**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION III**
**1650 Arch Street**
**Philadelphia, Pennsylvania 19103-2029**

**June 18, 2008**

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

Re: Draft Environmental Impact Statement (DEIS) for the Sparrows Point LNG Terminal and Pipeline Project (Reference Docket Nos. CP07-62-000, CP07-63-000, CP07-64-000, and CP07-65-000), CEQ # 20080162

Dear Ms. Bose:

In accordance with Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), Section 309 of the Clean Air Act, 42 U.S.C. § 7609, and the Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500-1508, the United States Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Sparrows Point Liquefied Natural Gas (LNG) Terminal and Pipeline Project.

The demand for energy in the U.S. continues to grow. According to the Energy Information Administration energy consumption is predicted to increase nationally at an average of 1.1 percent per year until 2030. Natural gas is the cleanest of all the fossil fuels. Its use is an important source of energy for reducing pollution resulting in a significant reduction in emissions of criteria air pollutants when compared with other fossil fuels and producing virtually no ash. The Sparrows Point LNG Terminal and Pipeline Project is a response to the country's growing need for a cleaner energy source.

The proposed Sparrows Point Facility would involve the construction of a 1.5 billion cubic feet per day LNG terminal and the construction of an 88 mile, 30-inch-diameter pipeline from Sparrows Point, Maryland to Eagle, Pennsylvania. The proposed terminal is to be located on the existing Sparrows Point Industrial Complex at Sparrows Point, Maryland. The project would also require the dredging of a 44 feet deep and 650 feet wide channel (approximately 3.7 million cubic yards of dredge material) to allow access to a dual berth terminal. AES anticipates that the terminal would handle 2 to 3 ships per week upon completion in 2010.

EPA is concerned that the DEIS does not contain sufficient information to fully assess the potential environmental impacts of the proposed action. A number of these information gaps have been specifically identified in the DEIS and the Federal Energy Regulatory Commission (FERC), the lead Agency, has proposed "mitigation measures"

to address those data gaps. (See Section 5.2 FERC Staff's Recommended Mitigation of the DEIS). The mitigation measures would be included as specific conditions of the FERC Order should the Commission authorize the project. Some of these mitigation measures would require the applicant to submit the necessary information prior to the end of the DEIS comment period. We believe that the information required by the mitigation measures is relevant to the Commission's decision regarding the application and is needed to fully assess the environmental impact of this project. EPA recommends that this information be included in the Final EIS. We also recommend that the Final EIS provide additional information to support FERC's determination that the Mittal Steel alternative terminal site location does not offer an environmental advantage over the preferred alternative.

Aside from the lack of information discussed above, EPA still has environmental concerns regarding the dredging aspects of this project. As reported in the DEIS, approximately 3.7 million cubic yards of contaminated dredged material will have to be removed from the Patapsco River. We are concerned over the potential adverse water quality impacts that would occur during the dredging operation, as well as impacts from the disposal operations. We are especially concerned that the DEIS does not identify a market for the dredged material or facilities willing to accept it, nor does the DEIS explain the on-site treatment process that will treat the dredged material to make it acceptable for beneficial reuse. These deficiencies should also be corrected in the Final EIS.

Under EPA's system for rating Environmental Impact Statements we are rating the environmental impacts associated with this project as Environmental Concerns (EC) as outlined above and further supported in the attached comments. Due to the lack of information available in the DEIS, we are rating the adequacy of the document as a "2", insufficient information. The rating system provides a basis upon which EPA makes recommendations to the lead agency for improving the DEIS. A summary of the rating criteria is enclosed.

EPA appreciates the opportunity to submit comments on the DEIS for the Sparrows Point project and would be pleased to discuss any of the comments and suggestions presented in this letter and attachments. My staff is ready to continue to participate on the cooperating agency team to provide additional input, as necessary, to assist FERC in the completion of the NEPA analysis for the project. Please feel free to contact me or Kevin Magerr at 215 814 5724, if you wish to discuss these comments further.

