description:</b> <u>Dissipation mechanisms at the end of the diversion channel to control erosion.</u>	
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance – When required, to removed any accumulated sediment</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b> <u>Rip-raps</u> - Rock or other material filtering bags is placed in various storm water exits and inlets along the line.	
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance: Remove accumulated sediment from and around the barrier and replace or repair the protection if damaged.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b> <u>Sediment Traps:</u> Sediment traps are small impoundments that allow sediment to settle out of construction runoff. They are usually installed in a drainage way or other point of discharge from a disturbed area. Temporary diversions can be used to direct runoff to the sediment trap (USEPA, 1993). Sediment traps detain sediments in storm water runoff to protect receiving streams, lakes, drainage systems, and the surrounding area. The traps are formed by excavating an area or by placing an earthen embankment across a low area or drainage swale. An outlet or spillway is often constructed using large stones or aggregate to slow the release of runoff (USEPA, 1992). The sediment traps are located at the beginning of the slopes and at areas where runoff discharges in high quantities. Also, the traps are located in the valleys between slopes.	
<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Maintenance: When required, remove accumulated sediment and clean surrounding areas</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b>BMP Description:</b> <u>Sanitary Wastes</u> - All sanitary wastes will be collected from portable units located in
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various areas throughout the construction site. These wastes will be collected and disposed off a minimum of two times per week by an authorized company. This company will discharge the water only to an authorized facility.

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Weekly inspection while executing maintenance or closing activities.</li> <li>• Maintenance: If necessary, change equipment or repair equipment.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Non-Hazardous Solid Wastes** - All non-hazardous solid wastes will be collected and properly disposed on appropriate bags and/or containers units located in various areas throughout the construction site. These wastes will be collected and disposed-off by an authorized company. Wastes include construction debris and typical day-to-day operation non-hazardous solid wastes.

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Weekly inspection while executing maintenance or closing activities</li> <li>• Maintenance: If necessary, change equipment or repair equipment.</li> </ul>
<b>Responsible Staff:</b>	Name: José Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

**BMP Description: Sediment barriers near wetland areas** – sediment barriers are perimeter sediment control structures constructed of material such as debris left over from site clearing and grubbing. These barriers were covered with a filter cloth to stabilize the structure and improve barrier efficiency.

<b>Maintenance and Inspection:</b>	<ul style="list-style-type: none"> <li>• Inspection monthly and within 24 hours of the end of a 0.5 inch or greater rainfall event.</li> <li>• Repair any damage silt fence or barriers and substitution of lost barrier materials.</li> </ul>
<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

#### 4.2 Closing Activities

<b><i>BMP Description: <u>Removal of construction debris</u></i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• No maintenance required.</li> <li>• Once removed, no inspection is needed</li> </ul>
<b><i>Responsible Staff:</i></b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b><i>BMP Description: <u>Removal of silt fences and pipe drainage</u></i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• No maintenance required.</li> <li>• Once removed, no inspection is needed</li> <li>• Document removal activities</li> </ul>
<b><i>Responsible Staff:</i></b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b><i>BMP Description: <u>Removal of wood mats at Wetland Locations</u></i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• No maintenance required.</li> <li>• Once removed, no inspection is needed</li> <li>• Document removal activities</li> </ul>
<b><i>Responsible Staff:</i></b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>

<b><i>BMP Description: <u>Slope stabilization, Grading and Reforestation of exposed areas</u></i></b> – The majority of the exposed areas will be replanted with local vegetation.	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	<ul style="list-style-type: none"> <li>• The area will be watered whenever needed. Inspection: Monthly for 12 months or until after vegetation is evident.</li> </ul>

<b>Responsible Staff:</b>	Name: Jose Ricardo Marina, P.E E-mail: <a href="mailto:jr-marina@prepa.com">jr-marina@prepa.com</a>
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### **4.3 Spill Prevention and Control Plan**

Immediately after an emergency situation is observed, all efforts will be directed towards the control of the situation.

For possible oil and/ or chemicals spills, the following procedures will be in place:

- o If any spill is detected, an alert signal must be given, all personnel removed from the area and the responsible people notified. A determination of the magnitude and extent of the spill must be completed and control procedures must be put in place.
- o All fueling or refueling activities must be stopped, to prevent any other incident.
- o An evaluation of the spill must be performed by the SWPPP/EHS Coordinator to determine the necessity to notify the concern agencies and the actions to be taken.

If an oil spill occurs the following corrective actions will be taken:

- o The first worker on the scene that detects an incident will assess the size of the spill and attempt to shut-off the source, if possible. If not knowledgeable of the type of spill and appropriate safety procedures, he/she should immediately contact the supervisor and the facility emergency coordinator rather than taking any specific action. Also he/she will activate the alarm associated with the emergency. Contact will be made by short-wave radio to activate the emergency response team force.
- o Equipment will be brought to the location of the spill to start control and clean-up action until the emergency response brigade arrives.
- o The spread of the spill will be contained by damming, diking or blocking by of absorbent material. Storm water drains and gutters will be protected.
- o If the amount of oil and/or hazardous material contained is substantial, the SWPPP and/ or emergency team member will arrange for immediate removal using the available equipment, vacuum pumps and/or any absorbent materials.
- o Other sources of manpower and equipment will be deployed at the discretion of the emergency coordinator.

## **SECTION 5: INSPECTIONS**

### **5.1 Inspections**

1. *Inspection Personnel: Identify the person(s) who will be responsible for conducting inspections and describe their qualifications:*

Name: Jose Ricardo Marina, P.E

E-mail: [jr-marina@prepa.com](mailto:jr-marina@prepa.com)

• ***Inspection Schedule and Procedures:***

*Describe the inspection schedules and procedures you have developed for your site (include frequency of inspections for each BMP or group of BMPs, indicate when you will inspect, e.g., before/during/and after rain events, spot inspections):*

Visual inspections of all cleared and graded areas of the construction site will be performed as specified in the abovementioned BMP's in Section 4.

The inspection will verify that the structural BMP's described in this document are in good condition and are minimizing erosion. The inspection will also verify that the procedures are effective. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

- Built up sediment will be removed from silt fencing when it has reached one-third of the fence.
- Silt fences will be inspected for depth of sediments, for tears, to see if the fabric is securely attached to the fence posts and to see that the fence posts are firmly in the ground.
- Temporary and permanent seeding will be inspected for bare spots, washouts, and healthy growth.
- The stabilized construction entrance will be inspected for sediment tracked on the road, for clean gravel, and to ensure that all vehicles and heavy equipment use the stabilized entrance, when leaving the site.

A maintenance inspection report will be made after each inspection. A copy of the report form is provided in **Appendix A** of this SWPPP. Completed forms will be maintained on-site during the entire construction project. Following construction, the completed forms will be retained at the general contractor's office for a minimum of 3-year. If construction activities or design modifications are made to the site plan, which could impact storm water, this SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and the planned control activities.

*Describe the general procedures for correcting problems when they are identified. Include responsible staff and time frames for making corrections:*

Immediately after a problem is identified by the inspector or any worker it must be reported to the SWPPP Team Director to initiate the response. The SWWP Team will evaluate the situation and decide on the corrective measure applicable. These changes will be noted in the Plan log and the SWPPP will be amended to reflect any

changes. Attach a copy of the inspection report you will use for your site. **Appendix B** contains copy of the Corrective Action Forms.

### ***5.2 Delegation of Authority***

Duly Authorized Representative(s) or Position(s):

Company Name: PREPA

Name

Position:

Address:

Telephone Number:

E-mail:

*Attach a copy of the signed delegation of authority form in Appendix G.*

### ***5.3 Corrective Action Log***

Corrective Action Log:

See **Appendix B**.

## **SECTION 6: RECORDKEEPING AND TRAINING**

### ***6.1 Recordkeeping***

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

Date(s) when major grading activities occur

See Appendix E – Major Grading Schedule

Date(s) when construction activities temporarily or permanently cease on a portion of the site:

See Appendix E.

Date(s) when an area is either temporarily or permanently stabilized:

See Appendix E -

### ***6.2 Log of Changes to the SWPPP***

Log of changes and updates to the SWPPP

See Appendix C – Amendment Logs

### **6.3 Training**

Individual(s) Responsible for Training:

Describe Training Conducted: See Appendix F.

- General stormwater and BMP awareness training for staff and subcontractors.
- Detailed training for staff and subcontractors with specific storm water responsibilities,

## **SECTION 7: CERTIFICATION AND NOTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

Title:

Signature:

Date:

Name:

Title:

Signature:

Date:

## **SWPPP APPENDICES**

Attach the following documentation to the SWPPP:

**Appendix A – Inspection Reports**

**Appendix B – Corrective Action Log**

**Appendix C – SWPPP Amendment Log**

**Appendix D – Subcontractor Certifications/Agreements**

**Appendix E – Grading and Stabilization Activities Log**

**Appendix F – Training Log**

**Appendix G – Delegation of Authority**

# Appendix A – Inspection Reports





# Appendix D –Subcontractor Certifications/Agreements

## SUBCONTRACTOR CERTIFICATION STORMWATER POLLUTION PREVENTION PLAN

Project Number: \_\_\_\_\_

Project Title: \_

Operator(s): \_

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

**I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.**

This certification is hereby signed in reference to the above named project:

Company: \_

Address: \_

Telephone Number: \_

Type of construction service to be provided:

Signature: \_

Title: \_

Date: \_



# Appendix F–SWPPP Training Log

## Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: \_ Date: \_

Course Length (hours): \_

Stormwater Training Topic: *(check as appropriate)*

<input type="checkbox"/>	Erosion Control BMPs	<input type="checkbox"/>	Emergency Procedures
<input type="checkbox"/>	Sediment Control BMPs	<input type="checkbox"/>	Good Housekeeping BMPs
<input type="checkbox"/>	Non-Stormwater BMPs		

Specific Training Objective: \_

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

# Appendix G –Delegation of Authority Form

## Delegation of Authority

I, Daniel Maldonado (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the "Via Verde" construction site. The designee is authorized to sign any reports, storm water pollution prevention plans and all other documents required by the permit.

\_\_\_\_\_ (name of person or position)

\_\_\_\_\_ (company)

\_\_\_\_\_ (address)

\_\_\_\_\_ (city, state, zip)

\_\_\_\_\_ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in \_\_\_\_\_ (Reference State Permit), and that the designee above meets the definition of a "duly authorized representative" as set forth in \_\_\_\_\_ (Reference State Permit).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Signature:** \_\_\_\_\_  
**Name:** \_\_\_\_\_  
**Company:** \_\_\_\_\_  
**Title:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

# 56



Daniel Pagan  
<daniel\_paganrosa@yahoo.com>

01/31/2011 02:38 PM

To "Marelisa\_Rivera@fws.gov" <Marelisa\_Rivera@fws.gov>, Edwin\_Muniz@fws.gov  
cc LarryEvans@bcpeabody.com, Larry Evans <lyutka53@aol.com>, Jousef Garcia <yousevgr@yahoo.com>, IVELISSE SANCHEZ SOULTAIRE  
bcc

Subject: Plant Survey Protocol

Dear Marelisa:

As requested, enclosed please find the referenced document for needed evaluation and approval. The document included was drafted in accordance with the agreement reached on December 8, 2010. See you all tomorrow.



