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**Date:** 12/26/2013 12:29 PM  
**Subject:** Response to Comments  
**Attachments:** 17892628\_2.docx

Stacey:

Per our discussion, please find our response to comments.

Please call if you would like to discuss anything.

Best regards,

Pete

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## **1. EIS**

An EIS is not required by the CMP nor is one necessary for this project. The CMP does not require the completion of a stand-alone EIS and, in any case, the studies submitted with the project applications fully assess potential environmental impacts of the project. After pre-application meetings with staff of the Pinelands Commission, the New Jersey Department of Environmental Protection, and the U.S. Army Corps of Engineers, SJG coordinated with the staff of all these agencies to identify the scope of threatened and endangered species investigations, the scope of cultural/historical resource investigations and those resources that could be impacted by the subject project. Multiple environmental impact assessments were submitted to the NJDEP, Pinelands Commission and the US Army Corps of Engineers. These environmental impact assessments addressed the concerns of the NJDEP under the Coastal Area Facilities Review Act (including all applicable Coastal Rules), the Waterfront Development Act, Flood Hazard Area Protection Act, the Freshwater Wetlands Protection Act; the Pinelands Commission under the Comprehensive Management Plan; and the US Army Corps of Engineers under the applicable sections of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

Each of the environmental impact assessment documents were sent to all three agencies for their review as agreed to during the pre-application process. These documents all include assessment of potential environmental impacts within the Pinelands.

The NJDEP and the US Army Corps of Engineers reviewed the subject application and concluded that the project will not have significant environmental impacts as evidence by the permits issued. The Pinelands Commission staff reviewed the application, including all the environmental impact assessment documents and stated on the record at the August 28, 2013 and December 4, 2013, Policy & Implementation Committee meetings that the project will not have significant environmental impacts. Based on the extensive environmental review performed by the independent experts working for all these agencies it is clear that no additional environmental impact assessments are required for Pinelands to prepare the MOA.

## **2. Groundwater Quality Impacts**

The proposed project will not impact groundwater quality. The potential for a buried utility line to drain or redirect ground water assumes that the backfill material is more porous than the surrounding soil which, without mitigative measures, could impact on groundwater flow close (within 5 feet) to the surface. With that in mind, the proposed gas pipeline project will utilize existing soil to backfill the pipe trench. By utilizing the existing soil for backfill, the porosity of the material in the trench will not be significantly different than the surrounding soil. This construction technique will not result in a diversion of groundwater flow, will not decrease the quantity of water recharging the groundwater aquifer or the river ecosystems and will not degrade the water quality.

## **3. Surface Water Quality Impacts**

The proposed project will not impact upon surface water quality. Specific measures will be implemented to reduce or eliminate the potential for increased suspended solids in the waterways

due to erosion. During its review of the subject project specific attention was directed to the review of the plans to be sure protective measures would be in place to reduce the potential for erosion and increased suspended solids in the waterways due to erosion. Although the pipeline project will cross 16 waterways the potential for water quality impacts associated with erosion are greatly reduced since all of these crossings will be accomplished by horizontal directional drilling or jack & bore. These construction techniques eliminate the far greater potential for water quality impacts associated with open cut crossings of waterways.

In addition, the project must comply with County Soil Conservation District standards, which includes review of the construction plans by those districts. If approved, the construction process will be overseen by South Jersey Gas inspectors, an environmental inspector and County Soil Conservation District inspectors to insure that soil conservation measures installed and remain effective until the construction area is stabilized to the satisfaction of Soil Conservation Districts.

#### **4. Fire Danger in the Pinelands.**

The proposed project will not increase the risk of forest fires with the Pinelands. As shown by infrastructure mapping provided by South Jersey Gas as part of this application, there are hundreds of miles of natural gas infrastructure located throughout the Pinelands with no reported fire incidents. The New Jersey Forest Fire Service has collected statistics on the cause of forest fires as outlined below:

*In New Jersey, 99% of all forest fires are set by people. Causes of these fires include:*

- 1. Arson - 52.9%: These fires are set willfully and maliciously for a variety of reasons including spite, revenge, personal gratification, and economic gain. The number of fires caused by arson has risen dramatically in recent years.*
- 2. Child-related accidents - 14.6%: Children playing with matches continues to be a major cause of forest fires. These fires occur mostly around housing developments.*
- 3. Smoking-related fires - 11.9%: Many fires are caused by matches, cigarettes, cigars, and pipe heels that are carelessly discarded before they are completely extinguished.*
- 4. Miscellaneous causes - 9.3%: Fires which cannot be grouped into any other categories are included in this group. Examples of these are a building fire that spreads to an adjoining woodland, or a forest fire resulting from an automobile accident.*
- 5. Campfires (recreation) - 3.5%: Fires of this type occur for one of two reasons:" (1) they are located next to or on flammable material or they are haphazardly constructed or (2) they are left untended while still burning.*