Sincerely,

William J. Hoffman, Associate Director
Office of Environmental Programs

Enclosure

**Attachment A: Detailed Comments on the Sparrows Point LNG Terminal and Pipeline Project (CEQ #20080162)**

The U.S. Environmental Protection Agency, Region III, is unable to fully assess the referenced environmental impacts based upon the information provided in the above noted DEIS. We recommend that the information discussed below be included in the Final EIS.

## 1. Dredging Issues

### (a) Material Management and Handling

In order for LNG ships to berth at the proposed Sparrows Point Terminal, the existing approach channel will need to be widened and deepened and a turning basin will need to be created. The DEIS estimated that 3.7 million cubic yards of contaminated dredged material will have to be removed from the Patapsco River.

The applicant (AES) has proposed to use an innovative reuse method of handling dredged material placement. AES would achieve reuse by processing the dredged material at an onsite Dredge Material Recycling Facility (DMRF). AES anticipates that approximately 5,500 tons of processed dredged material (PDM) will be shipped off-site daily. The duration of the PDM operation is expected to take two years. While AES has identified potential uses for the PDM in the DEIS, it has not identified a market for PDM or any facilities willing to accept the PDM (2-25, 3.28 appendix D). Further, the DEIS does not explain the DMRF treatment process that would be used to treat the contaminated dredged material for reuse or the potential environmental impacts from the treatment process (materials used by or waste generated from the treatment process) or the environmental impacts from the construction of the DMRF.

While EPA supports innovative reuse of dredged material, an evaluation is difficult due to lack of information about the treatment process. The Final EIS should include sufficient information to describe the PDM treatment process, and should indicate where and how the PDM will be used. In addition, the by-products from the DMRF should also be quantified and properly disposed. We recommend that the Dredged Material Placement Plan referenced as proposed mitigation measure # 43 and described on page 4-55 be included in the Final EIS (FEIS) as well as the impacts from the facility.

### (b) Storm Water Permitting - Construction of the Dredged Material Recycling Facility (DMRF)

Because the DMRF would be constructed where the soil potentially could be contaminated, EPA recommends an individual NPDES permit for the storm water discharge associated with construction activity be processed rather than a general permit.

**(c) Pugmill processing system**

The first step in the processing system is to screen out large oversized material. The dredging management plan does not indicate where this oversized material will be ultimately disposed. We recommend that the FEIS provide detailed information regarding the disposal of this oversized material.

**(d) Dredging Method**

In the DEIS, FERC requests comments from the agencies on the appropriate dredging method that should be used for the approach channel and turning basin for the proposed terminal.

EPA recommends that the dredging be conducted using an environmental bucket, as described in the DEIS. The environmental bucket would be equipped with vents, gasket, cover, and an alarm system to avoid overfilling. We recommend that the operational procedures include lowering the bucket to target depth at a control rate to avoid overfilling, closing the bucket (alarm confirms overlap closure), raising the bucket to a water level just below the vents to allow water drainage, moving the partially submerged bucket to a defined location near the receiving container, lifting the bucket from the water and swinging it over the receiving container, opening the bucket to discharge sediment into the work scow.

**(e) Maintenance Dredging**

The DEIS reports that the approach channel and turning basin would require approximately 500,000 cubic yards of maintenance dredging every six years (Pg 4-55). Similar to the initial approach channel and turning basin dredging, the DEIS does not detail how this material will be treated and managed. EPA recommends that additional information be provided in the FEIS on the treatment and management of this material.

**2. Wetlands**

Based on the DEIS, 16.7 miles, or approximately 20% of the pipeline length, have not been field surveyed to delineate wetlands due to access issues (Pg 4-65). Based on the wetlands that have been surveyed, 19.43 acres would be temporarily impacted and 4.46 acres of forested wetlands would be permanently impacted. (Pg 4-70). We recommend that the FEIS include a discussion of the wetlands impacts for the entire pipeline length and a proposed conceptual wetland mitigation plan.