Via Verde A&E Plant Protocols 1\_31\_2011.pdf

**PREPA – VIA VERDE PIPELINE**  
**THREATENED AND ENDANGERED VEGETATION ASSESSMENT PROTOCOLS**  
(December, 2010 – January, 2011)

**INTRODUCTION**

The field review protocols to be utilized by Dr. Franklin Axelrod and the team of qualified professionals have been revised in a manner which maximizes the likelihood of locating special status plant species that may be present within the project right-of-way. Based on the proposed pipeline right-of-way alignment provided to the USFWS, the Service has identified potentially suitable habitat for federally-listed species within the project right-of-way. Three areas will be initially visited prior to defining the final survey transects and target species. The target species and areas to be evaluated were listed in the USFWS letter dated June 30, 2010; they are described below. A brief discussion of the initial vegetation and area evaluations are included in the **SURVEY PREPARATION** and **PROGRESS to DATE** section of this document.

The level of effort required per given area and habitat will be dependent upon the vegetative community type, its overall diversity and structural complexity, which will determine the sight distance at which plants can be identified. Transects will be located to allow for complete coverage of the proposed pipeline right-of-way area. A summary of the plant assessment protocols and reporting to be used follows.

**Area 1 - Dry limestone hills in Peñuelas:**

Target species identified by USFWS: 1) *Ottoschulziarhodoxylon* (palo de rosa), 2) *Trichiliatriacantha* (bariaco), 3) *Buxus vahlii* (diablito de trescuemos), 4) *Eugenia woodburyana*, 5) *Catesbaeamelanocarpa*, 6) *Cordiarupicola*, 7) *Mitracarpusmaxwelliae*, and 8) *Mitracarpuspolycladus*.

**Area 2 - Central Mountain Range (Volcanic):**

Target species identified by USFWS: 1) *Thelypteris inabonensis*, 2) *Thelypteris yaucoensis*, 3) *Thelypteris verecunda*, 4) *Juglans jamaicensis* (nogal), and 5) *Polystichum calderoense*.

**Area 3 - Moist limestone (Manatí):**

Target species identified by USFWS: 1) *Cordiabellonis*, 2) *Ottoschulziarhodoxylon* (palo de rosa), 3) *Daphnopsis helleriana*, 4) *Solanum drymophilum* (erubia), 5) *Plodendron macranthum* (chupacallos), 6) *Myrciaganii*, 7) *Shoepfia arenaria*, 8) *Tectarea estremerana*, and 9) *Auerodendron pauciflorum*.

## **DESCRIPTION OF RARE PLANT SPECIES VEGETATION SURVEY PROTOCOL**

The final assessment and survey protocol to be completed will be pre-approved in writing by the USFWS and will address just those portions within and adjacent to the project right-of-way agreed upon after completion of the preliminary reconnaissance. Prior to developing the final survey areas and target species, a USFWS botanist accompanied Dr. Franklin Axelrod and Mr. Yousev Garcia on a preliminary reconnaissance of the initial target areas identified by USFWS at Peñuelas municipality. The original walking trail is identified via black line in Figure 1 attached. The purpose of the initial field meeting was to share information and to clearly identify the limits of those areas to receive further intensive, systematic surveys.

## **FIELD PROCEDURES**

The methodology to be used for the final target area assessments will require biologists to walk and survey 3 parallel transects (parallel to the axis). Each transect will be slowly walked and inspected. This will allow for complete coverage within each survey area.

All field survey personnel will be under the direct supervision of Dr. Franklin Axelrod. They will include two graduate students in the Department of Biology, UPR-Río Piedras: Mrs. Fabiola Areces Berezaín, who is a published botanist, and has had experience with endangered plants in the mogotes and Mrs. Adriana Herrera Montes, who has often accompanied Dr. Axelrod in the field and is botanically knowledgeable. All personnel will be trained by Dr. Axelrod in recognition of the rare plants suspected in the area through the use of herbarium specimens. Any specimens that are found in the field will be verified by Dr. Axelrod. They will then be flagged and a GPS reading for their location will be taken.

Upon review and approval of the assessment protocol, the PREPA scientific team will prepare and share final search schedule with the USFWS.

## **SURVEY PREPARATION and PROGRESS to DATE:**

The initial survey area proposed by USFWS treated the whole southern section of Peñuelas as one piece. The initial reconnaissance of this area found that only the southern third, which happens to be the older section (at least 50 years), has a strong possibility of containing endangered plants. During the preliminary field visit with the USFWS botanist, an exceedingly rare vine (not currently listed on the federal register) was observed in this southern section of this area. The middle section was extensively disturbed and did not warrant further field surveys. The northern section is composed of younger vegetative associations (tree diameter much smaller, with fewer older trees) of woods with a different composition of plants and, in the opinion of Dr. Axelrod, is unlikely to have the listed endangered species, but is probably worth a closer look. The Adjuntas section has been disturbed in the recent past (some old and abandoned houses) and is honeycombed with jeep trails. Due to these man induced impacts,

the vegetation is not representative of areas in which the target species of endangered plants occur elsewhere in the region. For example, *Thelypterisyaucoensis* and *Polystichumcalderonensis* are known only from exposed rocky summits of more or less pristine mountains; the only known populations of *Thelypterisverecunda* and *Thelypterisinabonensis* are many miles outside of the target area and in very different habitats. *Juglansjamaicensis* is known from a single population many miles away in a coffee plantation where it is a relict. This Adjuntas site has been clear cut more recently and shows no evidence of having had extensive coffee planting. This area will be removed from the final survey areas.

The limestone hill region of Manatí is thoroughly disturbed, including an old dump in the lower slopes. The lower elevations in this area do not warrant intensive surveys. However, the upper slopes do contain *Ottoschulziarhodoxylon* (a target species and listed on the federal register). Three different individuals of *Ottoschulzia* were identified in this area by Dr. Axelrod and it is suspected that more are present. One of the individuals is near the current alignment and the other two are far to the north. The last two, were located during an inspection for a potential access road. Changes to the pipeline right-of-way alignment and or/drilling through hills in this area may be possible. This will eliminate any threat to this species. Some lower hills nearby in Manatí identified by USFWS botanists will be surveyed as requested.

The locations for all final survey areas are included on Figures 1 and 2 attached.

#### **FINAL REPORTING REQUIREMENTS**

Survey reports to be prepared will document the locations that were visited, the date of the visit, the presence or absence of the target species at that time, and the abundance and distribution of all rare species in the survey area. The surveys will be performed in accordance with the agreed upon species-specific guidelines.

The final document will include the following information:

- Summary of survey methodology and a map of the survey transects within each of the target areas of concern. Any deviations or revisions to the standard assessment protocols will be noted with explanations provided.
- All maps documenting the survey areas will be overlaid on an ortho-photo of the project right-of-way with an indication of the scale.
- Impact Analysis: Recommendations will be provided for protective measures, potential design changes that avoid and/or minimize impacts, and possible mitigation if applicable.
- If any state-listed, federal or commonwealth rare or endangered species are observed, all appropriate regulatory agencies shall be notified. The notification will include the species identification, location, and any other critical data collected.

**SUMMARY and RECOMMENDATIONS:**

The preliminary reconnaissance performed to date has established those areas that must be carefully searched as opposed to those that do not merit such care. Based upon the preliminary field assessment work conducted by Dr. Axelrod and Yousev Garcia to date, the following summary and recommendations are presented for final USFWS review and approval:

**Southern Peñuelas region** - Yes, surveys to be conducted as depicted on the attached figures

**Central Peñuelas region** – No, the central section within the project right-of-way has been extensively disturbed and does not warrant further field surveys

**Northern Peñuelas region** - Yes, limited area surveys as depicted on the attached figures

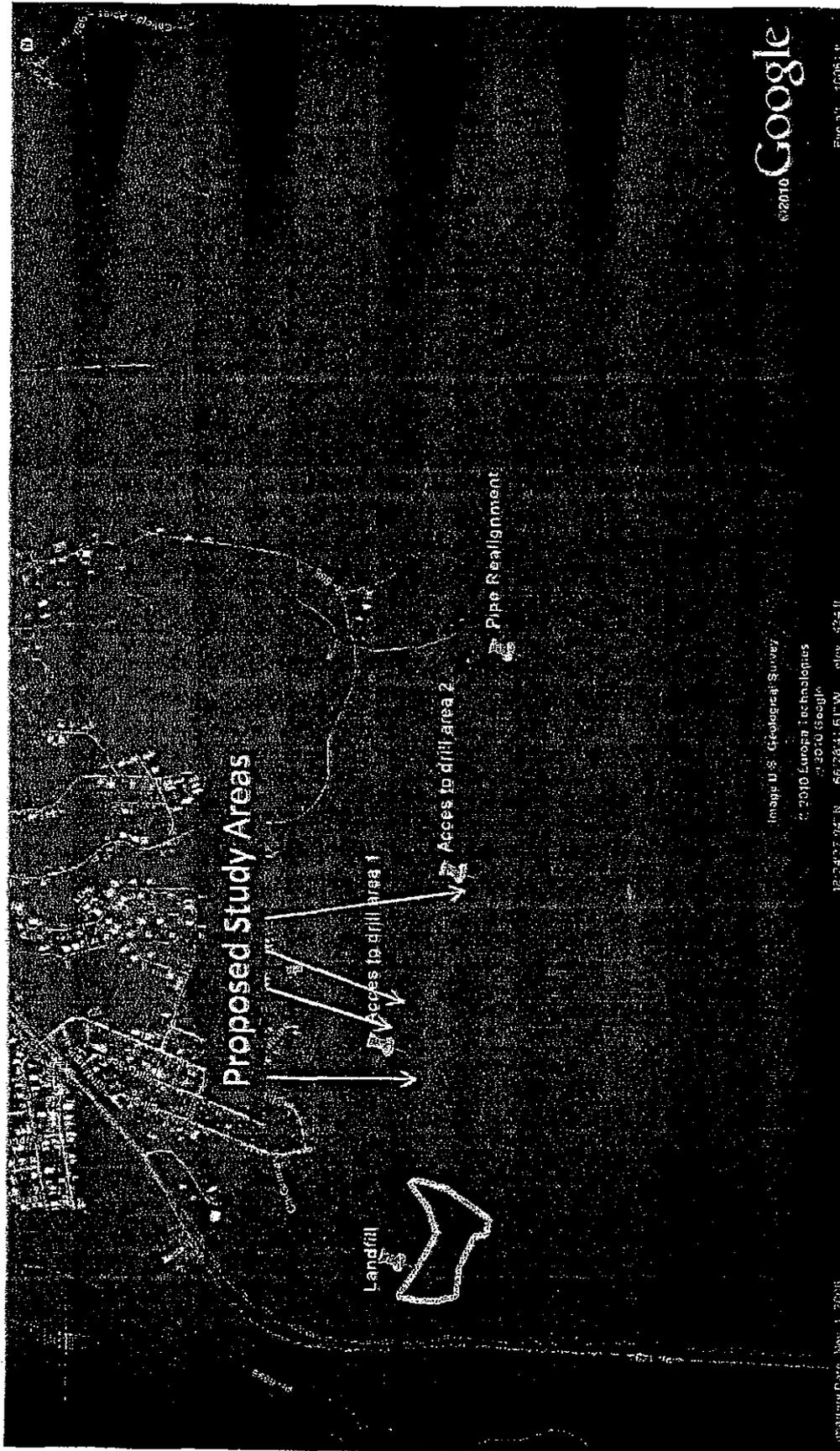
**Adjuntas** - No, the entire right-of-way area in Adjuntas, has been subjected to recent degradation and no endangered species are likely to be found.

**Lower slopes of the mogotes in the Manatí area** – Yes, surveys of this area will be conducted based upon recommendation of USFWS botanists. See attached figures with survey locations.

**Northern Wetlands and White Sands region** – No, the Via Verde will not go anywhere near the white sands area (from Vega Baja to Laguna Tortuguero) of the northern coast where *C. glandulosavar. mirabilis* (only this variety is on the register) is found. The presence of *Stahliamonosperma* in this area is highly questionable and neither of the target species was identified during the extensive JD field work performed by Jorge Coll.