6. *Equipment use - 2.8%: Fires of this type result from the careless operation and poor maintenance of equipment. Sparks from the running of chain saws, cutting torches, and earth moving equipment may cause forest fires.*

7 *Debris burning (leaves, trash) - 1.6%: The uncontrolled expansion of debris fires to adjoining areas may cause major fires. Debris burning is illegal, except under special conditions. Fires resulting from debris burning have been greatly reduced since the state banned open burning in 1972.*

8. *Railroad - 0.8%: These fires are caused by various railroad operations including improperly maintained right-of-way or spark arrestors and hot brake shoe particles.*

9. *Lightning - 0.4%: These are the only fires that are naturally occurring and non-preventable. This cause is responsible for less than 10 fires a year.*

*This information was obtained from the New Jersey Forest Fire Service.*

Based on the information collected by the New Jersey Forest Fire Service, the fact that this pipeline will be state-of-the-art construction and monitored during operation, the proposed natural gas pipeline does not represent a significant increase in fire danger.

## **5. Pipeline Emissions**

The pipeline will not have a significant impact on air quality along the right-of-way, ROW buffer, access roads, or surrounding landscape. The referenced study by Howarth *et.al.*, *Methane and the greenhouse-gas footprint of natural gas from shale formations*, Climatic Change (2011) 106:679-690, primarily focuses on methane emissions from shale production, which is not relevant to the SJG gas pipeline. However, the study concludes that a “conservative estimate” of leakage of gas during transmission, storage, and distribution is between 1.4% to 3.6%. The study acknowledges that “lost and unaccounted for gas”—the difference between the measured volume of gas at the wellhead and that actually purchased and used by consumers—is another way to estimate leakage system-wide. In SJG’s “Annual Report for Calendar Year 2012 Gas Distribution System”, submitted to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, the company’s percent of unaccounted for gas for year ending June 30<sup>th</sup> was just 0.8%. Moreover, this is a system wide statistic of all pipe in SJG’s transmission and distribution systems, including pipe installed from the early 1900’s through 2012. The Company is in the process of replacing its aging infrastructure that is more prone to corrosion and leakage; this includes cast iron pipe installed with bell and spigot joints in the early part of the 20<sup>th</sup> century, and bare and unprotected steel pipe installed in the middle part of the 20<sup>th</sup> century.

Modern transmission pipelines such as the one proposed by SJG experience minimal fugitive losses of methane. The latest data from the U.S. Environmental Protection Agency finds that

fugitive emissions from natural gas transmission pipelines (not including compressor stations) comprises just 0.3 percent of all fugitive emissions from natural gas transmission.<sup>1</sup> This means that fugitive emissions from natural gas transmission pipelines comprise just 0.006 - 0.015 percent of all fugitive losses from transmission pipelines, which themselves are a fraction of all transmission and distribution losses. Of note, the SJG pipeline will have no compressor station facilities (the primary source of fugitive pipeline losses) and only three connections, one at its source in Maurice River Township; another at the interconnect with the one-way feed to Cape May pipeline in Tuckahoe; and a third at the B.L. England Power Plant in Beesely's Point. The state-of-the-art pipeline is designed and will be constructed to be virtually leak free. The pipeline will be constructed to the highest industry standards, including a polyethylene coating and state-of-the-art cathodic protection systems to protect it from corrosion. The pipeline will be patrolled on a monthly basis, to assure no activities in the vicinity of the pipeline occur that could compromise the integrity of the pipeline.

The use of mercaptan odorant in the pipeline gas also is not an issue. Pipeline safety regulations of the N.J. Board of Public Utilities (N.J.A.C. §14:7-1.16) and the U.S. Department of Transportation (49 C.F.R. §192.625) require all natural gas distribution companies to inject an odor compound into their natural gas as a safety measure to warn of gas leaks so they can be repaired quickly. Olfactory detection of natural gas is essential because natural gas has virtually no odor when it comes from the production areas. Mercaptan injection rates are in the order of 20 parts per million. The odorant is absorbed by the natural gas and has no effect on its properties for burning. It is harmlessly burned up with the gas. In the event of a gas leak, this concentration becomes much lower as it mixes with air and does not pose a risk.

## **6. T&E Species Impacts**

The pipeline will have no impact on protected species during the construction or subsequent operation, since it will be beneath the roadway pavement or the existing cleared right-of-way. In the pre-application phase of this project Pinelands Commission staff identified those species that might be impacted by the project and required the SJG's threatened and endangered species consultant to investigate threatened and endangered species along the route. Based on the results of those investigations additional protective measures were added to the project plans. Also, the Pinelands Commission staff is requiring that a Pinelands Commission-approved biologist be present during construction in areas of suitable habitat to ensure that threatened and endangered species are not impacted during construction.

## **7. Sea Level Rise**

RC Cape May has advised that it has no plans to provide new flood prevention measures and that operation of the BL England plant has never been adversely impacted by flooding since its construction in the 1960s. RC Cape May reports that during Superstorm Sandy, and all previous storms in the last several decades, PJM called upon the BL England plant to operate to maintain the reliability of the electric transmission grid, and that the plant operated during these storm events despite flooding. Also, the repowering project was subject to the Coastal Area Facility

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<sup>1</sup> U.S. EPA, *United States Greenhouse Gas Inventory 2013, Annex 3.5 Methodology for Estimated CH<sub>4</sub> Emissions from Natural Gas Systems, Table A-126: 2011 Data and CH<sub>4</sub> Emissions (Mg) for Natural Gas Transmission.*

Review Act, N.J.S.A. 13:19-1 et seq. ("CAFRA"), which requires NJDEP to review the impact of development in a coastal area, including the impacts of flooding. NJDEP issued a CAFRA permit to RC Cape May Holdings LLC in 2013 for the repowering project.

## **8. Employment Benefits for New Jersey Residents**

South Jersey Gas strives to employ New Jersey workers in connection with its construction projects. For example, during years 2009 through 2013, the company conducted an accelerated program to replace the aging portions of its gas distribution infrastructure. This program invested approximately \$230,000,000 and created approximately 590 jobs. The job creation number is on an annualized basis. That is, labor hours totaling to an equivalent of 590 full time jobs for one year were worked. Ten different contractor companies participated in this work. All but one of the contractors has local operations offices within the State of New Jersey. The contractors employ primarily New Jersey residents.

The Company does not intend to dictate the source of workers employed by selected contractors awarded this work. However, out-of-state contractors typically hire skilled and unskilled labor from the local union halls. It is expected that contractors be using local companies for paving, excavation, materials supply, food, and lodging. By State law, labor on this project will be paid in accordance with prevailing wage requirements.

## **9. Cost of Alternative Routes**

Comparative costs of the various pipeline route alternatives were assessed by SJG during preliminary planning for the project. Cost was a secondary factor in the decision-making process with the primary factor being reliability, environmental impact, community impact, and constructability. The selected Route A was not the least-expensive alternative but was chosen because it had the least environmental and community impact. Route B with a reliability extension to the south of the BL England plant to provide limited redundancy to the Cape May feed was approximately \$75 million but was rejected due to the significant environmental and community impacts and constructability concerns. The cost of Route C was not estimated once it became evident that it would result in significant environmental impacts due to the need to clear 6.5 miles of Pinelands forest area. However, given that Route C was approximately 9 miles longer than the preferred Route A, the estimated cost of Route C would be approximately \$120 million (assuming a similar cost-per-mile).

## **10. Presence of Hydraulic Fracturing Contaminants**

Natural gas supplied from unconventional wells in the Marcellus Shale region enters into the interstate transmission systems and is mixed with natural gas from conventional production areas, with generally no ability to trace the source of the methane molecules. The natural gas industry has not identified concentrations of radon or benzene in natural gas extracted from unconventional wells beyond trace levels. Neither the U.S. Environmental Protection Agency or any State environmental agency has determined that the trace levels of radon or benzene in unconventional natural gas poses a threat to human health or the environment. Benzene is primarily stripped out of the natural gas stream in the production areas for its commercial value in other industries.

SJG has no specific data on radon/radium or benzene. Based on monthly chromatograph reports provided to SJG by its two pipeline suppliers, the typical gas that SJG receives and delivers to its customers has the following content:

- 90 - 95% methane
- 1% carbon dioxide
- 0.2 - 2% nitrogen
- 3 - 6% butanes/pentanes/hexanes
- < 0.1% unspecified heavy hydrocarbons (C6+).

Gas content is regulated by the FERC through an approved Tariff issued to each Company. For example, following is the Williams-Transco's Tariff as of July 2010:

- Heating Value >980, <1100 BTU/cf
- Free from objectionable odors/solids/liquids that could impact merchantability
- < 0.3 grains/100cf of hydrogen sulphide
- < 20 grains/100cf of total sulphur
- Sufficient odorant
- < 7 pounds of water vapor per million cf