**3. Nontidal Wetlands of Special State Concern (NTWSSC)**

As stated in the DEIS, Maryland defines Nontidal Wetlands of Special State Concern (NTWSSC) as wetlands with rare, threatened, or endangered species or unique habitat. The Maryland Department of the Environment provides special protection measures for these valued resources. The proposed pipeline would cross a NTWSSC at MP 22.23 on the north Bank of

Little Gunpowder Falls. Another NTWSSC is adjacent to (within 130 feet) of the pipeline right-of way at MP 46.45 to 46.63. We recommend that the FEIS evaluate potential impacts of the pipeline construction and operation on these NTWSSC and include any appropriate protective measures to avoid, minimize, and mitigate impacts.

**4. Potential Soil Contamination**

The DEIS reports that there is evidence of soil contamination at the proposed terminal and along the pipeline route (ES-3, Pg 4-13). To minimize the potential impacts of these soils, AES has prepared a Potentially-Contaminated Soil Management Plan. Part of the purpose of this plan is to address issues necessary to protect the workers at the site and the public from construction involving potentially contaminated soils. We recommend that FERC include the Potentially-Contaminated Soil Management Plan in the FEIS.

**5. Environmental Construction Plan (ECP)**

The ECP is intended to assist the applicant by identifying baseline mitigation measures for minimizing the extent and duration of the project-related disturbance for erosion, wetlands, and waterbodies. The ECP is referenced numerous times within the DEIS; we recommend that the ECP be included in the FEIS.

**6. Waterbody Crossing**

The proposed pipeline route would cross 177 waterbodies in Maryland and Pennsylvania (Pg 5-4). Mid-Atlantic Express LLC proposes to cross the Susquehanna and Back Rivers by Horizontal Directional Drilling (HDD). Because of their ecologically sensitive nature, EPA also recommends the use of HDD for the Deer Creek, Gun Powder Falls, and Octoraro Creek crossings.

**7. Aquatic Resource Mitigation Plan (ARMP)**

FERC has recommended that an ARMP be developed to minimize impacts to aquatic resources associated with the channel dredging and terminal and pipeline construction. We recommend that the ARMP be included in the FEIS.

**8. Air Quality**

**(a) General Conformity**

We note that the DEIS does not include information related to general conformity, other than general applicability. Without further detail on the emissions inventory and the emissions from the activities subject to general conformity, or with potential mitigation measures necessary to achieve conformity, it is difficult to comment on conformity at this time.

### (b) $PM_{2.5}$ Compliance

We recommend that the FEIS include a discussion on how the project will comply with EPA's May 16, 2008, final rule governing the implementation of the New Source Review (NSR) program for particulate matter less than 2.5 micrometers in diameter (PM2.5), 73 Fed. Reg. 28321, as well as the Agency's April 25, 2007 PM2.5 final non-NSR provisions of the PM2.5 NAAQS implementation rule, 40 CFR Part 51, Subpart Z.

### (c) Fugitive Dust Control Plan

We recommend that the Fugitive Dust Control Plan be reviewed by MDE/EPA as part of any construction permit application.

## 9. Threatened & Endangered Species

The bog turtle is a federally-listed threatened species, a state-listed threatened species in Maryland, and a state-listed endangered species in Pennsylvania. In Pennsylvania, bog turtles are most commonly found in the Southeastern part of the state. Portions of the proposed pipeline and associated aboveground facilities in both Maryland and Pennsylvania would be located within the range of bog turtle habitat and the proposed pipeline route would cross drainage areas containing known bog turtle habitat (Page 4-128 of the DEIS).