Figure. 2 Manatí Study Area



# 57



daniel\_paganrosa@yahoo.com

01/31/2011 03:41 PM

Please respond to  
daniel\_paganrosa@yahoo.com

To "Edwin Muniz" <edwin\_muniz@fws.gov>

cc "MarElsa Rivera" <Marelisa\_Rivera@fws.gov>

bcc

Subject Re: Plant Survey Protocol

Edwin: We are addressing a request from Marelisa. As you may know, this is a work in progress. As discussed previously Service input is welcome a extremely valuable. Sorry the commitment from PREPA and myself created any confusion. See you tomorrow. Danny

Sent via BlackBerry by AT&T

**From:** Edwin\_Muniz@fws.gov  
**Date:** Mon, 31 Jan 2011 15:34:14 -0400  
**To:** Daniel Pagan <daniel\_paganrosa@yahoo.com>  
**Cc:** Marelisa\_Rivera@fws.gov <Marelisa\_Rivera@fws.gov>  
**Subject:** Re: Plant Survey Protocol

According to the PREPA letter we received today from the Corps, it is stated the surveys for plants have been taking place. If that is the case why should we evaluate and approve this protocol after the fact.

---

Edwin E. Muñiz  
Field Supervisor  
Caribbean Field Office  
U.S. Fish and Wildlife Service  
(W) 787-851-7297  
(C) 787-405-3641  
(F) 787-851-7440  
edwin\_muniz@fws.gov  
Visit us at <http://www.fws.gov/caribbean/es/>  
Daniel Pagan <daniel\_paganrosa@yahoo.com>

Daniel  
Pagan  
<daniel\_paganrosa@yahoo.com>

01/31/2011  
02:38 PM

To "Marelisa\_Rivera@fws.gov"  
<Marelisa\_Rivera@fws.gov>, Edwin\_Muniz@fws.gov

cc LarryEvans@bcopeabody.com, Larry Evans  
<iyutka53@aol.com>, Jousef Garcia  
<yousevgr@yahoo.com>, IVELISSE SANCHEZ  
SOULTAIRE <I-SANCHEZ@PREPA.COM>

Subject Plant Survey Protocol

Dear Marelisa:

As requested, enclosed please find the referenced document for needed evaluation and approval. The document included was drafted in accordance with the agreement reached on December 8, 2010. See you all tomorrow.

[attachment "Via Verde AAE Plant Protocols 1\_31\_2011.pdf" deleted by Edwin Muniz/R4/FWS/DOI]

Omar Monsegur/R4/FWS/DOI

02/07/2011 12:12 PM

# 63

To daniel\_paganrosa@yahoo.com,  
Edgar.W.Garcia@usace.army.mil  
cc Marelisa Rivera/R4/FWS/DOI@FWS, Edwin  
Muniz/R4/FWS/DOI@FWS, Rafael  
Gonzalez/R4/FWS/DOI@FWS

bcc

Subject Comments for the threatened and endangered vegetation  
assessment protocol for Via Verde.

Dear Daniel,

Attached please find Service recommendations for the protocol for the search of threatened and endangered plants along the interest areas.

Omar A. Monsegur Rivera  
Fish & Wildlife Biologist - Botanist  
Ecological Service Field Office, Boquerón Puerto Rico  
Phone (787) 851-7297 ext 217



20110207Threatened and endangered vegetation assessments protocol for Via Verde.pdf



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Boqueron Field Office  
Carr. 301, KM 5.1, Bo. Corozo  
P.O. Box 491  
Boqueron, PR 00622

### MEMORANDUM

From: Omar A. Monsegur Rivera, Fish and Wildlife Biologist, USFWS, Caribbean Field Office

To: Via Verde File

Date: 02/07/2011

Subject: Threatened and endangered vegetation assessments protocol for Via Verde.

On January 31, 2011 PREPA submitted a protocol for the search of threatened and endangered plant species along the propose route of the Via Verde project. The following recommendations are provided as assistance to the Applicant to better assess possible presence of listed plants along the proposed route.

1. The Service agrees with the proposed approach of parallel transects to survey target areas for threatened and endangered plant species. However, the Service recommends that the protocol include four parallel transects instead of three, and that the personnel is evenly spaced to appropriately cover the width of the Right of way. Based on our site visits and habitat evaluation, the forest at target areas shows dense and close vegetation that will require four people to appropriately survey for rare species. This is highlighted due to the fact that some of the species are difficult to identify and are easily confused with common species. The use of four people will allow each member to survey a track of 12.5 meters wide along the 150 feet ROW. In areas where the ROW is expected to be wider than 150 feet, we recommend additional survey efforts to cover appropriately the entire ROW.
2. The protocol does not clarify the length of the parallel transects or if they are designed to cover the entire target area. Do to the patchy distribution of rare and

endangered plants the Service recommends that the whole length of the interest area be surveyed.

3. The Service considers PREPA use of experts from the academia as an appropriate approach. We also acknowledge the expertise of Dr. Frank Axelrod on the rare and endangered plants of Puerto Rico. We recommend that another local expert with extensive knowledge on endangered and rare species be included as part of the surveys. This will increase the chance of finding rare plants and will assist graduate students to identify the plant material.
4. In order to appropriately evaluate the effectiveness of a protocol for the search of endangered species, it is important to know the complete scope of a project. In a meeting held on December 8, 2010 PREPA stated that the mogotes from Manati to Vega Alta will not be impacted. However, PREPA have failed to provide documentation that clearly indicates if the mogotes will be impacted due to the use of horizontal directional drilling, open trenching, access road and staging areas. The protocol provided on January 31, 2011 indicates that individuals of palo de rosa (*Ottoschulzia rhodoxylon*) have been located along a potential access road and along the alignment. The presence of individuals of palo de rosa at several sites within Manati highlights the quality of the habitat and the possible presence of additional endangered plant species. Since there is a potential of impacts to mogotes and that the presence of endangered species has been confirmed, the Service urges the applicant to consider the whole mogote area, including the base of the mogote along the alignment as target areas to be surveyed as well as the access roads and staging areas (figure 1).
5. During our sites visits to the Peñuelas area it was noted that some of the habitat assessment was conducted outside the center line of the project. All parallel transects should be marked using a GPS and provided as a GIS layer to be included as part of the final report. This GIS layer should be overlaid over the ROW of the project. This will allow us to evaluate if the surveyed sites are within the area to be impacted, and if further evaluations are required. Plant experts and surveyors should be provided with the latest pipeline alignment so they can evaluate the precise area.
6. The Service continues recommending surveying the Adjuntas area (figure 2). The area of Pico Cerrote harbors a remnant of old forest with some rocky outcrops that can remain as a depository of rare and endangered species. Available information indicates that this area have remained forested for a long period. Ferns dependence on spores for dispersion contributes to the possibility that this area is occupied by our interest species. Despite that the only known population of nogal (*Juglans jamaicensis*) is located several kilometers west of Pico Cerrote, the

former land use of this area may let to the possibility that Pico Cerrote is a depository of the species. In fact, there is an historical collection of nogal by the german collector Paul Sintenis at this area. Due to the extremely rarity of our interest species in Adjuntas, the Service strongly recommend surveying those areas to avoid impacts to the species.

7. The area to be surveyed on Peñuelas does not correspond to the area identified by the Service as a target area. Depicted areas only show a small fraction of the area that the Service recommends to be extensively surveyed. Attached, please find a map that illustrates the areas that require to be surveyed (figure 3).
8. The Service still interested in conducting site visits to evaluate the habitat for endangered species and provide technical assistance to PREPA. The Service recommends that PREPA provide a detailed schedule to allow Service staff to joint Frank Axelrod in the field.

Figure 1. Manati to Vega Alta interest area for federally listed plant species.



Figure 2. Adjuntas interest area for federally listed plant species.

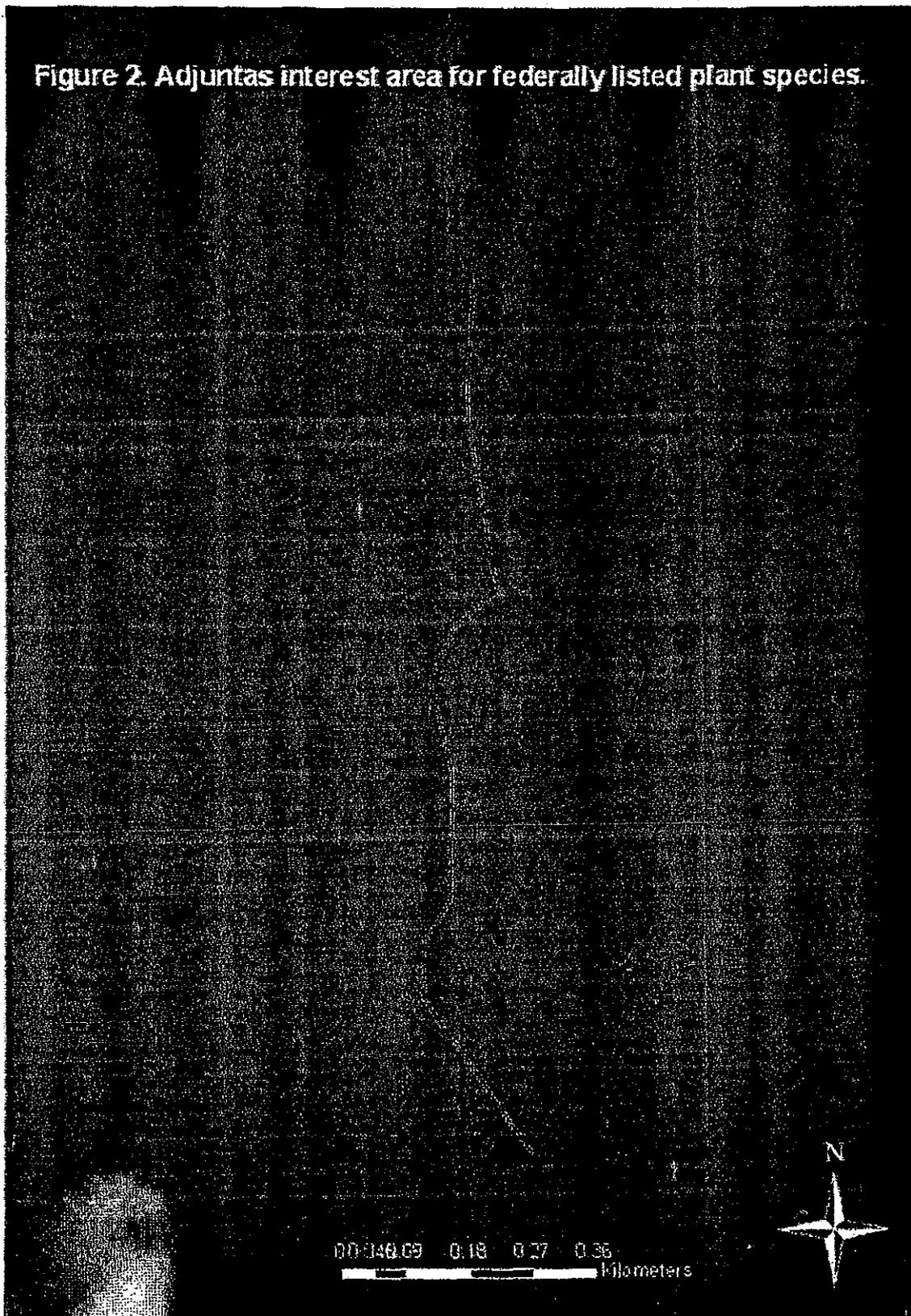
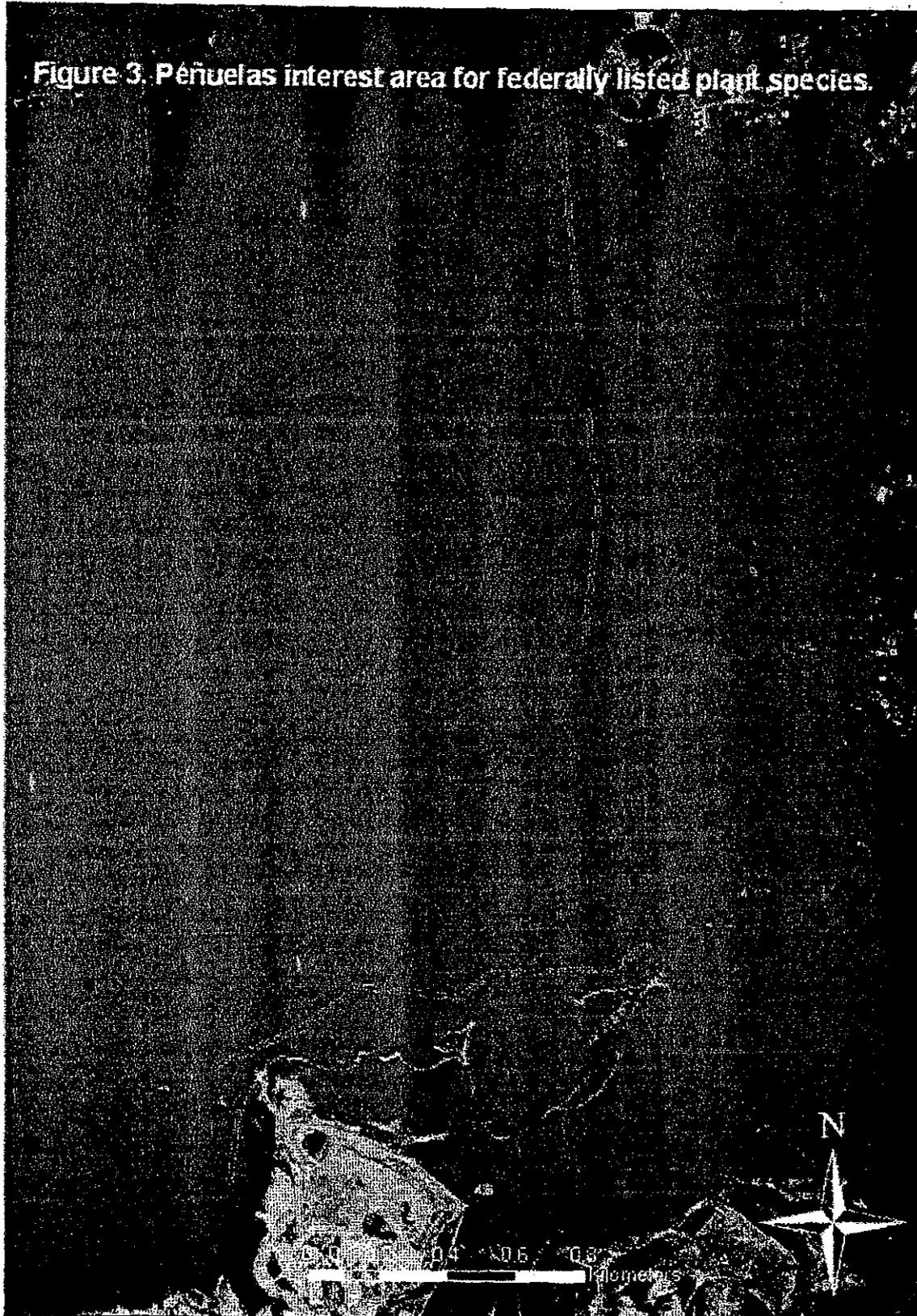


Figure 3. Peñuelas interest area for federally listed plant species.





Yousev Garcia  
<yousevgr@yahoo.com>

02/14/2011 03:08 PM

# 66

To "Marelisa T. Rivera" <Marelisa\_Rivera@fws.gov>, "Edgar W. Garcia" <edgar.w.garcia@usace.army.mil>, Edwin Muñiz <edwin.e.muniz@saj02.usace.army.mil>, Larry Evans  
cc Daniel Pagan <daniel\_paganrosa@yahoo.com>, IVELISSE SANCHEZ <I-SANCHEZ@PREPA.COM>, EDWIN BAEZ <E-BAEZ@PREPA.COM>, Francisco Lopez

bcc

Subject Via Verde - Puerto Rican Nighthjar Study

History This message has been forwarded.

Dear Marelisa:

Please see attached, the proposed transects to perform the Puerto Rican Nighthjar Study at the Peñuelas area.

Yousev

Don't be flakey. Get Yahoo! Mail for Mobile and



always stay connected to friends. USFWS Proposed Nighthjar transects.pdf



February 14, 2011

Mr. Edwin Muñiz, Supervisor  
Fish & Wildlife Service  
Caribbean Field Office  
Boquerón, Puerto Rico 00623

Dear Mr. Muñiz:

**Proposed Transects for Puerto Rican Nightjar Presence Study  
Via Verde Project Case # SAJ-2010-02881 (IP-EWG)**

Reference is made to the meeting held at the Boquerón Offices last Thursday February 10, 2011, between Mr. Rafael González of the Fish & Wildlife Service (Service), and the consultants for the Puerto Rico Electric Power Authority (PREPA), Mr. Jose Chabert and myself. As previously agreed, the meeting was aimed to discuss the extent of the field work required, as well as, to reach a final agreement that will allow the implementation of the Protocol Methodology previously presented before the initiation of the Nightjar nesting period.

This was a continuation of the meeting held at the Corp of Engineers offices last February 7, 2011, where the Field Work and Sampling Methodology related with the abovementioned task was discussed in detail. At said meeting the parties agreed that a field trip was needed (Scheduled for February 9 2011) to identify the suitable Nightjar habitat to be sampled, since the Service was in agreement with the methodology presented.

As agreed attached please find a map (See Attachment # 1) summarizing the transect areas to be sampled as required in the last meeting held at the Boquerón Service Office. These areas represents a total of 900 meters equivalent to 24% of the area to be studied (3.8 km, excluding 500 meters of Leucaenas Specie described as the yellow segments in the figure attached). Consistent with the Protocol and Methodology previously presented, sampling will be undertaken at a minimum of 160 meters intervals, within the study areas, for a total of 7 survey points described as follows:

1. Transect # 1 will have a 200 meters lengths and two survey points will be located,

130 WINSTON CHURCHILL AVE. • PMB 145 • SAN JUAN, PR 00926  
PHONE: 787 960 2002 E-MAIL: YOUSEVGR@YAHOO.COM

**Mr. Muñiz**  
**Proposed Transects Puertorican Nighthjar Study**  
**Case # SAJ-2010-02881 (IP-EWG)**  
**February 14, 2011**  
**Página 2**

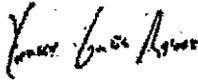
2. Transect # 2 will have a 500 meters lengths and three survey points will be located, &
3. Transect # 3 will have a 200 meters lengths and two survey points will be located.

We confident that the information included herein addressed all pending items related with the required Nighthjar Field study that will allow us to initiate this critical study before the forthcoming nesting period. PREPA will be able to initiate the field study mentioned above on February 16, 2011 if approval from the service is secured not later that February 15, 2011 at 11:00 AM. This will allow the consultants to complete all field work planning and preparations needed to implement the Work Plan presented.

PREPA will provide the Service with a detail Working Schedule as requested, to facilitate the participation of service personnel as needed.

Please do not hesitate to contact Eng. Daniel Pagan at 787-382-7330 at your convenience, in the event additional information related with this important subject is needed.

Best Regards,



Yousev García  
Director

Attachment # 1

- c. Mr. Edgar García (USCOE)  
Mrs. Marelisa Rivera (F&WS)  
Eng. Francisco Lopez (PREPA)  
Eng. Larry Evans (BC Peabody)  
Eng. Daniel Pagan (Asesores Ambientales y Educativos)  
File Vía Verde – FWS - PREPA

11



© 2010 Google

Eye alt 17244 ft

Transect 3

Transect 2

Transect 1

Image U.S. Geological Survey

18°01'55.26" N 66°41'30.55" W elev 458 ft

Imagery Date: 10/31/2005 1993

GOVERNMENT OF PUERTO RICO  
Puerto Rico Electric Power Authority

SAN JUAN, PUERTO RICO



www.aeepr.com

PO BOX 364267  
SAN JUAN, PUERTO RICO 00936-4267

Edya -  
FYI  
&P  
2/23

February 14, 2011

Arch. Miguel Bonini  
Archeologist  
State Historic & Preservation Office  
PO Box 9066581  
San Juan, PR 00906-6581

US ARMY CORPS  
OF ENGINEERS  
2011 FEB 23 A P 34  
ARCHAEOLOGICAL SECTION

Dear archeologist Bonini:

**Re: Via Verde Project  
Case # SAJ-2010-02881 (IP-EWG)**

We make reference to your recent conversation held in your office with archaeologist Marisol Rodríguez, consultant for Puerto Rico Electric Power Authority (PREPA). This conversation covered the issues discussed during the February 1 interagency meeting at the United States Corps of Engineers (USACE). As agreed upon, a copy of the Vía Verde route and alignment was provided via e-mail to Mr. Eduardo Cancio in a *.shp* file format. Also, another copy of the *.shp* file will be submitted in the forthcoming days, including the route alignment as described in the approved Final Environmental Impact Statement (DIA-F, in Spanish), as requested.

Please note that the information provided during your meeting to Mrs. Rodríguez, will be compared against the *.shp* file containing the State Historic & Preservation Office (SHPO) data made available to the government agencies in the past. As it was explained to you by archaeologist Rodríguez, PREPA used this official information together with the one available at the Puerto Rican Culture Institute (PRCI) to assist us in the Phase 1A investigation recently completed. Special precaution was taken, since it was understood that this information is not totally accurate. For this reason, PREPA's archeologists complemented that data with the traditional collection of information available in the SHPO and PRCI archives.

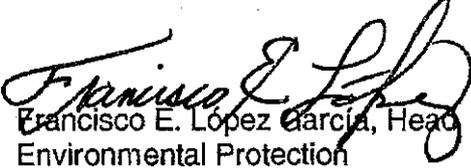
Moreover, all information available at the moment Phase 1A for Vía Verde study was undertaken, was utilized and mentioned in the report included in the DIA-F, filed before the Environmental Quality Board. This is the case, for example, of the Paso del Indio site that has a large file, but said information is not plotted in the area maps. Another example is the Río Tallaboa site that has not been incorporated to the SHPO digital maps.

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Other challenges addressed were the cases of sites that have different names or locations in SHPO's or PRCI's files. The information related with those sites was included in the different maps provided in the Phase 1A report filed as part of the DIA-F. One of these cases is the prehistoric site discovered during the construction of a bridge in the Río Cocal area. In some files, the information available is presented under the name Río Cocal and in others as Punta Coroso. Further investigation of the information available in the agencies allowed us to clarify that this site was of the Punta Coroso, impacted during the bridge construction. Some sites are only mentioned in a general way within the Phase 1A report, in order to keep the attention in the sites that have a direct relation with the project. We will be reviewing the information to be provided by you to make sure that all the sites included in the SHPO archives and located along the route are considered.

Thank you for your valuable cooperation, particularly understanding that additional information will be provided that was not previously available to the investigators. If you have any questions regarding this matter, please contact Mr. Edwin F. Báez Santiago, Manager, Environmental Projects and Licensing Department, at (787) 521-4969.

Cordially,

  
Francisco E. López García, Head  
Environmental Protection  
and Quality Assurance Division

c Mr. Edgar García, Corps of Engineers  
Arch. Carlos Rubio, Director of SHPO



# United States Department of the Interior



Edgar -  
FYI  
LC  
2/23

## FISH & WILDLIFE SERVICE

**Boqueron Field Office**  
Carr. 301, KM 5.1, Bo. Corozo  
P.O. Box 491  
Boqueron, PR 00622

FEB 16 2011

Daniel Pagán Rosa  
Asesores Ambientales y Educativos Inc.  
130 Winston Churchill Ave.  
PMB 145  
San Juan, Puerto Rico 00926- 6018

AMERICAN OVERSIGHT  
2011 FEB 23 A 10:33  
USAFPM CORPS  
OFFICE OF THE DIRECTOR

Re: Proposed Transects for Puerto Rican  
Nightjar Presence Study Via Verde  
Project Case # SAJ-2010-02881 (IP-  
EWG)

Dear Mr. Pagán:

This letter is in response to your letter dated February 14, 2011, regarding Puerto Rican nightjar Field Study. As requested, our comments are issued as technical assistance in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq. as amended).

We have the following comments to the proposed field study to survey the Puerto Rican nightjar:

1. The Service needs to clarify that we do not required nightjar surveys to start previously to the nesting season. Nightjar surveys can occur simultaneously with the nesting season.
2. Nightjar study transects 1 and 3 should start at least 150 meters from forest edge. The 150 meters zone will serve as a buffer to minimize or avoid edge, human, road, or trails effect on the survey.
3. A detailed map containing GPS coordinates for each survey point in the field should be provided.
4. The Service requests that the field work schedule be provided as soon possible and we will coordinate with your staff to participate during the surveys.

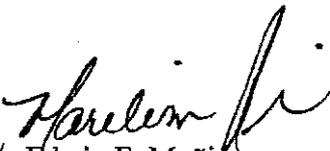
Mr. Pagán

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5. As previously mentioned at the meeting held at the Corps of Engineers last February 1, 2011, the Service restates that Leucaena patches do not provide nesting habitat for the nightjars. However, Leucaena patches provide foraging and roosting habitat for the species particularly when the patches are surrounded by nightjar nesting habitat. The staff performing surveys need to be aware.
6. As we stated in the past, we continue to be concerned with potential impacts to nightjar habitat within the entire area identified for the establishment of a mitigation area for the Gasoducto del Sur and surrounding areas that support nightjar habitat. As we mentioned previously, our concern is not limited only to the area that will be acquired (not a specific parcel) but expands to the entire area that was identified by species expert as the best habitat to be protected in the Guayanilla-Peñuelas area. We continue recommending the project route to be modified to avoid fragmentation of this important habitat.

Thank you for the opportunity to provide input. If you have any question, please contact Marelisa Rivera at 787-851-7297 extension 206.

Sincerely yours,

  
fm Edwin E. Mufiz  
Field Supervisor  
Caribbean Field Office

rg

cc:

CoE, San Juan  
PREPA, San Juan



Michelle Ramos/R4/FWS/DOI

02/23/2011 03:47 PM

# 70

To edgar.w.garcia@usace.army.mil, Daniel Pagan  
<daniel\_paganrosa@yahoo.com>  
cc Edwin Muniz/R4/FWS/DOI@FWS, Marelisa  
Rivera/R4/FWS/DOI@FWS, Rafael  
Gonzalez/R4/FWS/DOI@FWS

bcc

Subject Application for CZM Compatibility Certificate, Via Verde  
Project

Good afternoon:

Attached you will find our comments on the proposed project.



LP-012 CZM Via Verde 02-23-2011.pdf

Cordially,

Michelle Ramos  
STEP Student-Administrative Clerk  
U.S. Fish and Wildlife Service  
Caribbean Ecological Services  
P.O. Box 491  
Boqueron, Puerto Rico 00622

michelle\_ramos@fws.gov  
Phone: (787)851-7297 Ext. 213  
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"The achievements of a team are the  
results of the combined efforts of each individual".



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Boqueron Field Office  
Carr. 301, KM 5.1, Bo. Corozo  
P.O. Box 491  
Boqueron, PR 00622

FEB 23 2011

Mr. Max L. Vidal Vázquez  
Director Interno  
Subprograma Planes de Usos de Terrenos  
P.O. Box 41119,  
San Juan, Puerto Rico 00940-1119

Re: Application for CZM Compatibility  
Certificate, Via Verde Project  
CZ-2011-0921-021

Dear Mr. Vidal:

Thank you for your letter dated December 3, 2010, received in our office on December 13, 2010, requesting comments on the proposed project. The project consists of the construction of an approximately 92-mile-long natural gas pipeline from EcoEléctrica to the Puerto Rico Electric Power Authority (PREPA) power plants on the north coast of Puerto Rico. Our comments are provided as technical assistance under the Endangered Species Act (ESA)(87 Stat. 884, as amended; 16 United States Code 1531 *et seq.*) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*).

The documents attached to the application for the CZM Compatibility Certificate include the Joint Permit Application (JPA) and the Preliminary EIS for the project. The Service has reviewed the JPA, Preliminary EIS and Final EIS and provided comments to the Corps of Engineers and PREPA on December 15, 2010 and January 20, 2011, respectively. Copies of the letters are attached. As of today, our comments on those letters prevail.

Based on the above, the Service does not recommend the CZM Compatibility Certificate be issued until the environmental issues are addressed and adverse impacts are appropriately evaluated, minimized and compensated.

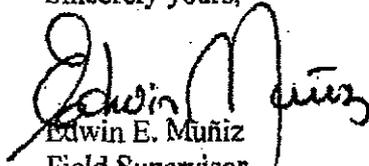
It is our mission to work with others, to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of our people. If you have any additional question regarding this issue, please do not hesitate to contact Marcelisa Rivera, Deputy Field Supervisor at 787-851-7297 extension 206.

Mr. Vidal

2

You may also visit our website <http://www.fws.gov/caribbean> for additional information on threatened and endangered species under jurisdiction and the programs to conserve them.

Sincerely yours,

  
Edwin E. Muñiz  
Field Supervisor  
Caribbean Field Office

Enclosures

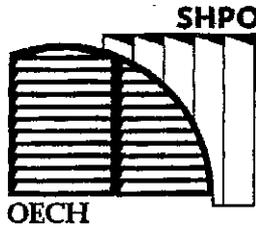
Rg/mtr

cc: PREPA, San Juan  
COE, San Juan

Edgar -  
SC  
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OFICINA ESTATAL DE  
CONSERVACIÓN HISTÓRICA  
OFICINA DEL GOBERNADOR

STATE HISTORIC  
PRESERVATION OFFICE  
OFFICE OF THE GOVERNOR



US ARMY CORPS  
OF ENGINEERS  
2011 MAR -1 P 3:12  
ARCHAEOLOGICAL SECTION

February 24, 2011

Mr. Francisco E. López García, Head  
Environmental Protection  
and Quality Assurance Division  
PR Electric Power Authority  
G.P.O. Box 364267  
San Juan, PR 00936-4267

**SHPO 08-03-10-01 VÍA VERDE PROJECT, ISLANDWIDE, PUERTO RICO / SAJ-2010-02881 (IP-EWG)**

Dear Eng. Cordero:

As discussed during the U.S. Army Corps of Engineers interagency meeting on February 1, 2011 and afterwards with your archaeological consultants Carlos Ayes and Marisol Rodríguez, we are enclosing a CD containing, in .shp file format, the approximate locations of archaeological sites reported within a one kilometer corridor along the *Vía Verde* route alignment. This information was previously available in our Office in paper format. The sites plotted do not necessarily represent the total universe of historic properties actually located within this corridor, nor does it contain information on site boundaries or historic significance.

Regarding information on the archaeological site of *Paso del Indio* in the municipality of Vega Baja, this historic property was included in the National Register of Historic Places in 2007 and has been marked in our maps since the 1980's. Six above ground properties, also listed in the NRHP, are located within a one-kilometer buffer zone. Among them, the Manatí urban zone, a potentially eligible district that includes four properties that are individually listed. Digital copies of the National Register nomination for all these properties are also included in the CD.

We hope this information is of use to you. We look forward to receiving the report

OFICINA ESTATAL DE CONSERVACIÓN HISTÓRICA OFICINA DEL GOBERNADOR  
STATE HISTORIC PRESERVATION OFFICE OFFICE OF THE GOVERNOR

Francisco E. López García  
February 24, 2011  
Page 2

on the results of the Stage I archaeological reconnaissance survey in the near future. This study identifies the presence or absence of cultural resources of architectural, archaeological, and/or historic significance within the project's area of potential effects. In order to comply with the National Historic Preservation Act of 1966, as amended, and 36 CFR Part 800, efforts to identify historic properties should follow the Secretary's "Standards and Guidelines for Archaeology and Historic Preservation" (48 FR 44716) as well as our Office's guidelines.

If you have any questions, please contact Miguel Bonini of our Office at 787-721-3737 or by e-mail at [mbonini@prshpo.gobierno.pr](mailto:mbonini@prshpo.gobierno.pr).

Sincerely,



Carlos A. Rubio Cancela, Architect  
State Historic Preservation Officer

CAR/BRS/MB/SG

Enclosure

c. Edgar García  
USACE

US ARMY CORPS  
OF ENGINEERS  
2011 MAR -1 P 3 13  
ARCHITECTURAL SECTION

App-1395



509 Guisando de Avila Suite 100 Tampa FL 33613; www.bcpeabody.com; 813.961.7300; Fax: 813.961.9300

February 24, 2011

Mr. Edgar Garcia  
Regulatory Project Manager  
Antillas Regulatory Section  
US Army Corps of Engineers  
400 Fernández Juncos Avenue  
San Juan, Puerto Rico 00901-3299

Re: Additional information requested for Via Verde project  
SAJ 2010-02881 IP-EWG

Dear Mr. Garcia:

To facilitate the evaluation of the data and responses previously provided in our letter of January 28, 2011, supplemental data and information are being presented. Specifically, where we previously referenced the Final Environmental Impact Statement, approved in November 2010, we are providing information to address the issues raised in your December 22, 2010 letter, and at the interagency project delivery team (PDT) meeting held on February 1, 2011.

**Project Impacts:**

Many actions have been taken, both in the preliminary planning for the project, and more recently, in adjustments to the proposed alignment and construction techniques, to minimize or avoid impacts. In addition to the information provided in our January 28, 2011 letter, these efforts aimed to avoid project impacts include the following:

- As previously discussed, the alignment entails a 150 feet easement, that includes 50 feet of the permanent operational Right of Way (RoW), a 50 feet construction RoW, as well as 50 additional feet of the maintenance RoW. Notwithstanding that, **when traversing near towns and communities**, every effort has been made to locate the pipeline alignment to avoid populated areas. Where this is not possible, the Puerto Rico Energy Power Authority (PREPA) will allow a 150-foot clearance distance from the actual pipeline location to any residential building, to provide as much setback as reasonable.
- After due consultation with the PR Planning Board, the proposed project was also rerouted **to avoid some commercial developments, as well as future residential areas** that had completed the required Planning Board process but construction has not been initiated yet. The alignment was altered to avoid both of those cases.
- In early designs, the pipeline originally crossed three forests (Bosque del Pueblo, Rio Abajo Forest and Forest De La Vega). To avoid impact to these forests, the design of the alignment was varied as follows:
  - a) **El Bosque del Pueblo State Forest** was completely avoided by moving the original alignment more to the west and outside the boundary.

US ARMY CORPS  
OF ENGINEERS  
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ASSOCIATION

- b) **In the Rio Abajo State Forest**, no impact will occur because the pipeline alignment will use the existing PR-10 easement in that area. This forest was previously fragmented by the construction of PR-10. The Via Verde project proposes to use 8.4 miles of this road right-of-way to avoid further fragmentation of the forest, as well as to prevent additional impact to the karst area at said location.
  - c) **State Forest De La Vega** is the only forest the project will directly impact. However, the impact will be minimal (only 0.0086 square mile will be directly impacted). This 0.0086 square mile corresponds to a length of 0.43 mile of pipe located within the forest, by the 100 feet width of the initial construction area. This constitutes only 0.47% of the forest to be temporarily impacted. Minimizing fragmentation is an important factor to promote biodiversity. To mitigate this minor impact, PREPA intends to acquire land adjoining several sections in Forest De La Vega in order to connect isolated parts to further minimize fragmentation within this state forest. These lands will be devoted to conservation. The whole process will be done in coordination with DNER.
- **In the case of wetlands**, the impact is a temporary one, and will occur during installation of the pipeline. As proposed, the project does not involve any permanent impact to wetlands, so there is minimal, if any, cumulative impact in association with other actions. To further minimize wetland impacts the following measures will be taken:
    - Limit construction to a right-of-way of 50-feet,
    - Demarcate the easement to restrict the removal of vegetation and avoid impacts to the wetland outside of this area.
    - Implement control measures to prevent erosion and sedimentation or minimize sediment transport to other areas of the wetland.
    - No vehicles are allowed to leak oil or other liquids to pollute the wetland. If a leak occurs during construction, spill kits will be used to clean and remove material to a control workspace.

The project crosses north and northwest of San Pedro Swamp (Municipality of Toa Baja), where it is associated with the mouth of the Cocal River and in forested wetland areas of Punta Salinas. In these sections the pipeline will be installed utilizing Horizontal Directional Drilling (HDD) and cross at depths (over 60 Feet) well below the root zone of trees. The savanna areas of this swamp, which could be affected by pipeline construction, are (or have recently been) used for commercial planting of grass. It must be pointed out that Via Verde project was originally and is still designed and planned to comply with established USACE Nationwide Permits associated with the construction work covered under Section 404 of the Clean Water Act. The characteristics of this particular project are a clear indication of the limited impact of the pipeline to the bodies of water, mangroves, and wetlands located within the designated alignment.

Roads will be crossed by the pipeline project utilizing the cross boring technique to avoid impact to infrastructure and public transit. The pipeline will be installed at least 4 feet below the road, or as required by the Highway Authority, both state and federal, as applicable. These sections of the pipeline are designed to withstand the weights associated with road vehicles passing over it.

To minimize impact incidental to the effect of deforestation and temporary removal of topsoil, PREPA will implement a Plan for the Control of Erosion and Sedimentation (CES) and a Storm Water Pollution Prevention Plan (SWPPP) in compliance with Environmental Quality Board (EQB) regulations and regulations of the US Environmental Protection Agency promulgated for this purpose.

**Changing the route of the proposed alignment in the Mogote Area of Manati to avoid impacts to the Mogotes.** If any particular Mogote cannot be avoided by routing the pipeline around it, the pipeline will utilize the push/pull bore method (not HDD) to tunnel underneath the landscape.

***Secondary Impacts:***

The entire 92 mile length of the Via Verde project will be located underground, so secondary impacts are expected to be minimal. **Within the aquatic resource the pipeline trenches will be excavated 4-6 feet deep** and this will not adversely impact groundwater resources and aquifers. **There will be no permanent fill and no maintenance roads constructed** in waters of the U.S. **No secondary impact is expected to occur to surface sheet flow and/or ground water flow.**

Gas pipes could contaminate groundwater if the natural gas used during operation of the project contained dense contaminants (liquid natural gas) and there was a break in the bottom of the pipe where they can escape. Also contamination could occur where compressor stations are located to boost the gas flow. **It is important to mention that the gas to be used in the Via Verde project will not have the type of contaminant that is condensed (by specification), or have compressor stations.**

Open trench impacts include increased turbidity, sedimentation downstream from crossings, and direct impact to sessile wildlife and aquatic flora. To minimize any impact that potential erosion and sedimentation from land may have on the aquatic environment PREPA has taken the following measures:

- **An Erosion and Sedimentation Control Plan (CES) was developed** and will be submitted to the Environmental Quality Board for approval. This Plan will identify the construction easement to avoid impacting other areas; will identify water bodies that may be affected by construction to protect them; and will identify drainage patterns to a body of water and locate areas where control measures such as bales of hay and strainers will be installed. Also, a CES Plan inspector will oversee the development of the project, and will report its findings to the EQB.
- **Submit a Notice of Intent to the US Environmental Protection Agency (EPA) and prepared a Storm Water Pollution Prevention Plan (SWPPP).** This Plan will be finalized using the EPA guidance, Developing a Stormwater Pollution Prevention Plan: A Guide for Construction Operators and staff that accompanies it.
- **PREPA will present written notification to the EQB on the initiation of activities.** Such notice shall be not later than five (5) business days following the commencement of any activity defined in the CES Plan.

- **In those areas where steep gradients are encountered, slope stabilization (terraces) will be utilized** to reduce runoff velocity and minimize erosion. Geotextiles will also be installed in these areas to prevent rain or wind erosion.
- **Sediment traps** will be installed at points of discharge throughout the construction site to contain runoff. These traps will incorporate a catchment area with rocks of different sizes placed to control the discharge velocity of runoff.
- **Silt fence** will be installed along with rectangular hay bales along the perimeter of the 100-foot construction easement to contain any sediment and avoid transport to adjacent areas.
- **Hay bales** will be used to protect existing storm drains in impervious surfaces, where applicable, and will be kept in good conditions.

**Another secondary impact would be effects to water quality from leakage of oils and other fluids from machinery.** Although the possibility of groundwater contamination is considered remote, oil and fuel spills that are not addressed promptly could contaminate the water. To avoid this possibility, PREPA will implement a Spill Control Plan Environmental Coordinator project. This Plan will be prepared following the guidelines of the Code of Regulations Federal Regulations, Title 40, Protection of the Environment, Part 112, Oil Pollution Prevention. The plan will be submitted to EPA and the Environmental Quality Board (EQB) for evaluation. Each Operations Center will have a copy of the Plan. The Environmental Coordinator will provide briefings at each Center.

During construction, the resident engineer will be responsible for ensuring implementation of control measures in coordination with Environmental Coordinator. PREPA will do everything possible to ensure no vehicles are allowed to leak oil or other liquids that may affect water quality. If a vehicle develops leaks during the work, spill kits will be used to collect any leaks and the vehicle will be removed.

**Secondary (temporal) impacts** will also be mitigated by reducing construction time. PREPA will apply standards that require surface crossings of water bodies less than 10 feet wide to be completed in 24 hours or less. Water bodies of 10-100 feet wide will be crossed in 48 hours or less. These crossing will use one of the three "open" cut methods outlined in Appendix F of the Joint Permit Application. After installation of the pipeline, topographic contours will be returned to conditions that existed prior to construction to avoid affecting the hydrology and natural cycles or patterns of movement of water in the surface streams or ditches.

**Finally, to reduce any secondary impacts to air quality** water trucks will be used to spray the areas of construction. This includes the construction easement, any mounds of soil and all Centers of Operations. This will keep soil moist and minimize the amount of dust that might be dispersed. In addition, haul trucks will be required to use tarps to prevent dust emissions during transport of material on roadways. The tarps will be in good condition and shall properly tied to prevent loosening and the wind from moving it.

In addition to the information provided above, the translation of Chapter #6 of the State Environmental Impact Statement that covers impacts minimization has been included as Attachment #1.

***Alternatives Analysis:***

PREPA recently completed an extended Alternative Analysis aimed to address EPA concerns and guidelines as presented on December 22, 2010 letter. Attachment # 2 includes said Alternative Analysis.

***Alternative Fuels:***

Attachment # 3 included a translation of Chapter # 4 of the State Environmental Impact Statement that covers the subject mentioned above.

***Compensatory Mitigation:***

In our previous letter we explained why an extensive compensatory mitigation plan was not submitted up front with the permit application. Since there will be no permanent fill of waters of the U.S., and secondary impacts to these same wetlands is expected to be minimal due to the size of the pipe and its method of placement, **temporal impacts to the aquatic resource is the remaining impact that may require compensation.**

PREPA is prepared to immediately work with the Corps to identify an appropriate goal for aquatic resource "lift" to offset temporal "loss". In terms of location, mitigation could be two types: 1) in situ enhancement or creation and, 2) land acquisition, preferably adjacent and identical or similar in ecological value. PREPA is ready to propose mitigation "on site", since it is difficult to get land with the characteristics necessary for successful mitigation.

As discussed at the PDT meeting on February 1, 2011, as the pipe is put in place the contractor will move forward and "walk" the construction along the corridor. As the pipeline trench is backfilled with the wetland hydric soil and topsoil, the wetland will be returned to its preconstruction topography. The vegetation in the areas of wetlands to be impacted with open trench will be allowed to immediately restore naturally. In wetlands that are active agricultural areas, landowners will be allowed to continue planting crops that do not have deep roots. In the rest of the project corridor, i.e. uplands, reforestation will occur naturally or through mitigation plans coordinated with Department of Natural and Environmental Resources (DNER), except for the growth of deep-rooted trees within the 50 foot construction easement (25 feet on either side of the pipe whenever possible.) A mitigation plan to include reforestation at a rate of 3:1 for trees to be removed is already required by the DNER and has been agreed to by PREPA. This mitigation plan will provide habitat compensation by acquiring land, reforestation of public areas or any combination the DNER deems necessary.

One mitigation opportunity PREPA is prepared to execute exists at the herbaceous Caño Tiburones wetland reserve, which has been significantly impacted by agricultural activities in the past. The dominating herbaceous species in this wetland is cattail (*Typha domingensis*), identified as an unwanted invasive species by federal agencies.

The method of installing the pipeline in this areas will allow replacing the cattail vegetation that existed before the construction with a desirable aquatic species.

**Cultural Resource Concerns:**

Efforts are being undertaken by PREPA to complete the translation of the Archaeological Study 1A as requested by the USACE during the meeting held on February 1, 2011. Translation efforts are around 70% complete and final document will be presented before the USACE in the forthcoming week.

In the mean time, PREPA's consultants periodically meet with State Historic and Preservation Office (SHPO) in an effort to secure all data available to ensure that all data has been included in the efforts being undertaken by our consultants. In a meeting held at SHPO on February 23, 2011, an agreement was reached to have additional meetings between PREPA's consultants and SHPO personnel to discuss the progress being made in the implementation of the Phase 1B study initiated during the month of January 2011. These meetings will be also geared to address any particular information concerns that needed to be addressed as part of the consultation process performed by the USACE.

**HDD Crossing Information:**

At the PDT meeting the Corps, US Fish and Wildlife Service and National Marine Fisheries Service requested information on the proposed HDD crossing locations to include length of each crossing and depth the pipe would be placed at beneath the waterway being crossed. The following information is provided for the HDD crossing sites still proposed (due to site limitations three previous sites will no longer utilize the HDD construction method):

<u>Number</u>	<u>Waterway</u>	<u>"C" No.</u>	<u>Length of HDD</u> <u>Crossing Entry to Exit</u>	<u>Depth of Pipe</u> <u>Under Waterway</u>
1	Matilde River	C1	1,417 ft	-50 ft
2	Unnamed Canal	C3	1,100 ft	-58 ft
3	Rio Tallaboa	C5	1,298 ft	-58 ft
4	Grande de Arecibo	C34	1,185 ft	-40 ft
5	Grande de Arecibo	C36	1,850 ft	-60 ft
6	Grande de Arecibo	C37	1,200 ft	-45 ft
7	Rio Tanama	C39	1,360 ft	-65 ft
8	Grande de Arecibo	C43	1,838 ft	-55 ft
9	Rio Manati	C66	1,230 ft	-40 ft
10	Rio Manati	C72	1,200 ft	-48 ft
11	Rio Manati	C73	1,910 ft	-40 ft
12	Rio Indio	C74	1,387 ft	-41 ft
13	Rio Indio	C75	1,150 ft	-47 ft
14	Rio Indio	C79	1,145 ft	-40 ft
15	Rio de la Plata	C83	1,600 ft	-48 ft
16	Mangrove Slough	C90	1,300 ft	-50 ft
17	Rio Cocal mangroves	C93	4,531 ft	-55 ft
18	Uplands at Punta Salina	NA	3,588 ft	-50 ft

19	Shoreline at Levittown	NA	4,495 ft	-55 ft
20	Shoreline at Levittown	NA	3,782 ft	-55 ft
21	Rio Hondo/Rio Bayamon	C95	1,831 ft	-80 ft

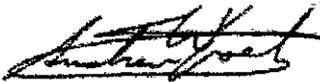
\*NOTE: The "C" numbers show the crossing location as identified in Table 5 in the Joint Permit Application (JPA) and on the Impact Maps in Appendix B of the JPA

**The pipe depth at each HDD crossing (none less than 40 feet) will ensure no channel bed erosion will affect the pipe (and vice versa).** This technology will enable a "dry crossing" well below the river bed. These sections of the project will be built so the drilling begins at a safe distance from a waterway channel and extends below the bed at an appropriate depth, which was determined by subsurface exploration with geotechnical borings. In addition to the eighteen waterway crossings, three locations (18-20) are proposed to minimize the potential for liquefaction and coastal erosion. At these locations the pipe will be installed by HDD at depths of 50 feet or more, which protect the pipe from the action of the waves. For this reason, no impact will occur to the dunes and the coastline at Levittown.

**Another approach aimed to reduce and minimize impact associated with the HDD are the use of temporary construction workpads.** For these workpads, a 200 X 200 foot area will be used on both sides of the body of water at the entry and exit points of the pipeline. Once the HDD crossing is completed, these workpads will be immediately removed and preconstruction site conditions restored. At 14 of the 18 HDD waterway crossing locations the temporary workpads will be located in Palustrine Wetlands (previously disturbed by ranching or framing activities). None of the workpads are located in forested wetland habitat. More detailed information on these workpads will be provided soon.

As indicated previously, PREPA is committed to address any and all concerns presented by the US Army Corps of Engineers (USACE). In the event additional information related with the Joint Permit Application is needed by the Corps, please do not hesitate to contact us at 503-781-7930 at your earliest convenience.

Cordially Yours,



Andrew Goetz  
 President  
 BCPeabody  
 509 Guisando de Avila  
 Suite 100  
 Tampa, Florida 33613



cc. Mr. Osvaldo Collazo (CoE)  
Eng. Francisco E. López (PREPA)  
Via Verde Project File



February 28, 2010

Sr. Sindulfo Castillo  
Jacksonville District  
US Army Corps of Engineers - Antilles Office 400  
Avenida Fernández Juncos  
San Juan, Puerto Rico 00901-3223

“Vía Verde” Natural Gas Pipeline / Puerto Rico - SAJ -2010-02881 IP/EWG

Mr. Sindulfo Castillo:

We are deeply disturbed by recent events that have transpired in the proposed construction of a natural gas pipeline known as ‘Vía Verde’ (*Green Way*) or ‘Gasoducto del Norte’. We wish to communicate information about this project that appears to violate existing regulations and permitted procedures.

This project involves the construction of natural gas pipeline that would cross the Island of Puerto Rico from the EcoElectrica facility in the south of Puerto Rico to the north of the island. In doing so it would cut through our central mountain range, and then extend eastwards through our northern karst zone to supply natural gas to three Puerto Rico Electric Power Authority (PREPA) power plants. This project, which has met with great opposition from the people of Puerto Rico, is pending approval from the U.S. Corps of Engineers.

We represent Casa Pueblo, a community-based organization with over 30 years of service contributing towards sustainable development in Puerto Rico in the areas of economic development, environmental protection, educational programs, and agriculture. Casa Pueblo has been nationally and internationally recognized, including through the award of a 2002 Goldman Prize, equivalent to an Environmental Nobel Prize, to its Director Dr. Alexis Massol-González. Our concern regarding the potential impact of this natural gas pipeline led us to assemble a Scientific and Technical Commission to study the potential environmental, social and economical impacts of the project. This Commission has now been studying this project for more than six months, and we wish to report some important findings of our studies.

- Our Commission presented evidence in September of last year that EcoEléctrica does not have the capacity, nor the infrastructure required to

supply natural gas to the 'Via Verde' pipeline. This matter itself makes the project unviable. In their best-case scenario for expansion, EcoElectrica could only provide enough fuel for PREPA-Costa Sur.

- Our findings were reaffirmed by the investigation of EcoElectrica undertaken by Senators Larry Seilhamer and Antonio Fas Alzamora . R of the S Resolution 889 was unanimously approved at the Senate on November 16, 2010 including a recommendation to discard the project.
- Prior to the Governor's declaration of an "Energy Emergency", PREPA had already decided on one alternative, the northern gas pipeline project. Three months before the emergency was declared, over \$13 million in contracts had already been awarded for this alternative project, despite the fact that this "energy crisis" was not apparent at the time.
- The governor's "energy emergency" order retroactively accepted and validated the decision made by AEE to exclusively choose the "Via Verde" alternative and invest millions of dollars of public funding in the project (e.g. design, environmental issues, expropriation and publicity campaigns).
- The order of an "energy emergency" closes the doors on the opportunity for a serious, participative and democratic discussion to evaluate other potential alternatives that could be employed to address this 'energy emergency'. It discards the possibility of bringing in other stakeholders including industries to address this problem, such as architects and engineers.
- The declaration of an "energy emergency" is part of PREPA's strategy to deliberately endorse one company - EcoEléctrica. This is potentially in violation of national anti-monopoly laws.
- Pedro Ray is the Chief Executive of Ray Engineers. He was also on the Board of Directors of Puerto Rico Infrastructure Financing Authority, clearly indicating that there is a conflict of interest.
- A further conflict of interest is that the agency in charge of publicity, Ballori & Farré, subcontracted the wife of Edward Zayas, the person in charge of communications of La Fortaleza.

Ray Engineers, P.S.C.	\$8.9 Millions	4/30/10 - 4/29/11	Pipeline Design
Environmental and Educational Advisors	\$300,000.00	5/14/10 - 9/22/10	Environ. Consulting
New Star Acquisitions Group	\$500,000.00	6/22/10 - 6/21/11	Preparatory Phase
New Star Acquisitions Group	\$6,364,518.00	10/1/10 - 9/30/11	Admi Consulting
Ballori & Farré	\$2.7 Millions	7/2/10	Public Campaign

Governor declares the state of "Energy Emergency" 7/19/10

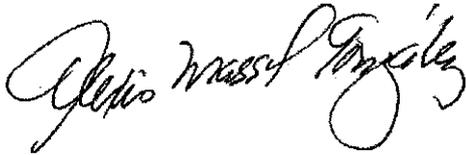
Environmental and Educational Advisors	\$2 Millions	8/23/10 - 8/22/11	Environ Consulting
UNIPRO Architects, Engineers and Planners	\$6 Millions	9/28/10 - 9/27/12	Project Manager

- PREPA's actions prior to the state of emergency are evidently corrupt and antidemocratic, with no opportunity for free competition among industries and employers, and no participation of the people.
- Just days after the declaration of this false "energy emergency" the Governor was offering to sell energy to the Dominican Republic.

- After the public announcement and before the public debate, PREPA renewed its contracts with the Environmental and Educational Advisors, increasing the amount from \$300,000 to \$2 Million. \$6 Million was granted to UNIPRO Architects, Engineers and Planners for the management and supervision of the construction, even though the project had not yet been approved by the local agencies EQB, DNR or PB at that time, and the Federal Agencies' evaluation of the project had not yet begun.
- \$350 Million of Wall Street bonds were issued for project construction last December. These bonds are guaranteed by Federal Funds.

Casa Pueblo expresses its willingness to collaborate with the USCOE in the process, to ensure that the energy projects to be developed in Puerto Rico are undertaken in compliance with environmental and best-practice. However, 'Via Verde' is clearly an unacceptable proposal by engineering, environmental, public risk and financial standards. We thus recommend that USCOE to deny the permit immediately to minimize further damages to the people of Puerto Rico. In addition, we are recommending the referral of the 'Via Verde' file to the US Attorney for evaluation.

Sincerely yours,



Dr. Alexis Massol-González, Director  
Casa Pueblo



Dr. Arturo Massol-Deyá, Biologist  
Casa Pueblo



Dr. Gerson Beauchamp, Electrical Engineer  
Casa Pueblo

cc: [lyrica@goldmanprize.org](mailto:lyrica@goldmanprize.org)



"Garcia, Edgar W SAJ"  
 <Edgar.W.Garcia@usace.ar  
 my.mil>  
 03/01/2011 08:37 AM

To "Garcia, Edgar W SAJ" <Edgar.W.Garcia@usace.army.mil>, "Lisamarie carrubba" <Lisamarie.Carrubba@noaa.gov>, "Carl Soderberg" <Soderberg.carl@epa.gov>, "Carlos A. Rubio" <Castillo, Sindulfo SAJ" <Sindulfo.Castillo@usace.army.mil>

bcc

Subject RE: SAJ-2010-02881 (IP-EWG) Response to Corps' Dec 22 "issues" letter (UNCLASSIFIED)

# 71

Classification: UNCLASSIFIED  
 Caveats: NONE

Ladies and Gentlemen,

The Corps received at our office the enclosed copy of BCPeabody (BCP) follow-up response letter to the Corps Dec 22, 2010 letter.

The letter is not a complete response, and the references are not well identified. Upon calling the BCP, they will be sending corrections.

Respectfully,

Edgar W. Garcia  
 Project Manager  
 Antilles Regulatory Section

-----Original Message-----

From: Garcia, Edgar W SAJ  
 Sent: Monday, January 31, 2011 11:42 AM  
 To: 'lisamarie carrubba'; 'Carl Soderberg'; 'Carlos A. Rubio'; 'Miguel Bonini'; 'jaime.torres@dot.gov'; 'carlos.machado@dot.gov'; 'Marelisa\_Rivera@fws.gov'; 'rafael\_gonzalez@fws.gov'; 'Edwin\_Muniz@fws.gov'; 'Soto.Jose@epamail.epa.gov'  
 Cc: Castillo, Sindulfo SAJ; Garcia, Edgar W SAJ  
 Subject: FW: SAJ-2010-02881 (IP-EWG) Response to Corps' Dec 22 "issues" letter (UNCLASSIFIED)  
 Importance: High

Classification: UNCLASSIFIED  
 Caveats: NONE

Ladies and Gentlemen,

The Corps received the enclosed advanced copy of the PREPA response letter to the Corps Dec 22, 2010 letter.

The Corps is forwarding a copy of subject letter in an effort to clarify certain aspect of the letter during our meeting tomorrow. Also, the proponent suggested that the Federal Agencies involved with this project have a copy of the letter before the meeting.

At this moment we have not received the original letter in our office, nor have we evaluated the supplied information.

Respectfully,

CN 078-04495  
REV. 06/10

GOVERNMENT OF PUERTO RICO  
PUERTO RICO ELECTRIC POWER AUTHORITY

*Edgar*  
*fyA*  
*SC*  
*3/7*

SAN JUAN, PUERTO RICO

www.prepa.com



GPO BOX 364267  
SAN JUAN, PR 00936-4267

March 7, 2011

Mr. Edgar García  
Regulatory Project Manager  
Antilles Regulatory Section  
US Army Corps of Engineers  
400 Fernández Juncos Avenue  
San Juan, Puerto Rico 00901-3299

US ARMY CORPUS  
OF ENGINEERS  
ZM MN - 1 P 2 32

**Re: Additional Information Requested for Vía Verde Project regarding Natural Gas Availability  
SAJ 2010-02881 IP-EWG**

Dear Mr. Garcia:

The Puerto Rico Energy Power Authority (PREPA) filed a Joint Permit Application (JPA) with the U.S. Army Corps of Engineers (CoE) on September 20, 2010, regarding the construction of the Vía Verde Project. The Project involves the construction of a 92 miles pipeline of 24" diameter, originating at the LNG Terminal owned by EcoEléctrica Corporation (EcoEléctrica) in the Municipality of Peñuelas.

As requested, , this letter provides the CoE with additional information (which supplements the details provided in the JPA for the Project) which indicates that no additional Federal Energy Regulatory Commission (FERC) permits or authorizations are required in order for EcoEléctrica to provide natural gas service for the Vía Verde Project.

As indicated in the JPA, as well as in the approved Final Environmental Impact Statement (FEIS) prepared for the Project, the natural gas supply for the Project (approximately 93MM scf/day) will be purchased by PREPA in accordance with the Order and Authorization granted by FERC in 2009. This amount of gas will be utilized by PREPA in fueling the power plants that are part of its generating system, providing an option to dispatch the power generating units based on each unit's heat rate, as well as the overall operation cost. This will allow the selection, on a daily basis, of the most efficient operational scenario that yields a reduction in the power cost in Puerto Rico.

At this time, and with the natural gas volumes mentioned above, PREPA will be able to fuel, on different operational and loads ratios, Units 5 & 6 of the San Juan Steam Plant, Units 5 & 6 that recently were converted into dual fuel operation located at the South Coast plant, and PREPA's other co-fired generating units. The selection of the specific operating scenario for these units that yields the lowest operational cost to PREPA will be undertaken daily through the use of the installed Smart Grid Technology that integrates the use of computer algorithm utilized by PREPA for the last twenty years.

Mr. Edgar García  
Page Number 2  
March 7, 2011

To accomplish the actual delivery of natural gas to PREPA's operational system in compliance with the FERC 2009 Authorization, PREPA will provide written notice to EcoEléctrica and FERC with respect to the change in the gas usage end point for the additional gas supply that has been authorized. Gas will be supplied through the use of an existing main header coming out from the gasifying units located within the EcoEléctrica facilities, as allowed by the FERC Order and Authorization. This infrastructure will be utilized in supplying natural gas to South Coast Plant units 5 & 6 in the forthcoming weeks.

It must be pointed out that all permits and authorizations required for the delivery of the volumes of natural gas mentioned above are in place at EcoEléctrica as of the date of this communication. This permit also considers an increase in the amount of LNG deliveries to the Peñuelas LNG terminal from the actual number of vessels of 12 per year to 24 vessels per year.

In the event additional information related to this subject is needed, please do not hesitate to contact us at your earliest convenience.

Cordially Yours,



Ángel L Rivera Santana, Director  
Planning and Environmental Protection

- c. Mr. Jaime Sanabria (EcoEléctrica)  
Eng. Carlos Reyes (EcoEléctrica)  
Vía Verde Project File



DEPARTMENT OF DEFENSE  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
ATILLES OFFICE  
400 FERNANDEZ JUNCOS AVENUE  
SAN JUAN, PUERTO RICO 00901-3299  
March 18, 2011

Antilles Regulatory Section  
SAJ-2010-02881 (IP-EWG)

Eng. Francisco E. Lopez  
Autoridad de Energía Eléctrica  
P.O. Box 364267  
San Juan 00936-4267

Dear Mr. Lopez:

Reference is made to your Department of the Army (DA) permit application, submitted through Joint Permit Application Number 1059, of September 20, 2010 for the Via Verde Natural Gas Pipeline (NGPL) project. The proposal is to construct and install a 24-inch diameter steel NGPL for approximately 92 miles long with a construction right-of way (ROW) of 150 feet wide, that transverses the island of Puerto Rico from the Eco Eléctrica Liquid Natural Gas Terminal in municipality of Guayanilla, to the Cambalache Termoeléctrica electric power plant in the municipality of Arecibo, then east to the Palo Seco facility in the municipalities of Toa Baja and San Juan. The pipeline route will encompass both private and public lands which include commercial, industrial, and agricultural land uses. The total project area is about 1,672 acres that will impact 235 river and wetland crossings, for a total of 369 acres of jurisdictional Waters of the United States. Please refer to case number SAJ-2010-02881 (IP-EWG) in future correspondence regarding this project.

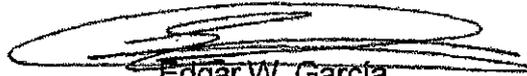
The Corps acknowledge receipt of your letters dated January 28, 2011 and February 28, 2011, and understands that the outstanding information requested in our letter dated 22 December 2010 will be provided as soon as it becomes available.

Also, in accordance with 33 CFR 325.2(3), we are enclosing a data compact disk that contains additional letters received in response to the Public Notice issued for the above referenced permit application. Please review and provide a detailed written response to each of the issues raised in said letters.

You are cautioned that any work performed below the mean high waterline or ordinary high waterline in waters of the United States, or the discharge of dredged or fill material into adjacent wetlands, without a DA permit could be subject to enforcement action. Receipt of a permit or endorsement from other agency does not obviate the requirement for obtaining a DA permit for the work described above prior to commencing work.

If you have any questions or comments regarding this case, you may contact Mr. Edgar W. García, at telephone numbers 729-6905/6944 ext. 3059, or at the letterhead address.

Sincerely,

A handwritten signature in black ink, appearing to read 'Edgar W. Garcia', is written over a horizontal line.

Edgar W. García  
Antilles Regulatory Section

Copy to:  
Mr. Larry Evans  
BC Peabody Consulting, P.A.  
509 Guisando de Avila, Suite 100  
Tampa, FL 33613



# US Army Corps of Engineers Jacksonville District

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## Regulatory Division - News & Announcements

▪ Reissuance of Nationwide Permits and Regional Conditions — Request for Comments

▪ Via Verde permit application — Project Status:

- U.S. Army Corps of Engineers continues thorough review of Via Verde natural gas line permit application (4 Apr 2011)
- On 1 February 2011, the US Army Corps of Engineers (USACE) held the first of a series of interagency meetings to address concerns and issues resulting from this proposal. The meeting included Puerto Rico Electric Power Authority (PREPA) personnel, project consultants, U.S. Fish and Wildlife Service (USFWS), State Historic Preservation Office (SHPO), Federal Highway Administration (FHWA), National Oceanographic Atmospheric Agency (NOAA) and the Environmental Protection Agency (EPA). PREPA provided a status of actions being taken to fulfill federal regulatory requirements. Summary discussion points follows:
  - Protocol and schedule for field work were provided by PREPA on 31 Jan.
  - Field surveys for 32 FWS threatened and endangered species and archeological sites are ongoing. Essential Fish Habitat surveys to begin by 22 February. NOAA Threatened & Endangered Species not yet addressed
  - FWHA information required for modification of Right of Way (ROW) agreement received on 31 Jan.
- Response to USACE letter of 22 December 2010 was received on 31 Jan.
  - Response received shows information is incomplete. Applicant is aware and will be submitting required information.

- USACE clarifies position on Via Verde permit application
- Reorganization of the Jacksonville District, North Permits Branch
- Corps Soliciting Comments on the draft National Wetland Plant List
- Final Atlantic and Gulf Coast Plain Regional Supplement to the 1987 Wetland Delineation Manual
- Court Approves DOJ & Corps settlement with Century Homebuilders
- Regulatory Division Launches The New Video Library
- Regional General Permit SAJ-103
- Regulatory Division Opens Dialogue on Phosphate Mining
- Draft Environmental Impact Statement for Progress Energy Florida – Levy Nuclear Plant Released for Public Review and Comment

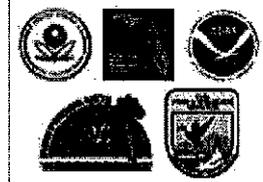
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CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION  
CENTRO EUROPA BUILDING, SUITE 417  
1492 PONCE DE LEON AVENUE, STOP 22  
SAN JUAN, PR 00907-4127

APR 01 2011

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

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

Dear Mr. Castillo:

This is in further reference to the Vía 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 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 now believe 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 independent 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.

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, EPA and all

natural resource 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 recolonization 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 independent qualified personnel during drilling operations to closely monitor the process and stop work if any issues or abnormalities are detected.

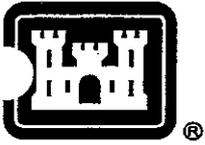
If you have any questions or require additional information on this matter, please contact Ms. Teresita Rodríguez, Chief of the Multimedia Permits and Compliance Branch (MPCB), at 787-977-5864 or Mr. José Soto, of the MPCB, at 787-977-5829.

Sincerely,



Carl-Axel P. Soderberg  
Director

CC: USFWS-Cabo Rojo, PR  
DNER- San Juan, PR  
PRPB- San Juan, PR  
PREQB- San Juan, PR



# NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS | Jacksonville District

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Release No.: NR 11-024

For Release: April 4, 2011

Contact: Nancy J. Sticht

Phone: (904) 232-1667 (904) 334-1054

Email: Nancy.J.Sticht@usace.army.mil

FAX: (904) 232-2237

**FOR IMMEDIATE RELEASE**

## U.S. Army Corps of Engineers continues thorough review of Via Verde natural gas line permit application

JACKSONVILLE, Fla. – The U.S. Army Corps of Engineers, Jacksonville District is continuing its thorough review of the Puerto Rico Electric Power Authority's (PREPA) application for a Department of the Army permit to construct and install a 92-mile natural gas pipeline that traverses the island of Puerto Rico. The Corps is in ongoing consultation with resource agencies and in December 2010 requested additional information from the permit applicant, including information pertaining to the Alternatives Analysis.

PREPA is conducting endangered species and archeological resource surveys. They will provide a draft Biological Assessment and Phase I Archeological Study that, once submitted, will enable the Corps to initiate consultation with the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration's Fisheries Service, Protected Resource Division and the State Historic Preservation Office. The Corps met with the Federal Highway Administration March 30, to discuss requirements of the National Environmental Policy Act (NEPA) pertaining to the 22 miles of highway the proposed pipeline would traverse. Corps officials also met with the Pipeline and Hazardous Materials Safety Administration (PHMSA) and Commonwealth Public Safety Commission (PSC) March 31, to coordinate efforts in the federal review process and clarify the roles, functions and responsibilities of the PHMSA and PSC in the Via Verde project.

After all information is provided, the Corps will evaluate the application in coordination with resource agencies and make a final determination on the permit.

Updates will be posted to the Jacksonville District website throughout the review process. For more information, please visit: [www.saj.usace.army.mil](http://www.saj.usace.army.mil), click on Regulatory Division, then Actions of Interest and Via Verde natural gas pipeline.

###

Page 1 of 1

US ARMY CORPS OF ENGINEERS | Jacksonville District

P.O. Box 4970 • Jacksonville, FL 32232-0019

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