The DEIS reported that a Phase I and II bog turtle survey was conducted at potential sites along the proposed pipeline alignment pursuant to United States Fish and Wildlife Service, Pennsylvania Fish and Boat Commission and the Maryland Department of Natural Resources requirements. It was also reported in the DEIS that two bog turtle sightings occurred at two locations. Three additional sites identified as potential bog turtle habitat were not surveyed because of access issues. While the information regarding the bog turtle was reported in the DEIS, Mid-Atlantic Express has not submitted a final report. EPA recommends that the assessment be completed before project pipeline design is finalized.

## 10. Major Permits, Approvals, and Consultations for the Sparrows Point Project (Table 1.3-1)

The table should include: State (Maryland & Pennsylvania), and Federal CWA Section 402 NPDES (Storm Water and Wastewater) Permitting. We also recommend that the FEIS include a discussion on the applicability of the Resource Conservation & Recovery Act (RCRA) as it may apply to the storage and processing of contaminated dredged material.

## 11. Additional Temporary Workplaces (ATW)

We recommend that ATWs associated with pipeline work be sited in a way to avoid sensitive areas related to waterbody crossings.

## 12. AES Environmental Inspectors and Environmental Inspectors working under the Third Party Environmental Compliance Monitoring and Reporting Program

EPA recommends that the AES environmental inspectors and environmental inspectors working under the Third Party Environmental Compliance Monitoring and Reporting Program be trained in erosion and sediment control as well as wetland mitigation and monitoring.

## 13. Environmental Justice Analysis

We recommend that the FEIS provide additional analysis of potential environmental justice concerns, including a comprehensive review of the areas and communities that may be adversely impacted by the proposed project. We recommend that the additional analysis re-evaluate the DEIS's identification and assessment of areas with potential environmental justice concerns that may be impacted by the project. For example, while one community, Turner Station, is identified in the DEIS, other communities, such as Dundalk and Edgemere, may also be considered to be communities with potential environmental justice concerns. We also recommend that the FEIS use more recent census data (a number of more recent acceptable data updates and estimates are available through the census and the State of Maryland).

We also recommend that the FEIS clarify the extent to which communities of potential environmental justice concern may be adjacent to the 88-mile length of the proposed pipeline. Based on the brief information provided in the DEIS, it is not clear if consideration was given to any communities adjacent to the proposed pipeline.

We also recommend that the FEIS more clearly outline the steps that were taken to ensure comprehensive involvement of the at-risk communities in the project area. It is not clear whether any meetings were held in the community that was identified as the closest neighbor to the project (i.e., Turner Station) or whether project documents and information were disseminated to community leaders. We also recommend that the FEIS more clearly outline why public comments reported that the proposed project would "discriminate" against the African American community at Turner Station (pg. 4-184) and whether there are any appropriate and relevant mitigation measures to be considered.

## 14. Marine Vessel Emissions

It is estimated that the terminal will receive between 120-150 LNG vessels annually. These delivery vessels may emit large amounts of fine particle pollution. Studies of air emissions produced by some of the large ports in the U.S. indicate that the combined emissions from the vessels, cargo handling equipment, and transport vehicles associated with port operations can equal or exceed the air emissions from a mid-sized power plant or petroleum refinery.

EPA suggests that FERC develop strategies to reduce emissions from the LNG delivery vessels and other marine engines (e.g., tugboats) associated with the operation of this proposed facility. Specifically, EPA suggests that FERC consider the following:

- The feasibility of limiting delivery vessels to significantly cleaner fuels (e.g., lower sulfur fuels and/or natural gas) when in transit next to land. We understand that LNG carriers are powered with steam turbines that can be fed from boilers fired by "boil-off" gas, as well as with heavy fuel oil. Since the international sulfur limit for fuel oil used in ships is 45,000 ppm, this fuel oil can emit large amounts of particle pollution when used. Using cleaner fuels during local transit would help reduce community exposure to particle emissions from ships.
- Providing electric power for ships berthed at the shipping terminal so the ships will not run their boilers or diesel engines while docked. This practice is already used in other regions of the country.
- Creating an "eco-speed" zone for the speed of the ships coming into port that is the optimal speed to reduce emissions. The California Air Resources Board and the Port of Los Angeles and the Port of Long Beach have successfully utilized this strategy. The Port of Seattle is also exploring this eco-speed strategy.
- The feasibility of retrofitting harbor craft such as tugboats to reduce emissions with engine retrofits designed to emit less pollution. New vessels purchased to support the LNG facility should be required to feature these retrofits and use cleaner fuels.

**15. Exotic and Invasive Species Control Plan**

The Exotic and Invasive Species Control Plan should at a minimum comply with the Presidential Executive Order 13112 of February 3, 1999. The plan should include the following exotic and invasive control measures: prevent introduction, detect and respond rapidly to control population, monitor population and provide for the restoration of native species.

**16. Onshore LNG Terminal Alternative Analysis**

FERC has determined that the preferred onshore LNG terminal would be the Sparrows Point site based the following siting criteria:

- Available property of appropriate size
- Distance to populated areas
- Amount of dredging required
- Distance to potential interconnections with interstate pipeline systems where sufficient take-away capacity exists to limit the need to expand existing systems
- Amount of wetlands to be impacted by the construction of the terminal or associated approach channel, turning basin, and docking areas
- Potential for impacts to threatened or endangered species or their critical habitat

FERC considered eight sites (including Sparrows Point) in their analysis. EPA recommends that the FEIS provide additional analysis regarding the environmental advantages/disadvantages of the Sparrows Point site as compared to the Mittal Steel site. Given the fact that the Sparrows Point site would require almost twice the amount of material to be dredged than the Mittal Steel

site, we believe use of the Sparrows Point may have more adverse environmental impacts. Moreover, we recommend that FERC re-evaluate the feasibility of AES acquiring the Mittal Steel site in light of recent developments regarding property ownership and provide that re-evaluation in the FEIS.

http://www.epa.gov/compliance/nepa/comments/ratings.html
Last updated on Thursday, December 27th, 2007.

National Environmental Policy Act (NEPA)



# Environmental Impact Statement (EIS) Rating System Criteria

EPA has developed a set of criteria for rating draft EISs. The rating system provides a basis upon which EPA makes recommendations to the lead agency for improving the draft EIS.

- Rating the Environmental Impact of the Action
- Rating the Adequacy of the Draft Environmental Impact Statement (EIS)

## RATING THE ENVIRONMENTAL IMPACT OF THE ACTION

- **LO (Lack of Objections)** The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.

- **EC (Environmental Concerns)** The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.

- **EO (Environmental Objections)** The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental Objections can include situations:

  1. *Where an action might violate or be inconsistent with achievement or maintenance of a national environmental standard;*

  2. *Where the Federal agency violates its own substantive environmental requirements that relate to EPA's areas of jurisdiction or expertise;*

  3. *Where there is a violation of an EPA policy declaration;*

  4. *Where there are no applicable standards or where applicable standards will not be violated but there is potential for significant environmental degradation that could be corrected by project modification or other feasible alternatives; or*

  5. *Where proceeding with the proposed action would set a precedent for future actions that collectively could result in significant environmental impacts.*

- **EU (Environmentally Unsatisfactory)** The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of environmentally objectionable impacts as defined above and one or more of the following conditions:

  1. *The potential violation of or inconsistency with a national environmental standard is substantive and/or will occur on a long-term basis;*

2. *There are no applicable standards but the severity, duration, or geographical scope of the impacts associated with the proposed action warrant special attention; or*

3. *The potential environmental impacts resulting from the proposed action are of national importance because of the threat to national environmental resources or to environmental policies.*

**RATING THE ADEQUACY OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)**

1. **(Adequate)** The draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

2. **(Insufficient Information)** The draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the final EIS.

3. **(Inadequate)** The draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA's belief that the draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS.