



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE
Governor

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June 23, 2009

Environmental Resources Branch,
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, Pennsylvania 19107-3390

Attn.: Minas M. Arabatzis

Re: Delaware River Main Stem and Channel Deepening Project
Environmental Assessment (April 2009)

Dear Mr. Arabatzis:

In response to the U.S. Army Corps of Engineers (ACOE) Public Notice dated April 6, 2009 (CENAP-PL-E-09-04), the State of New Jersey, Department of Environmental Protection ("NJDEP") provides the following comments on the Delaware River Main Stem and Channel Deepening Project Environmental Assessment (EA; April 2009). In addition, because the EA and ACOE Response to NJDEP's Comments did not address most of NJDEP's concerns, NJDEP continues to insist that the ACOE prepare an updated Environmental Impact Statement (EIS) and conduct supplemental coordination under the Coastal Zone Management Act before the project proceeds.

The stated purpose of the April 2009 EA (Section 1.1) "is to evaluate the impacts of changes to the Congressionally authorized project ... which are the result of Preconstruction, Engineering and Design (PED) Studies, as well as changes to the existing conditions in the project area from those described in the 1992 Environmental Impact Statement (EIS), 1997 Supplemental [EIS], and 1998 Record of Decision (ROD), and to consolidate in one document the results of post-SEIS monitoring and data collection efforts." However, significant changes in the ecosystem of the Delaware River Estuary since the 1998 ROD have not been fully evaluated by the ACOE in the EA or response to NJDEP's comments.

Many of the analyses and evaluations in the EA are based on outdated and inappropriate data and information, are not current, and do not reflect existing conditions in the Delaware River and Bay. Where the EA does cite and use more recent data and information, the document frequently provides only a superficial, cursory analysis of this data and information. In addition, the EA reaches many conclusions supposedly based on updated data and information, but these conclusions are not supported by the record or studies cited.

The EA does not adequately describe existing conditions in the project area, and its analyses and evaluations do not address the potential impacts of the Delaware River Main Stem and Channel Deepening Project. Further, the public and other State and federal agencies were not afforded any formal opportunity to comment on the April 2009 EA, and to receive formal responses from the ACOE on their comments. The April 2009 EA should be considered "draft" and subject to the formal public notice, review, and comment requirements of the National Environmental Policy Act. In addition, based on the scope of the proposed project, its potential to result in significant and long-term adverse impacts to the environment and natural resources of the Delaware River and Delaware Bay, and significant new information that the ACOE has not properly evaluated, a Supplemental Environmental Impact Statement (SEIS) is necessary for the Delaware River Main Stem and Channel Deepening Project.

The NJDEP's most significant concerns with the analyses and evaluations presented in the April 2009 EA are contained in this letter. Attachment 1 to this letter contains additional details on the EA deficiencies.

Characterization of the Sediments to be Dredged

The sediments to be dredged are predominantly located in channel side banks and bend widening areas and have not been adequately characterized. Sediments from the channel side banks and bend widening areas have the potential to be contaminated by toxic and bioaccumulative chemicals at levels of concern. Without an adequate characterization of these sediments, it is not possible to evaluate the potential impacts of the proposed dredging operations, the disposal of the dredged material into upland confined disposal facilities (CDFs), or the beneficial use of dredged material at sites in Delaware Bay.

(1) All sediments to be dredged must be sampled and tested consistent with the following documents:

U.S. Environmental Protection Agency and Department of the Army - U.S. Army Corps of Engineers 1998. Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual (Inland Testing Manual). EPA 823-B-98-004, February 1998. (Referred to herein as the 1998 USEPA/ACOE Inland Testing Manual)

U.S. Army Corps of Engineers 2003. Evaluation of Dredged Material Proposed for Disposal at Island, Nearshore, or Upland Confined Disposal Facilities – Testing Manual. Technical Report ERDC/EL TR-03-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS, January 2003. (Referred to herein as the 2003 USACOE Upland CDF Manual)

N.J. Department of Environmental Protection Dredging Task Force 1997. The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters. October 1997, 55 pp. + appendices. (Referred to herein as the 1997 NJDEP Dredging Manual)

The data and information obtained through the implementation of a comprehensive sediment sampling and analysis plan must then be evaluated in consideration of the applicable regulatory standards and guidelines to assess potential impacts to surface water quality, groundwater quality, the aquatic and terrestrial ecosystems, and public health.

(2) The EA does not contain any recent data for sediments from the channel side banks and bend widening areas to be dredged. Bulk Sediment Chemistry data for sediments from the existing navigation channel (including data from past channel maintenance dredging projects) are not reflective of sediments from the channel side banks and bend widening areas.

(3) The EA does not contain any recent any Effluent (Modified) Elutriate data for any of the sediments to be dredged and disposed of in upland CDFs. Thus, it is not possible to evaluate potential impacts to surface water quality resulting from effluent discharges during dredged material dewatering operations at the upland CDFs.

(4) The EA does not contain any precipitation-induced Surface Runoff data for the sediments to be dredged and disposed of in upland CDFs. Thus, it is not possible to evaluate potential long-term and ongoing impacts to surface water quality resulting from surface runoff discharges from the upland CDFs.

(5) The EA does not contain any appropriate leaching data for sediments to be dredged from the channel side banks and bend widening areas. Thus, it is not possible to evaluate potential impacts to groundwater quality resulting from the use of the upland CDFs for the disposal of the dredged material from the proposed project.

(6) The EA does not contain any recent bulk sediment chemistry data to evaluate the potential impacts to the terrestrial ecosystem and public health resulting from the use of the upland CDFs for the disposal of the dredged material from the proposed project.

(7) The ACOE has concluded in the April 2009 EA that the sediments to be dredged in the project area have been adequately characterized. However, this conclusion is based on the use of outdated sediment analyses, a limited number of sediment samples collected in locations restricted to the existing navigation channel proper, and a limited evaluation of sediment samples collected by NOAA as part of the injury assessment from the November 26, 2004 M/T Athos I Oil Spill.

- (a) Sediment data collected in support of the 1992 EIS and 1997 SEIS are old and not reflective of the existing sediments in the project area. Section 4.0 of the 1998 USEPA/USACE Inland Testing Manual (referenced above) states "the general recommendation of EPA and USACE is that the interval between reevaluating of Tier 1 data for ... projects not exceed three years or the dredging cycle, whichever is longest." The ACOE does not follow this recommendation, and is instead relying on sediment data that is over a decade old.
- (b) The 45 sediment core samples analyzed in 2003 and 2005 in support of navigation channel maintenance work were not collected along the full extent of the proposed 102-mile Delaware Deepening Project, and were not collected from locations in channel side banks and bend widening areas. In addition, the EA only compares this sediment data to the New Jersey "Residential Direct Contact criteria"; there is no indication that this data was compared to the recent Technical Requirements for Site Remediation (N.J.A.C. 7:26E) Appendix 1 - Soil Remediation Standards Tables. Elutriate, Effluent (Modified) Elutriate, leaching, and biological analyses of these sediments apparently were not conducted.
- (c) The EA cites conclusions made by a NOAA "Aquatic Injury Assessment" of the M/T Athos I Oil Spill to determine that "there is no basis to conclude that adverse environmental impacts from the Athos Oil Spill in 2004 will contribute to any adverse impact resulting from the Delaware River [Deepening Project]." This conclusion based on the NOAA injury assessment is unrelated to the potential impacts that could result from the dredging and dredged material disposal activities associated with construction of the Deepening project. In addition, the EA incorrectly states that the sediment sample results from post-Athos Oil Spill data set are similar to the results of the ACOE 2003 and 2005 sampling events. For further explanation please refer to Attachment #1.

(8) The dredged material from each specific "reach" of the project area that will be disposed of in each specific upland CDF has not been adequately characterized and evaluated as separate "dredged material management units" (USACOE Inland Testing Manual). Thus, it is not possible to evaluate the potential adverse impacts to surface water quality, groundwater quality, the aquatic and terrestrial ecosystems, and public health that could result from the dredging operations and the disposal of "reach specific" dredged material into each of the individual upland CDFs proposed to be used for this project. Likewise, it is not possible to evaluate the need for any operation and management activities during dredging operations and at each of the upland CDFs to minimize any potential adverse impacts.

(9) The EA does not evaluate the recent sediment quality data and information for the Delaware River provided by the NJDEP in the comments submitted to the ACOE in response to the December 17, 2008 Public Notice (CENAP-PL-E-09-01) for this project (see NJDEP January 14, 2009 comment letter).

The ACOE has performed only a limited characterization and evaluation of the quality of the existing sediments to be dredged since the last sampling program presented in the 1997 SEIS. Thus, it is not possible to evaluate the potential impacts of the proposed project on surface water quality, groundwater quality, the aquatic and

terrestrial ecosystems, and public health. Since the EA does not comply with the USEPA/ACOE 1998 Inland Testing Manual, the USACOE 2003 Upland CDF Manual, and 1997 NJDEP Dredging Manual referenced above, the ACOE must develop and implement a comprehensive sediment sampling and analysis plan in accordance with these manuals for the entire 102-mile Delaware River Main Stem and Channel Deepening Project area before the ACOE begins construction. Further, to comply with NEPA, the results of this sampling and analysis must be available for public review and comment before the project starts.

Air Quality

Section 176(c) of the Clean Air Act (CAA) requires a Federal Agency to conform to a State's Implementation Plan (SIP) for a non-attainment or maintenance area. Currently, the entire State of New Jersey is in non-attainment for the 8-hour Ozone National Ambient Air Quality Standard (NAAQS). In addition, Camden County and Gloucester County are in non-attainment for the 1997 and 2006 Fine Particulate (PM_{2.5}) Standards. Since the proposed project is one of the largest proposed Federal projects in New Jersey, and New Jersey is in non-attainment for ozone and for PM_{2.5} in Camden and Gloucester counties, it is critical that the ACOE identify the direct and indirect emissions from the entire proposed Project in the non-attainment area and mitigate these emissions as required by the Federal General Conformity regulations (40 CFR 93).

(1) Emissions from this proposed Project will impact counties in Delaware (Kent and New Castle) and Pennsylvania (Delaware and Philadelphia). These counties share a multi-state non-attainment area with New Jersey for ozone and fine particulate matter (PM_{2.5}). Kent, New Castle, Delaware and Philadelphia counties are part of the Philadelphia-Wilmington-Atlantic City 8-hour Ozone non-attainment area. In addition, New Castle, Delaware, and Philadelphia counties are part of the Philadelphia-Wilmington Fine Particulate (PM_{2.5}) non-attainment area. In light of the shared non-attainment areas, the ACOE must identify the direct and indirect emissions from this proposed project within these counties and mitigate these emissions as required by the Federal General Conformity regulations (40 CFR 93).

(2) In 2004, a General Conformity Analysis and Mitigation Report (Final Draft) was prepared for this Project. The report indicated that the Project emissions would be above the de minimis levels in 40 CFR 93.153(b) of the General Conformity regulation for Oxides of Nitrogen (NO_x) emissions for all years and Carbon Monoxide (CO) for year four. A draft Statement of Conformity was prepared for this Project but was never finalized.

Section 3.5 of the EA indicates that the ACOE is in the process of updating the emissions analysis and mitigation plan for this proposed project. 40 CFR 93.153(b) (Applicability) of the General Conformity regulations requires "a conformity determination for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a non-attainment or maintenance area caused by a Federal action would equal or exceed the rates in (b)(1) or (b)(2) of this section." Since the last Applicability Analysis was completed in 2004, the United States Environmental Protection Agency (USEPA) issued a Final Rule on July 17, 2006 amending the General Conformity regulation to include de minimis emissions levels for PM_{2.5} and its precursors (100 tons per year (tpy) Direct PM_{2.5}, and 100 (tpy) SO₂). The Applicability Analysis (updated emissions analysis) for this Project must include the direct and indirect emissions for the entire proposed project in the non-attainment area for pollutants listed in 40CFR 93.153(b)(1) and (b)(2) of the General Conformity regulation.

Before the project starts, the Applicability Analysis, Conformity Determination, Mitigation Plan and a Statement of Conformity (SOC) must be completed and public participation requirements must be met. An updated (final) mitigation plan also must be prepared and the reporting requirements of 40 CFR 93.155 and the public participation requirements of 40 CFR 93.156 in the General Conformity regulation must be followed. The new SOC is required for this proposed project by 40CFR 93.157 (Frequency of Conformity Determinations) of the

General Conformity regulation. At the present time, none of the required analyses have been completed, and the public process has not even begun.

Threatened and Endangered (T/E) Species

(1) The ACOE has initiated formal consultation under Section 7 of the Endangered Species Act (ESA) with the National Marine Fisheries Service (NMFS), but a Biological Opinion has not been issued by the NMFS to complete this consultation. Thus, at the present time, it is not possible to determine whether the proposed project as currently designed and the proposed dredging schedule can be implemented in a manner consistent with all of the recommendations that will be made in the Biological Opinion to protect the Shortnose Sturgeon, as well as all other identified T/E species that could be impacted by the proposed project. In addition, the NJDEP must be able to make future comments on potential impacts of the proposed project on State and federal T/E species after completion of the ESA Section 7 Biological Opinion by the NMFS.

(2) The bald eagle's official New Jersey status remains State endangered and State regulatory protection will remain unchanged by the federal action to de-list in 2007. The NJDEP continues to be concerned about the health of and threats to bald eagles that nest in the lower Delaware River region, particularly from contaminants. In addition, the proposed consultation/mitigation measures presented in Section 4.2.6.5 of the EA for the bald eagle are inadequate. The NJDEP requires consultation on any bald eagle nests that are within one mile of any dredged material disposal area, with staging to avoid negative impacts to nesting. The NJDEP also requires consultation to avoid negative impacts to bald eagle foraging habitat within 0.5 mile of dredged material disposal areas.

(3) The peregrine falcon official New Jersey status remains State endangered. The NJDEP requires consultation with regard to peregrine falcon nests in the project area (Delaware River and Delaware Bay) and avoidance of negative impacts due to dredging or dredged material disposal activities.

Surface Water Quality

A large (but undetermined) percentage of the sediments to be dredged have not been adequately characterized, making it impossible to evaluate the potential impacts of the proposed project on surface water quality to the Delaware River as a result of disposal of dredged material in the upland CDFs. Depending on the length of time of active dredged material disposal operations into each upland CDF, it may be necessary to evaluate potential impacts to surface water quality (and the aquatic ecosystem) from CDF discharges using both the applicable acute and chronic surface water quality criteria from the NJDEP and Delaware River Basin Commission. In addition, the potential bioaccumulation of contaminants in the upland CDF dewatering effluent may be of concern. Further, the long-term impacts to surface water quality resulting from precipitation-induced surface runoff from the upland CDFs must be evaluated.

The statement in Section 4.1.3 of the EA that "Water quality impacts associated with operation of upland [CDFs] for construction of the channel deepening project would be minimal." is not supported by the data, information presented in the EA, or the April 24, 2009 response to NJDEP's comments. The evaluation of sediment data and the issuance of a WQC by the NJDEP for channel maintenance dredging are not relevant to the evaluation of the sediments to be dredged from the channel side banks and bend widening areas from the Deepening Project.

(1) The EA concludes that "Based on these minimal exceedances, the impact of CDF operation on water quality is considered small." However, the quantity of sediment to be dredged as part of the proposed project is considerably larger than that associated with channel maintenance activities, and the sediments to be dredged

have not been adequately characterized. Thus, based on the very limited data, the NJDEP does not agree with this ACOE's conclusion that surface water quality impacts in the Delaware River will be small, and has identified the need to complete additional sediment characterization work and evaluations of potential impacts to surface water quality (and the aquatic ecosystem). This would include Effluent (Modified) Elutriate analyses of the sediments to be dredged at the level of "dredged material management units", associated predictive analyses of dewatering effluent contaminant concentrations for each upland CDF, development of appropriate mixing zones for each upland CDF, and comparisons to applicable acute (and potentially chronic) water quality criteria. Likewise, contaminant concentrations in precipitation-induced surface runoff should be evaluated. Finally, depending on the results of these analyses, there may be a need to conduct bioassays (toxicity and bioaccumulation) to evaluate potential impacts to the aquatic ecosystem. See 1998 USEPA/USACOE Inland Testing Manual, 2003 USACOE Upland CDF Manual, and 1997 NJDEP Dredging Manual referenced above.

(2) Section 4.1.3.1 of the EA discusses the results of a modeling effort in 2001 by the ACOE to evaluate the near-field concentrations of metals and PCBs released during navigation channel and berthing area dredging operations from a cutterhead hydraulic dredge and bucket dredging, respectively. The 2001 modeling study used previously collected sediment data from the Marcus Hook Range. As stated in the NJDEP's January 14, 2009 comment letter, because this data over a decade old, the conclusion reached in the EA that exceedances of DRBC's water quality criteria are unlikely is highly questionable. In addition, this modeling study did not consider the potential impacts of dredging sediments located in channel side banks and bend widening areas. Thus, the EA's conclusion that "Metals and PCBs would not exceed [DRBC] water quality criteria in the vicinity of a working cutterhead hydraulic dredge or a bucket dredge during construction of the deepening project." is not supported by the data presented in the EA.

Groundwater Quality

Because as discussed above, a large (but undetermined) percentage of the sediments to be dredged have not been adequately characterized, it is not possible to evaluate the potential impacts of the proposed project on groundwater quality, or to determine compliance with groundwater quality standards.

(1) Section 4.1.1.1 of the EA concludes that "...the newly dredged sediments from the 45-foot project contains [sic] no harmful levels of contaminants, so in the event that the water were to reach the aquifer from the disposal area, it would have no impact on water quality." However, sediments to be dredged from the channel side banks and bend widening areas have not been characterized. Such analyses must include appropriate leaching analyses to evaluate the potential impacts to groundwater as discussed in the above reference manuals.

(2) Section 4.1.1.1 of the EA briefly discusses the potential impacts of metals leaching from the upland CDFs into groundwater. Additional study and evaluation are needed. See 1998 USEPA/USACOE Inland Testing Manual, 2003 USACOE Upland CDF Manual, and 1997 NJDEP Dredging Manual referenced above.

(3) Section 4.1.1.1 of the EA refers to summary upland CDF groundwater monitoring reports that are to be completed in Spring 2009. The NJDEP has not received these reports, and must have the right to provide additional comments concerning potential groundwater impacts from the proposed project after review of the reports.

(4) Section 4.1.1.2 of the EA states that "permeable sand and gravel in the river are in direct contact with the ... [PRM aquifer] system" and that "a large volume of water is presently infiltrating the aquifer from the river." Deepening the navigation channel and dredging the channel side banks and bend widening areas may increase the infiltration of river water into the aquifer. The potential impacts of such increased infiltration have not been evaluated in the EA.

Coastal Zone Consistency Determination

The EA states that the State of New Jersey provided a determination of consistency with New Jersey's Coastal Zone Management Program for the Project on August 29, 1997. The EA fails to recognize that the State of New Jersey revoked its consistency determination on September 30, 2002, or that the ACOE committed to supplemental coordination under the Federal Consistency Regulations (40 CFR Part 930) on October 10, 2002. This required coordination process has not yet been completed with the State of New Jersey. Most of New Jersey's concerns were not addressed by either the EA or the ACOE April 24, 2009 response to NJDEP's comments.

Essential Fish Habitat Assessment

An EFH Assessment was provided to the NMFS by the ACOE in a letter dated February 9, 2009 which re-initiated consultation with the agency under the Magnuson Stevens Act (MSA). The NMFS provided its comments and conservation recommendations to the ACOE in a letter dated April 16, 2009. On June 19, 2009, the ACOE provided a response to the NMFS's comments and conservation recommendations. This response came one week before the Project is to be bid and does not give regulatory authorities time to determine adequacy of the response. Until such time as the ACOE completes formal consultation under MSA with the NMFS, the ACOE has not fully evaluated the impacts of the Project on federally managed species under MSA.

Submerged Aquatic Vegetation (SAV)

As discussed in the NJDEP's January 14, 2009 Comment Letter, updated information available to the NJDEP, Division of Fish and Wildlife indicates that Wild Celery (*Vallisneria americana*) is rebounding in the freshwater areas of the Delaware River. Any update of the environmental record must contain the results of mapping of SAV within the project area, and a demonstration that SAV areas will be avoided or impacts to SAV will be minimized to the maximum extent practicable. Finally, any impacts to SAV must be offset by way of a mitigation plan. NOAA's April 16, 2009 letter to the ACOE on the Essential Fish Habitat (EFH) Assessment also requests that the ACOE undertake a comprehensive SAV survey of the project area to determine direct and indirect impacts from the Project.

The EA states that the ACOE performed a shoreline survey for SAV in 2008 at one of the federal CDFs based on a requirement in the September 2007 WQC issued by the NJDEP for the maintenance dredging of the federal navigation channel. This survey found no SAV at this location. Use of surveys from the routine maintenance dredging project monitoring program from the shoreline of one CDF is inadequate evaluate the impacts of new dredging of channel side slopes and channel bends (shallow water areas) where SAV habitat has been documented to be present (See NOAA's April 16, 2009 letter).

Cumulative and Secondary Impacts

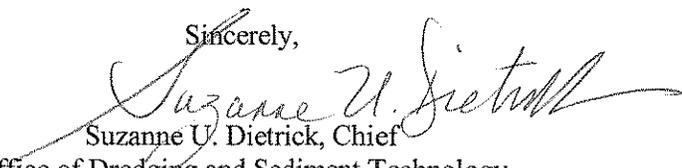
Section 4.8 of the EA contains a very brief evaluation of the proposed project's "cumulative effect." However, the evaluation does not include expansion of port facilities as a potential impact of deepening access channels to the main navigation channel and berthing areas to enable the full use of the proposed deepened main navigation channel. NJDEP disagrees that "any future decision by port interests to expand existing benefiting facilities would be independent of the deepening project." Such decisions – as well as a decision to build new port facilities – are in fact likely to be based on the existence of a deepened channel.

Additional review and technical comments on the April 2009 EA are included in Attachment #1.

Conclusion

Based on the deficiencies in the EA outlined in this letter and in the attached comments, this Project should not go forward until the ACOE addresses NJDEP's concerns, and ensures that the Project can be conducted in a manner that does not harm the environment and its resources. Accordingly, the ACOE must work with the NJDEP and other agencies to complete a SEIS and must complete supplemental coordination with the NJDEP before the Project proceeds.

Sincerely,


Suzanne U. Dietrick, Chief
Office of Dredging and Sediment Technology
Site Remediation Program

c:

Lt. Col. Thomas Tickner, Philadelphia District, Army Corps of Engineers

Peter Colosi, Division Chief, National Marine Fisheries Service

John R. Pomponio, Director, Environmental Assessment and Innovation Division, EPA Region 3

Sarah Cooksey, Administrator, DNREC

James Newbold, PADEP

Attachment #1

I. Delaware River Main Stem and Channel Deepening Project Environmental Assessment (April 2009)

The following technical comments pertain to the NJDEP's review of the April 2009 Environmental Assessment published for the Delaware River Main Stem and Channel Deepening Project. For reference, the NJDEP's January 14, 2009 comment letter on the Public Notice CENAP-PL-E-09-01 is attached.

Section 1.5, Relationship to Environmental Statutes

This section provides a table that lists the compliance status relative to applicable environmental quality protection statutes and other environmental review requirements for the Project. The NJDEP requests the following clarification on the information presented in the table:

- Clean Air Act, as amended - The table lists the Project in "Full" compliance with this Act. However, in other sections of the EA (Section 3.5 and Section 4.4.1), it is stated that the ACOE is in the process of updating its emissions analysis, General Conformity Analysis, and Mitigation Report. This listing should be listed as "Partial". Please refer to additional comments below from the NJDEP on compliance with the Clean Air Act.
- Clean Water Act of 1977 - The table lists the Project in "Partial" (coordination ongoing) compliance with this Act. However, Section 1.5.2 of the EA states that the Project was granted an exemption under Section 404 (r) of the Clean Water Act when Congress authorized the Project in October 1992. Please clarify what partial compliance means as it relates to this listing and exactly which agencies the ACOE is coordinating with to obtain full compliance with the Act.
- Coastal Zone Management Act of 1972, as amended - The table lists the Project in "Full" compliance with the Act. The NJDEP disagrees with the conclusion in Section 1.5.1 that the State of New Jersey provided its concurrence that the Project met New Jersey's CZM regulations on August 29, 1997

Section 2.5.1 and Appendix A - Dredged Material Disposal Plan for the Delaware River

The EA and Appendix A provide a more detailed evaluation of the proposed dredged material management plan for the Project and future maintenance dredging volumes to maintain the deeper channel. The plan is not consistent with an agreement between Governors Corzine and Rendell that all dredged material must be placed in Pennsylvania. In addition, to verify the information presented in the EA, the NJDEP requests a copy of the current dike elevations and capacity analysis performed by the ACOE including the updated topographic mapping for each CDF and the 2007 disposal area inspection report for each federal CDF.

Section 2.9 - Economic Benefits

As stated in the NJDEP's January 14, 2009 comments on Public Notice CENAP-PL-E-09-01, there must be a demonstrated need for the project that cannot be satisfied by existing conditions in order for the Deepening Project to be in compliance with New Jersey's Coastal Zone Management Program. The NJDEP has relied on the economic analysis and cost-benefit ratio for the project provided by the District in its need analysis. While the District has completed several updates to the economic analysis in response to the 2002 GAO report and additional information provided by the principal lightering Company, the NJDEP continues to have serious questions regarding the need for the project, for many of the same reasons specified in the September 2002 Revocation. Based on the April 24, 2009 response to NJDEP's comments, NJDEP understands that the most

recent update to the economic analysis performed in April 2008 will be reviewed by GAO, but that this review has not yet been completed.

Section 4.1.4 - Sediment Quality

The ACOE has relied on outdated sediment analyses, a limited sample size and sample locations, and a limited evaluation of sediment samples collected by the NOAA as part of the injury assessment from the Athos Spill in determining in the EA that the sediments to be dredged from the Project have been adequately characterized. The ACOE is referred to the 1998 USEPA/USACOE Inland Testing Manual which provides guidance on frequency, evaluation of historic data, and use of existing data when evaluating potential impacts of dredged material discharge and disposal. For the reasons provided below, the ACOE failed to follow this testing manual in the sediment sampling described in the EA.

The EA provides a comparison of the sediment data provided in the 1997 Supplemental Environmental Impact Statement (1997 SEIS) to two sets of bulk sediment data collected in 2003 and 2005 in the area of maintenance dredging for the Philadelphia to the Sea Maintenance Dredging Project. The area of maintenance dredging is the main federal navigation channel. The District appears to contend that because the 2003 and 2005 data sets were reviewed by the NJDEP during the renewal of the Water Quality Certificate for the Maintenance Dredging Project, which led to the issuance of the WQC in September 2007, NJDEP believes that these two data sets are adequate to characterize the dredged material to be removed from the Project. The Department does not support this contention. While the scope of sampling (45 samples) may be adequate to evaluate the sediment quality for routine maintenance dredging of the federal navigation channel, this sample size and limited area of sampling is inadequate to characterize the contaminants concentrations in the sediments over the 102-mile Project area. In addition, areas of new dredging for the Delaware Deepening Project are outside of the limits of the existing federal navigation channel that are subject to routine maintenance dredging by the ACOE. Specifically, the EA states that approximately 11 bend widening areas equating to approximately 215.9 acres will be newly dredged; a 1V: 3H side slope of new dredging is required for the deeper channel; an access channel will be deepened to the Beckett Street Terminal; and the Marcus Hook Anchorage will be widened and deepened to accommodate a two space anchorage. These new areas of dredging were not sampled during the 2003 and 2005 events. Moreover, the sediment quality of these new dredge areas has not been evaluated by the ACOE for over a decade. As noted by the ACOE in the EA (Page 101), the new dredging of shallow water areas have the greatest potential for higher concentrations of contaminants as well as the potential for accumulation of contaminants from the Athos Spill. As stated on Page 38 of the Inland Testing Manual published by the ACOE and USEPA, "the general recommendation of EPA and USACE is that the interval between reevaluating of Tier 1 data for these projects not exceed three years or the dredging cycle, whichever is longest."

The EA fails to evaluate new information and studies provided by the NJDEP on sediment quality data for the Delaware River in the comments submitted to the ACOE in response to the December 17, 2008 Public Notice (CENAP-PL-E-09-01). See the NJDEP's January 14, 2009 comment letter in the Sediment Investigation and Other Studies Sections. Again, the ACOE is directed to its own Inland Testing Manual, which states at Section 4.1 that for a particular dredging project it is appropriate to evaluate all existing data from various resources in determining the potential for contaminants to be present in the sediments to be dredged from the Project.

Athos Spill

Both the NJDEP's and USEPA Region III commented on the Public Notice CENAP-PL-E-09-01 that the Athos Spill was considered a significant change in the Delaware River that must be fully evaluated in any NEPA document for the Project.

However, the EA evaluated a limited data set from the sediment data collected by NOAA as part of the Injury Assessment from the Athos Spill (5 channel samples of the 162 sediment samples). The EA then concluded that there would be no adverse impacts from dredging to construct the Delaware Deepening Project, based on an apparent misinterpretation of the Injury Assessment report using the limited sampling performed in 2003 and 2005, and outdated sediment data from 1997.

The EA draws conclusions from the NOAA injury assessment unrelated to the impacts from the dredging and dredged material disposal from the Project. The NOAA Injury Assessment assessed a limited number of sediment samples and did not address the potential impacts from dredging or dredged material disposal of the sediments impacted by the Athos Spill.

The EA incorrectly states that the NOAA sediment sample data post-Athos Spill are similar to the results of the ACOE 2003 and 2005 sampling events. Specifically, the limited data set evaluated by the ACOE in the EA (5 sediment samples results collected from the navigation channel) that underwent PAH screening indicate that the concentrations of PAH compounds (reported between 0.8 ppm to 22.7) would exceed New Jersey's Soil Remediation Standards (N.J.A.C. 7:26D). In contrast, the majority of the PAH compounds analyzed in the ACOE 2003 and 2005 sampling events were below New Jersey's Soil Remediation Standards.

Other sediment sample data from the Injury Assessment for sample locations collected in the vicinity of areas proposed for new dredging (i.e. channel bends, side slopes) in the Deepening Project report show PAH concentrations that significantly exceed the Department's Soil Remediation Standards. A number of these sample locations were determined to have "very high PAH concentrations (above 100 ppm)" and underwent further analyses as part of the injury assessment (see sample locations within Schuylkill River Area and Tinicum Island Area). The ACOE did not even evaluate any of the NOAA sediment data that would be in proximity to areas of new dredging and would equate to the largest volume of dredging for the Project. Instead, the ACOE limited its evaluation to samples in the existing federal navigation channel in which minimal dredging is necessary to deepen the channel.

In conclusion, the ACOE has not adequately evaluated the significant changes to the sediment quality of the dredged material to be removed during the Project since the last comprehensive sampling of the Project area as presented in the 1997 SEIS. New available information on sediment quality of the dredged material as discussed above necessitates that the ACOE perform a new sediment investigation for the entire 102-mile Project Area.

4.1.3 Water Quality

Water Quality Impacts from the Point of Dredging

Section 4.1.3.1 of the EA discusses the results of a 2001 modeling effort to evaluate the near-field concentrations of metals and PCBs released during dredging operations from a cutterhead hydraulic dredge and bucket dredging. The modeling study used sediment data previously collected and evaluated in the 1997 SEIS. Due to the age of the sediment data used in this study, and the significant changes in sediment quality presented above, the conclusion reached in the EA that exceedances of DRBC's water quality criteria is not supported by more recent information and studies. The EA also states that the ACOE plans to conduct a study of total suspended sediment and contaminant concentrations downstream of a working hydraulic cutterhead dredge during initial construction of the Project. Since the EA relied on outdated sediment results in the modeling effort performed in 2001, and the ACOE has not yet conducted the water quality study on a working hydraulic cutterhead dredge, the EA has not adequately addressed the water quality impacts from dredging in the Delaware River.

Water Quality Impacts at Confined Disposal Facilities

The EA provided an evaluation of 71 water samples collected at the point of Confined Disposal Facility (CDF) discharges between 1998 and 2006. These water samples were collected by the ACOE from material removed during routine maintenance dredging of the federal navigation channel and disposed of in one of several federal CDFs. The EA concludes that since the water quality data collected from the routine maintenance dredging material disposed of in CDFs indicates minimal exceedances of applicable surface water quality criteria, that impacts to water quality from the Project are also expected to be minimal. The contaminant concentrations in sediments to be newly dredged are anticipated to be significantly different than concentrations of sediments removed during routine maintenance dredging of the existing federal navigation channel. As discussed above, the ACOE must perform an updated sediment investigation of the entire 102-mile Deepening Project. This updated sediment data should be evaluated by the ACOE to predict the contaminant concentrations in the return water to be discharged to the Delaware River from material removed from the construction of the Deepening Project. Until the ACOE completes this modeling effort, the ACOE has not adequately evaluated the water quality impacts discharges of return water to surface waters from the Project.

Section 4.1.3.1 of the EA includes a "PCB mass balance analysis for the entire deepening project", using previously collected sediment data from the navigation channel. This analysis did not include any data from the channel side banks and bend widening areas, and thus does not represent the "entire deepening project." The basis for the 99.9% efficiency factor in retaining PCBs in various upland CDFs is not clear.

Section 4.1.3.2 of the EA evaluates potential water quality impacts from discharges at the Reedy Point South upland CDF; this analysis only considered selected heavy metals. As a first order screening/design model, it is not known how accurately the CORMIX model replicates the mixing zone associated with the upland CDF discharge weir. It is also incorrect to assume that the maximum dissolved concentration will be predicted by equilibrium partitioning; the result of Effluent (Modified) Elutriate tests should be used. In any event, this analysis predicted exceedances of surface water quality criteria. Similar types of evaluations at the other upland CDFs to be used for the proposed project apparently have not been conducted.

Groundwater Impacts Beneath CDFs

Section 4.1.1.1 concludes that "...the newly dredged sediments from the 45-foot project contains no harmful levels of contaminants, so in the event that the water were to reach the aquifer from the disposal area, it would have no impact on water quality." The ACOE has not performed an analysis of the areas of proposed new dredging for over a decade. The ACOE has never performed a leachate analysis of the dredged material from the Project. Therefore, the EA has drawn conclusions without the supporting updated sediment investigation for the Project.

The EA states that since 2002, the ACOE has performed 8 rounds of groundwater sampling at several CDFs which received dredged material from the maintenance dredging project. The NJDEP in its January 14, 2009 comment letter on Public Notice CENAP-PL-E-09-01 requested that ACOE perform a comprehensive evaluation of the data with respect to contaminant trends and compliance with New Jersey's Groundwater Quality Standards. The EA states that the ACOE is currently preparing summary reports for all of the groundwater samples taken from 2002 to the present, but this summary report has yet to be made available to the NJDEP or other state and federal agencies.

The EA does provide a cursory evaluation of the groundwater sampling data as it relates to the presence or absence of Volatile Organic Compounds, Semi-volatile Compounds, and PCBs which demonstrates that these contaminants were "not confidently detected" in any of the data. However, the EA states that the ACOE is currently studying metals in groundwater at the federal CDFs.

Because the ACOE used outdated sediment data in its evaluation of disposal of dredged material from the Deepening Project, and has not completed an evaluation of existing groundwater monitoring well data collected since 2002 to compare these results to updated sediment data collected in the Project area, the EA has not adequately addressed the potential impacts to groundwater quality from the Deepening Project.

Air Quality (Section 3.5) and General Conformity Analysis (Section 4.4.1)

The NJDEP, Bureau of Air Quality Planning (BAQP) reviewed the Air Quality Sections (Section 3.5 Air Quality and Section 4.4.1 General Conformity Analysis) of the EA for the Delaware Deepening Project (Project). The BAQP has the following comments:

1. Section 176(c) of the Clean Air Act (CAA) requires a Federal Agency to conform to a State's Implementation Plan (SIP) for a non-attainment or maintenance area. Section 176(c)(1)(A)(B) of the CAA, requires that activities will not:
 - (i) cause or contribute to any new violation of any standard in any area;
 - (ii) increase the frequency or severity of any existing violation of any standard in any area; or
 - (iii) delay timely attainment of any standard or any required interim emission reductions or other milestone in any area.

Currently, the entire State of New Jersey is in non-attainment for the 8-hour Ozone National Ambient Air Quality Standard (NAAQS). In addition, Camden County and Gloucester County are in non-attainment for 1997 and 2006 Fine Particulate (PM_{2.5}) Standards. Since the Project is one of the largest Federal projects in New Jersey and New Jersey is in non-attainment for ozone and for PM_{2.5} in Camden and Gloucester counties, it is critical that the ACOE identify the direct and indirect emissions from the entire Project in the non-attainment area and mitigate these emissions as required by the Federal General Conformity regulation (40 CFR 93).

2. Emissions from this Project will impact counties in Delaware (Kent and New Castle) and counties in Pennsylvania (Delaware and Philadelphia). These counties share a multi-state non-attainment area with New Jersey for ozone and fine particulate matter (PM_{2.5}). Kent, New Castle, Delaware and Philadelphia counties are part of the Philadelphia -Wilmington- Atlantic City 8-hour Ozone non-attainment area. In addition, New Castle, Delaware, and Philadelphia counties are part of the Philadelphia-Wilmington Fine Particulate (PM_{2.5}) non-attainment area. In light of the shared nonattainment areas, the ACOE must identify the direct and indirect emissions from this Project within these counties and mitigate these emissions as required by the Federal General Conformity regulation (40 CFR 93).
3. In 2004, a General Conformity Analysis and Mitigation Report (Final Draft) was prepared for this Project. The report indicated that the Project emissions would be above the de minimis levels in Section 93.153(b) of the General Conformity regulation for Oxides of Nitrogen (NO_x) emissions for all years and Carbon Monoxide (CO) for year four. A mitigation plan was developed that would mitigate the NO_x and CO (year four) emissions to a net of zero as required by the regulation. A draft Statement of Conformity was prepared for the Project but was never finalized.
4. The EA indicates that the ACOE is in the process of updating the emissions analysis for this Project. Section 93.153(b) (Applicability) of the General Conformity regulation requires "a conformity determination for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed the rates in (b)(1) or (b)(2) of this section." Since the last Applicability Analysis was

completed in 2004, the United States Environmental Protection Agency (USEPA) issued a Final Rule on July 17, 2006 amending the General Conformity regulation to include de minimis emissions levels for PM_{2.5} and its precursors (100 tons per year (tpy) Direct PM_{2.5}, and 100 (tpy) SO₂). The Applicability Analysis (updated emissions analysis) for this Project must include the direct and indirect emissions for the entire Project in the nonattainment area for pollutants listed in 93.153(b)(1) and (b)(2) of the General Conformity regulation.

5. The ACOE should utilize the emissions levels (40 CFR 93.153 (b)(1)) for the 1-hour Ozone NAAQS to identify projects/actions subject to General Conformity under Section 172(c) of the Clean Air Act, in order to avoid backsliding on controls provided by that Act to facilitate attainment. The de minimis levels for NO_x is 25 tons per year (tpy) and the de minimis level for Volatile Organic Compounds (VOCs) is 25 tpy.
6. The BAQP has concerns regarding the estimates used by the ACOE for the amount of dredged materials for this Project. Dredging results in direct emissions for this Project and the amount of dredged material will impact the emissions from this Project. The Dredged Material Disposal Plan (Appendix A) in the EA indicates that there has been a downward trend in the estimated amount of dredged material for this Project from 1992 to 2009. During the construction phase of this Project, any increase in emissions due to an increase in dredged material will require mitigation.
7. The transport of the dredged material to its final placement/location is an activity that generates direct emissions for this Project. The February 2004 General Conformity Analysis and Mitigation Plan (Final Draft), indicated that the dredged material would be transported to several Federal upland disposal sites located in New Jersey, Pennsylvania and Delaware. The EA indicates that due to a reduction in the amount of dredged material, several of the Federal upland disposal sites included in the February 2004 General Conformity Analysis and Mitigation Plan (Final Draft) are no longer required. However, the May 2007 Governors' Agreement stipulated that Pennsylvania will accept all dredged material from this Project, except to the extent that New Jersey seeks material for New Jersey port facility projects. The USEPA's July 13, 1994 General Conformity Guidance: Questions and Answers¹, indicates that a project can not be broken down into segments in order for each segment to be below the de minimis levels and that all reasonably foreseeable emissions must be included for the project as a whole in determining applicability. Therefore, based on the USEPA's Guidance, the emissions associated with transport of the dredged materials to their final placement/location in Pennsylvania must be included in the Applicability Analysis for this Project.
8. The Applicability Analysis, Conformity Determination, Mitigation Plan and a Statement of Conformity (SOC) must be completed, including public participation requirements, before starting the Project. The February 2004, General Conformity Analysis and Mitigation Report (Final Draft), included the mitigation plan for this Project. Since the ACOE is in the process of updating the emissions analysis for this Project, an updated (final) mitigation plan must be prepared and the reporting requirements of Section 93.155 and the public participation requirements of Section 93.156 in the General Conformity regulation must be followed.

A draft SOC for this Project was published in the Philadelphia Inquirer on July 15, 2004, but a Final SOC was never completed. In addition, the ACOE is in the process of updating the emissions analysis for the Project. Therefore, a new SOC is required for this Project as indicated in Section 93:157 (Frequency of Conformity Determinations) of the General Conformity regulation.

¹ http://www.epa.gov/air/genconform/documents/gcgqa_940713.pdf

9. Due to the health risks associated with diesel exhaust, any project that involves concentrated sources of diesel exhaust such as heavy use of construction vehicles, the following precautionary best management practices should be followed:
- Observe the 3-minute idling rule. This will realize a fuel savings, as well as savings in wear and tear on the vehicle in question, and will reduce emissions on a project-wide basis.
 - All construction equipment greater than 75 horsepower should use ultra-low sulfur diesel fuel. Obtaining this fuel should not be problematic, due to its wide availability.
 - All construction equipment above 75 horsepower should meet Tier 4 nonroad emission standards. If Tier 4 standards cannot be met, construction equipment must have control technology verified by the USEPA or the California Air Resources Board (CARB) to reduce particulate matter emissions by a minimum of 85%.

The NJDEP and other state and federal agencies attended a meeting in April 2009 in which all the issues referenced above were discussed with the ACOE. Yet, to date there has not been any follow-up discussions or meetings with any agencies as a result of that meeting.

Section 4.1.2 - Salinity/Hydrology

Section 4.1.2.4, Sea Level Rise states that the ACOE is currently performing additional runs with the Delaware Estuary hydrodynamic-salinity model to investigate potential sea level rises at rates greater than those previously evaluated. Until such time as this modeling effort is complete, its results evaluated by the ACOE and made available for public comment, the EA has inadequately addressed the potential for changes in spatial and temporal salinity distribution from the construction of the Deepening Project.

Threatened and Endangered Species

The ACOE initiated formal consultation under Section 7 of the Endangered Species Act with the National Marine Fisheries Service (NMFS) in a letter dated January 21, 2009. A Biological Opinion under Section 7 has yet to be issued by the NMFS to complete this consultation. The EA, Conclusion and Findings Section, states that the ACOE intends to adopt and implement all project-related recommendations that are put forth in the Biological Opinion to minimize potential adverse effects on *Shortnose Sturgeon*. This statement is premature since the Biological Opinion has not been issued by the NMFS. The ACOE has not reviewed the recommendations within the Biological Opinion to determine whether or not the Project as currently designed and dredging schedule can be implemented to meet all the recommendations put forth in the Opinion to be protective of all of the identified species, including but not limited to the Shortnose Sturgeon, sea turtles and whales.

Shortnose Sturgeon and Atlantic Sturgeon

The January 2009 Biological Assessment and EFH Assessment provided by the ACOE to the NMFS did not consider new information and studies on the distribution of both the Shortnose and Atlantic Sturgeon as discussed below. ACOE's June 19, 2009 response to NMFS on the EFH Assessment still does not consider this new information.

Shortnose sturgeon early life stages were recently documented over an approximately 17-km reach of the lower non-tidal river from mid-April to mid-to-late May. (*Environmental Research and Consulting, Inc. 2008.*)

In addition, preliminary tracking studies of juvenile Shortnose sturgeon showed different patterns of movements in the winter (n=3), indicating that the entire lower Delaware River (Philadelphia to below Artificial Island) may be utilized for overwintering. Sub-adults of both species have been captured in various reaches of the Delaware while the State of Delaware collected large numbers of Atlantic sturgeon near the Marcus Hook anchorage during 2008 sampling.

Acoustic tagging studies by ERC, Inc. (2006) indicate that adult Shortnose sturgeon demonstrate one of two generalized movement patterns, either making long excursions from the upper to the lower tidal river (Pattern A) or remaining in and utilizing the upper tidal river (Pattern B) (ERC, Inc. 2006). Fish with Pattern A movements made long distance excursions, often moving between the upper tidal river and the area of the C&D Canal or farther downstream. Most of the tagged Shortnose sturgeon occupied known overwintering areas in the Roebling, Bordentown and Trenton reaches of the upper tidal river during December through March. Three fish, however, appear to have overwintered in the downriver, below Wilmington. This suggests the existence of an overwintering area in the lower river. Downriver overwintering areas are known to occur in other river systems, but previously there had been no evidence of such areas in the Delaware River (ERC, Inc. 2006). In addition, preliminary tracking studies of juvenile Shortnose sturgeon showed different patterns of movements in the winter (n=3), indicating that the entire lower Delaware River (Philadelphia to below Artificial Island) may be utilized for overwintering (ERC, Inc. 2007). One fish, whose tag was active in late spring and summer, showed movement spanning approximately 25 kms between the Chester and Deepwater Point ranges, spending much of its time in the vicinity of Marcus Hook (ERC, Inc. 2007).

EA, Pg. 135-138 -Surveys (submersible mostly, but also trawl and gillnet) to determine presence of sturgeon were conducted between March 4 and March 25, a period when many of the adults should begin travelling up the river to spawn. The conclusion in the EA that densities in the Marcus Hook area were much lower than in the Trenton area may be a bit different had surveys been conducted December through February (blasting is due to occur December 1 to March 15), when the overwintering fish are most likely to be present. Although only three unidentified sturgeon were seen on the video tapes in the Marcus Hook area, this number seems large considering the low visibility, time of year, and hit or miss nature of the sled survey.

These additional studies and information must be incorporated into the EFH Assessment and Biological Assessment.

Bald Eagle

Section 3.3.6.5 of the EA fails to represent the NJ nesting population of bald eagles and the fact that it still has endangered status. In the NJ Bald Eagle Annual Report (<http://www.njfishandwildlife.com/ensp/pdf/egl rpt08.pdf>), NJDEP notes that contaminants remain a threat to bald eagles, particularly in the Delaware River and Bay habitats. We also note that the bald eagle's official New Jersey status remains state endangered and state regulatory protection will remain unchanged by the federal action to de-list in 2007. The NJDEP continues to be concerned about the health of and threats to bald eagles that nest in the lower Delaware River region, as opposed to the "good condition" evaluation quoted by the Delaware Estuary Program in regard to the Delaware Bay population.

Section 4.2.6.5 states that "At the time of the 1995 consultation, the following reasonable and prudent measure to minimize impacts was adopted. Prior to any construction activities at upland dredged material disposal areas, the Philadelphia District would coordinate with the U. S. Fish and Wildlife Service and the New Jersey Department of Environmental Protection to determine if there are any bald eagle nests within 0.25 miles or a line of site distance of 0.5 miles from an upland dredged material disposal area. If there is an active nest within these distances, construction of the site and the use of the site for the disposal of dredged material would be staged to avoid disturbance impacts. This measure will still be followed."

The above referenced protective measures referenced in the EA have been determined to be inadequate by the NJDEP and are based on outdated information. Specifically, the NJDEP requires consultation on any bald eagle nests that are within 1 mile of any dredged material disposal area, with staging to avoid negative impacts to nesting (NJDEP, DFW Recommendation). The NJDEP also require consultation to avoid negative impacts to bald eagle foraging habitat within 0.5 mile of dredged material disposal areas (NJDEP, DFW Recommendation).

Marine Fisheries and Shellfisheries

Essential Fish Habitat Assessment

An EFH Assessment was provided to the NMFS by the ACOE in a letter dated February 9, 2009 which re-initiated consultation with the agency under the Magnuson Stevens Act (MSA). The NMFS provided its comments and conservation recommendations to the ACOE in a letter dated April 16, 2009. On June 19, 2009, the ACOE provided a response to the NMFS's comments and conservation recommendations. This response came one week before the Project is to be bid and does not give regulatory authorities time to determine adequacy of the response. Until such time as the ACOE completes formal consultation under MSA with the NMFS, the ACOE has not fully evaluated the impacts of the Project on federally managed species under MSA.

American Oyster (Section 4.2.3.3)

The NJDEP, Bureau of Shellfisherie's Delaware Bay Office (BSF) has reviewed the ACOE Channel Deepening Environmental Assessment. BSF comments are mainly restricted to the natural oyster seed beds and industry leased grounds, which range from Channel River Mile 15 through 52.

The EA provides a general discussion of the proposed ACOE oyster monitoring plan for the Project. However, the EA does not provide any formal workplan that has been approved by state and federal agencies.

Data Collection/Studies - Pre-Construction Oyster Monitoring Study (2000-2001)

As stated in the NJDEP's comments on the Public Notice CENAP-PL-E-09-01 dated January 14, 2009, the Bureau of Shellfisheries continues to have serious concerns with any proposal that would allow any "construction activities" (e.g., dredging, rock blasting, etc.) before one year's worth of resource data is collected as "baseline".

The purpose of the original study (ca. 2000-2001) was to collect data to be "used as a baseline through which oyster bed health after project completion can be accessed." However, the oyster monitoring data and water quality data presented in the report is now eight+ years old. It would be inappropriate to utilize this data set to characterize pre-construction conditions of the oyster resource, particularly given the stated need of "determining if the deepening significantly impacted oyster populations in Delaware Bay." The main components of this resource characterization and water monitoring study should be repeated in order to accurately assess current population structure. Food supply monitoring is again of particular importance. The monitoring program should sample one year prior to construction, throughout construction and a number of years afterward (suggest three to four).

Expansion of Known Oyster Reefs

One major finding since the 2000 study is the detection of an expansive area of oyster habitat within the area of Hope Creek (Salem Co., NJ). This finding has expanded the range of the natural oyster seed beds to Artificial Island. Because almost no data exists for this range, a monitoring station needs to be added to the program. A

resource-monitoring program should be implemented before dredging this range of the channel. This data should be collected for a minimum of one year prior to construction.

The extent of this area has been mapped as part of a benthic habitat data initiative (Delaware Coastal Program within the Delaware Department of Natural Resources and Environmental Control). If a monitoring program is initiated, this mapping data should be incorporated. In addition, the Haskin Shellfish Research Laboratory incorporated this area into its annual oyster seedbed survey last year.

Shell Loss Contingency

The natural oyster beds found on New Jersey's side of Delaware Bay are not in carbonate balance every year (i.e., naturally, the oyster beds often lose more shell per m² than shell accretes per m²). The effect of a deeper channel on carbonate balance has not been evaluated. This metric can be observed as part of the resource and water quality-monitoring program discussed above, without increased costs for additional sampling. The tools for this monitoring program are already in place. A contingency program to maintain carbonate balance after channel deepening should be included in any agreements between the Department and the Army Corps of Engineers.

Recruitment / Spat Monitoring

Hydrodynamic model runs show two important phenomena relative to larval transport in Delaware Bay. A net downbay drift potential exists that results in good recruitment events becoming more and more sporadic as one goes upbay. There is also a tendency for the main channel to trap larvae on either the Delaware or New Jersey side. A spat settlement-monitoring program should be added to the monitoring program to ascertain whether a deeper channel influences larval transport within the Bay. This is particularly critical when oyster populations are in a low abundance, contracted state, as they are currently (i.e., populations are more susceptible given their contracted range). This data should be collected before construction in the Bay occurs, and at least collected before construction activities in the upper Delaware Bay.

The results of the 3-D hydrodynamic model and the predicted effect of the proposed project on the movement of the salt line are not relevant to potential impacts on oyster beds in Delaware Bay. The model results and predicted salinity levels in the bay should be presented and discussed in the EA. Small changes in salinity over the oyster beds may result in adverse impacts to this resource.

Proceeding with construction before restarting the monitoring program could have serious impacts on an industry that is beginning to regain some of its previous vitality. This will conflict with the ACOE's own efforts to restore the Bay's oyster resource. The ACOE is the lead federal agency in the ongoing Delaware Bay Oyster Restoration Program. When the CY2008 program is complete, over \$6.5 million dollars will have been spent to revitalize the oyster resource and struggling oyster industries.

Based on the many changes to this resource, until the 2000-2001 "baseline" study is updated with the more recent data, the EA has not adequately evaluated the impacts of the proposed dredging on the oyster population in Delaware Bay.

Other Species of Concern

Submerged Aquatic Vegetation (SAV)

As discussed in the NJDEP's January 14, 2009 Comment Letter, updated information available to the NJDEP, Division of Fish and Wildlife indicates that Wild Celery (*Vallisneria americana*) is rebounding in the freshwater

areas of the Delaware River. Any update of the environmental record must contain the results of mapping of SAV within the project area, and a demonstration that SAV areas will be avoided or impacts to SAV will be minimized to the maximum extent practicable. Finally, any impacts to SAV must be offset by way of a mitigation plan. NOAA's April 16, 2009 letter to the ACOE on the Essential Fish Habitat (EFH) Assessment also requests that the ACOE undertake a comprehensive SAV survey of the project area to determine direct and indirect impacts from the Project. Based on ACOE's June 19, 2009 response to NMFS on the EFH Assessment, this requested survey has not been done.

The EA states that the ACOE performed a shoreline survey for SAV in 2008 at one of the federal CDFs based on a requirement in the September 2007 WQC issued by the NJDEP for the maintenance dredging of the federal navigation channel. This survey found no SAV at this location. Use of surveys from the routine maintenance dredging project monitoring program from the shoreline of one CDF is inadequate evaluate the impacts of new dredging of channel side slopes and channel bends (shallow water areas) where SAV habitat has been documented to be present (See NOAA's April 16, 2009 letter).

Section 6.0 - Evaluation of Section 404(b)(1) Guidelines

Section 6.0 – II-A-(2) of the Section 404(b)(1) Guidelines analysis states that “The material to be dredged from the navigation channel is similar to the existing sediment types at the beneficial use sites, and the existing confined disposal areas.” However, since the sediments to be dredged in the channel side banks and bend widening areas have not been characterized, this statement cannot be construed as applying to all of the sediments to be dredged as part of the proposed project.

Section 6.0 – II-C- (2)-c (Toxic metals and organics) of the Section 404(b)(1) Guidelines analysis states: “No significant impacts.” As detailed in this comment letter, the potential effects of these contaminants have yet to be determined; additional comprehensive and detailed evaluations are needed.

Section 6.0 – II-D (Contaminant Determinations) of the Section 404(b)(1) Guidelines analysis: As detailed in this comment letter, the potential effects of contaminants have yet to be determined; additional comprehensive and detailed evaluations are needed.

Section 6.0 – F-(1) of the Section 404(b)(1) Guidelines analysis: It is not clear from the EA how mixing zones were determined at the Reedy Point South CDF, and it does not appear that mixing zones have been used at any of the other upland CDFs, the beneficial use sites, or the Buoy 10 open water disposal site.

Section 6.0 – F-(2) of the Section 404(b)(1) Guidelines analysis: Although some evaluations of sediments in the navigation channels have been completed, as noted in this comment letter, additional comprehensive and detailed evaluations of the sediments to be dredged are needed. This includes a variety of comparisons to applicable water quality criteria. Although the ACOE states “it is anticipated” that all discharges will meet the applicable water quality criteria, this has not been demonstrated in the EA. Also see Section 6.0 – III-C of the Section 404(b)(1) Guidelines analysis.

Sections 6.0 – G and 6.0 - H of the Section 404(b)(1) Guidelines analysis: Potential cumulative and secondary effects to the aquatic ecosystem have not been adequately evaluated in the EA.

Section 6.0 – III-D of the Section 404(b)(1) Guidelines analysis: As detailed in this comment letter, the potential impacts to bald eagles and peregrine falcons resulting from the use of upland CDFs needs additional study.

REFERENCES

Environmental Research and Consulting, Inc. 2006. Acoustic telemetry study of the movements of Shortnose sturgeon in the Delaware River and bay. Progress report for 2003-2204. Prepared for NOAA Fisheries. 11 pp.

Environmental Research and Consulting, Inc. 2007. Preliminary acoustic tracking study of juvenile Shortnose sturgeon and Atlantic sturgeon in the Delaware River. May 2006 through March 2007. Prepared for NOAA Fisheries. 9 pp.

Environmental Research and Consulting, Inc. 2008. Final report of investigations of Shortnose sturgeon early life stages in the Delaware River, Spring 2007 and 2008. Prepared for the NJ Division of Fish and Wildlife, Endangered and Nongame Species Program. 24 pp. + appendices.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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August 25, 2009

Dear Mr. DePasquale:

This letter serves as a follow-up to the Department's review and comment letter (from Suzanne U. Dietrick, dated June 23, 2009) on the Environmental Assessment (EA; April 2009) prepared by the U.S. Army Corps of Engineers-Philadelphia District (ACOE) for the Delaware River Main Stem and Channel Deepening Project (the Project). In addition, this letter is in response to the ACOE position stated at its July 15, 2009 meeting with the Department that the sediments to be dredged as a result of the Project have been adequately characterized, and that the dredging operations and the disposal of the dredged material in upland confined disposal facilities (CDFs), or its beneficial use in Delaware Bay, will not result in adverse impacts to the environment and public health.

This letter provides additional information and detail concerning the Department's review of the existing available sediment data in the Project area, the use of this data in the April 2009 EA, and the resulting conclusions drawn by the ACOE concerning the potential impacts of the Project. As detailed below, the Department continues to believe that the sediments to be dredged have not been adequately characterized. The potential impacts to the environment and public health that could result from the Project cannot be evaluated without the implementation of a comprehensive sediment sampling and analysis plan consistent with the applicable U.S. Army Corps of Engineers and N.J. Department of Environmental Protection technical manuals, and comparison of the resulting sediment data to current regulatory criteria and sediment quality guidelines.

Need for a Comprehensive Sediment Sampling and Analysis Plan

To evaluate the potential impacts from the proposed Project (or any dredging project), and to ensure adequate protection of the environment and public health, it is critical to comprehensively characterize the sediments to be dredged. Three technical manuals have been developed and provide protocols for the sampling, analysis, and evaluation of sediments proposed to be dredged and disposed of at upland confined disposal facilities (CDFs). The protocols in these manuals have been designed to evaluate, in a comprehensive manner, potential impacts to the aquatic and terrestrial ecosystems and human health that could result from dredging operations and the

placement of dredged material in upland CDFs. Potential impacts to surface waters of the United States could result from dewatering and surface runoff discharges from upland CDFs, while the leaching of contaminants can impact groundwater. These manuals are:

U.S. Environmental Protection Agency and Department of the Army - U.S. Army Corps of Engineers 1998. Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual (Inland Testing Manual). EPA 823-B-98-004, February 1998. (the 1998 USEPA/ACOE Inland Testing Manual);

U.S. Army Corps of Engineers 2003. Evaluation of Dredged Material Proposed for Disposal at Island, Nearshore, or Upland Confined Disposal Facilities – Testing Manual. Technical Report ERDC/EL TR-03-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS, January 2003. (the 2003 USACOE Upland CDF Manual); and

N.J. Department of Environmental Protection Dredging Task Force 1997. The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters. October 1997, 55 pp. + appendices. (the 1997 NJDEP Dredging Manual)

These manuals provide the protocols required to develop and implement a comprehensive sediment sampling and analysis plan for the proposed Project. After comprehensive sampling is complete, the sample data must be evaluated taking into account the currently applicable regulatory standards and guidelines, to assess potential impacts to surface water quality, groundwater quality, the aquatic and terrestrial ecosystems, and public health. Management actions can then be developed and implemented to minimize the identified potential impacts.

The sediments to be dredged as part of the proposed Project are predominantly located in channel side banks and bend widening areas, and are not located in the main navigation channel that is subject to regular maintenance dredging operations. These sediments have significant potential to be contaminated by toxic and bioaccumulative chemicals at levels of concern. A comprehensive characterization of the sediments to be dredged is essential to predict and evaluate the potential impacts of dredging, disposal of the dredged material into upland CDFs, and the beneficial use of dredged material at sites in Delaware Bay.

However, the ACOE has not adequately characterized the sediments to be dredged for the proposed Project consistent with the protocols in the above-referenced technical manuals. The ACOE has relied on outdated (i.e. pre-1997) sediment sampling and analytical activities to characterize the sediments to be dredged, particularly in the channel side banks and bend widening areas. More recent data from 2003 and 2005 consist of only a limited number of maintenance dredging sediment samples collected at limited locations in the Project area; in addition, only limited types of analyses and evaluations were performed on these samples.

The limited sediment sampling and analyses conducted by the ACOE for the Project are not consistent with the protocols in the above-referenced technical manuals in at least the following ways:

(1) The USEPA/ACOE (1998) and ACOE (2003) manuals are based upon the application of a tiered testing and evaluation system (Tiers I-IV). The data and information used in the April 2009 EA prepared for the proposed Project is limited to Tier I – the use of readily available, existing information. However, most of this data was collected prior to 1997 and/or was associated with

maintenance dredging projects in the existing navigation channel, not new work dredging. Thus, the April 2009 EA does not include or evaluate any recent (i.e. post-1997) data for sediments from the channel side banks and bend widening areas to be dredged (i.e. the new work dredging areas). Nor does the April 2009 EA include/reference much useable and reliable Tier II-III data as required by the technical manuals; see Review of the Sediment Data Presented in the 1997 SEIS and Review of pre-1997 Sediment Data.

(2) Dredged material placed in upland CDFs is dewatered, resulting in effluent discharges to surface water from the facilities. The ACOE (2003) and NJDEP (1997) manuals therefore require Effluent (Modified) Elutriate testing to predict and evaluate potential impacts to surface water from dewatering dredged material. However, the April 2009 EA (or any other ACOE document) does not use or reference any recent Effluent (Modified) Elutriate data for any of the sediments to be dredged (maintenance and new work) and disposed of at upland CDFs in its evaluation of the potential impacts of the Project. As discussed in Review of pre-1997 Sediment Data, the available Modified Elutriate data from sediments in new work dredging areas are almost seventeen years old, are of unknown reliability and usability due to unspecified Quality Assurance/Quality Control issues, and have method detection limits (MDLs) for a large number of compounds (particularly PCBs) which further limit the usability of the data. Therefore, it is not possible to evaluate the potential impacts to surface water quality and the aquatic ecosystem that could result from the discharge of dewatering effluent from new work dredged material placed in upland CDFs.

(3) The upland CDFs at which dredged material will be placed are uncovered and therefore subject to surface water runoff during precipitation events. However, contrary to the requirements set forth in the ACOE (2003) manual, the April 2009 EA (or any other ACOE document) does not use or reference any precipitation-induced Surface Runoff data for the sediments to be dredged (maintenance and new work) in its evaluation of the potential impacts of the Project. Such data are necessary to evaluate potential long-term and ongoing impacts to surface water quality and the aquatic ecosystem resulting from surface runoff discharges from the upland CDFs.

(4) The upland CDFs at which dredged material will be placed discharge to groundwater. However, inconsistent with the requirements of the ACOE (2003) and NJDEP (1997) manuals, the April 2009 EA (or any other ACOE document) does not use or reference any appropriate leaching data for the sediments to be dredged from the channel side banks and bend widening areas in its evaluation of the potential impacts of the Project. Such data are necessary to evaluate potential impacts to groundwater quality resulting from the disposal of sediments at the upland confined disposal facilities. The monitoring work conducted at the upland CDFs from 2002 through 2006 (draft summary reports dated June 2009) was designed to evaluate the potential impacts of the leaching of contaminants from maintenance dredged material placed in the upland CDFs on the underlying groundwater resources; this work will not predict the potential impacts to groundwater of the disposal of dredged sediment from areas outside of the main navigation channel (i.e. new work dredging).

(5) The April 2009 EA does not contain any recent bulk sediment chemistry data for the sediments to be dredged from the channel side banks and bend widening areas (i.e. new work dredging areas). Such data are needed to evaluate the potential impacts to the terrestrial ecosystem and public health resulting from the use of the upland CDFs for disposal of the dredged material from the proposed Project.

(6) Sediment data collected in support of the 1992 EIS and 1997 SEIS are old and do not reflect the existing sediments in the Project area. The use of this sediment data is inconsistent with

Section 4.0 of the 1998 USEPA/USACE Inland Testing Manual, which states "the general recommendation of EPA and USACE is that the interval between reevaluating of Tier 1 data for ... projects not exceed three years or the dredging cycle, whichever is longest."

(7) The ACOE analyzed 45 sediment core samples in 2003 and 2005 in support of navigation channel maintenance work; these two data sets are discussed in greater detail in Review of the Versar, Inc. 2003 and 2005 Sediment Data. The 2003 and 2005 data sets are inadequate to characterize the contaminant concentrations in the sediments to be dredged over the 102-mile Project area. Areas of new work dredging for the proposed Project are outside of the limits of the existing federal navigation channel that are subject to routine maintenance dredging. Specifically, 11 bend widening areas (approximately 215.9 acres in area), the 1V:3H channel side slopes required for the deeper channel, the deepening of the access channel to the Beckett Street Terminal, and the widening and deepening of the Marcus Hook Anchorage to accommodate a two space anchorage, all represent areas of new work dredging. These areas of new work dredging were not sampled during the 2003 and 2005 sampling events. Moreover, the sediment quality of these new work dredging areas has not been evaluated by the ACOE since before 1997.

(8) The dredged material from each specific "reach" of the Project area that will be placed in each specific upland CDF has not been adequately characterized and evaluated as separate "dredged material management units". Such characterization and analysis is required to evaluate the potential adverse impacts to surface water quality, groundwater quality, the aquatic and terrestrial ecosystems, and public health that could result from the dredging operations and the disposal of "reach specific" dredged material into each of the individual upland CDFs. Such characterization and analysis also is required to evaluate the need for any management activities during dredging operations and at each of the upland CDFs to minimize any potential adverse impacts.

Review of the Versar, Inc. 2003 and 2005 Sediment Data

The ACOE analyzed 45 sediment core samples (bulk sediment chemistry analyses only) in 2003 and 2005 in support of navigation channel maintenance work; the collected sediment samples were not located in any new work dredging areas associated with the proposed Project. The April 2009 EA only compares this sediment data to the New Jersey "Residential Direct Contact criteria", and apparently does not compare it to the current Technical Requirements for Site Remediation (N.J.A.C. 7:26E) Appendix 1 - Soil Remediation Standards Tables. Elutriate, Effluent (Modified) Elutriate, leaching, and biological analyses of these sediments were not conducted.

Section 4.1.4 of the April 2009 EA concludes that, even though exceedances of regulatory criteria for some metals were observed in the 2003 and 2005 sediment data, the "small number of exceedances is an indication that *channel sediments* [emphasis added] are not contaminated with inorganic metals". In addition, the April 2009 EA concludes that even though exceedances of regulatory criteria for some organic compounds were observed, "the relatively few detections above New Jersey criteria and the magnitude of the exceedances are indication that *channel sediments* [emphasis added] are not a contaminant of concern." [Note: the April 2009 EA may not have used the currently applicable criteria for metals and organics.] No recent sediment data has been collected from channel side bank and bend widening areas (i.e. new work dredging areas) and evaluated in the April 2009 EA. In addition, the actual volume of sediments to be dredged represented by each sample for which exceedances of applicable criteria have been observed have apparently not been considered by the ACOE when drawing the conclusions made in the April 2009 EA. Thus, the small number of criteria exceedances noted in the April 2009 EA

may, in fact, be indicative of large (but as of the present date undetermined) volumes of contaminated sediment.

Based on an analysis completed by the NJDEP Office of Dredging and Sediment Technology, a number of the maintenance dredging samples collected and analyzed by the ACOE in 2003 and 2005 exceed – or potentially exceed - the New Jersey Residential or Non-residential Soil Remediation Standards for compounds of concern.

- Versar (2005) data: the Non-Residential Soil Remediation Standards were exceeded for arsenic (Stations 21 and 24) and benzo(a)pyrene (Stations 1, 3, 4, 21, and 24; approached at Station 18). The Residential Soil Remediation Standards were exceeded for
 - thallium (Stations 12 and 19; approached at Station 29)
 - vanadium (Station 19)
 - heptachlor epoxide (Station 4)
 - benzo(a)anthracene (Stations 1 and 4; approached at Station 3)
 - benzo(b)fluoranthene (Stations 1, 3, and 4)

The MDLs for dibenz(a,h)anthracene (Station 3 and 4 samples) and PCB aroclors (ten stations) were greater than the Residential Soil Remediation Standards; thus, the non-detects observed in these samples may be actual exceedances of the Residential Soil Remediation Standards.

- Versar (2003) data: sample Ph-Sea-1 exceeded the Non-Residential Soil Remediation Standards for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene. The Non-Residential Soil Remediation Standard for benzo(a)pyrene was also exceeded at Stations Ph-Sea-4, Ph-Sea-5, Ph-Sea-8, and Ph-Sea-10. The data for Aroclor PCB-1221 indicate possible exceedances of the Residential Soil Remediation Standard for total PCBs in 14 of the 15 collected samples.

Some of the samples analyzed within Reach C of the Project (which is the first Reach that the ACOE proposes to dredge), exceed New Jersey's Non-residential Soil Remediation Standards for arsenic or benzo(a)pyrene. Most of the samples collected within Reach C potentially exceed New Jersey's Residential Soil Remediation Standards for PCBs.

The April 2009 EA also concludes in Section 4.1.4 that the “2003 and 2005 data sets support the findings presented in the 1997 [SEIS]” and that sediment conditions in the Project area have not changed since the evaluations completed as part of the 1997 SEIS. However, the statistical analyses conducted by Versar, Inc. that compared the 2003 and 2005 metals data with historical metals data from the early 1990's – and the inability to conduct such analyses for organic compounds – indicate that the 2003 and 2005 data do not support the findings of the 1997 SEIS.

- A statistical analysis presented in the Versar (2005) report found that concentrations of zinc and thallium have increased in certain areas of the river since the early 1990's. The Versar (2005) report also notes that insufficient data were available from the early 1990's historical data set to statistically compare it to the 2005 data for organic compounds.
- A statistical analysis presented in the Versar (2003) report found that concentrations of arsenic, beryllium, chromium, copper, nickel, lead, mercury, zinc, and thallium have increased in certain areas of the river since the early-1990's. The Versar (2003) report

also notes that due to the elevated detection levels in the sediment data for organic compounds collected in the early-1990s (and thus a lack of usable historical data), it was not possible to compare the 2003 and early 1990's historical data for organic compounds.

Effects of the 2004 M/T Athos Oil Spill

The April 2009 EA cites the sediment data collected by NOAA in December 2004 as part of the injury assessment from the November 26, 2004 M/T Athos I Oil Spill as evidence that sediment conditions in the Project area have not been impacted by this oil spill. The 42 collected samples were surface grab samples and were analyzed only for PAHs (bulk sediment chemistry analyses only). No elutriate, Effluent (Modified) elutriate, surface runoff, or biological analyses of the sediments were performed. Thus, potential impacts to water quality and the aquatic ecosystem from the dredging and management/disposal of these sediments cannot be evaluated.

The NJDEP Office of Dredging and Sediment Technology completed an evaluation of the December 2004 and January 2005 sediment data and the NOAA (2006) report that evaluates this data. As shown in Table 1, a number of samples exceeded one or more of the New Jersey Residential and/or Non-residential Soil Remediation Standards. Twenty-one (21) of these 42 samples exceeded the Non-residential Soil Remediation Standard for benzo(a)pyrene.

Based on an apparent misinterpretation of the NOAA Injury Assessment report the ACOE concluded in the Section 4.1.4 of the April 2009 EA that the M/T Athos I oil spill would not result in adverse impacts from dredging to construct the Delaware River Deepening Project. However, the NOAA Injury Assessment report did not evaluate the sediment that would be dredged, or the potential impacts from the dredging and dredged material disposal activities. The NOAA (2006) report also notes in Section 1.5.5 that the collected "subtidal sediment samples provide a limited overview of the potential degree and spatial extent of oiling in the Delaware River mainstem." In addition, the report states that with "the exception of four samples near Tinicum Island, the subtidal samples were either collected in tributaries or outside the area that appears to be most affected by the discharge [i.e. oil spill] ..."

The M/T Athos I Oil Spill must be considered a significant change in the Delaware River whose potential effects must be fully evaluated in any NEPA document for the proposed Project. Additional assessments are needed to evaluate the potential long-term impacts of the M/T Athos I oil spill on sediment quality (i.e. PAH concentrations) five years after the event. It is unknown to what extent the data from the surface sediment samples collected by NOAA in 2004 and 2005 are reflective of the sediments to be dredged as part of the Delaware River Deepening Project.

Table 1: Exceedances of NJ Residential and Non-residential Soil Remediation Standards in NOAA 2004 sediment data.					
Sample	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene
Subtidal Surface Grab Samples					
SED-WOOD-01	Res	Res & Non-res	Res & Non-res	Res*	
SED-WOOD-02		Res	Res & Non-res		
SED-WOOD-03		Res*	Res & Non-res		
SED-MAN-02			Res & Non-res		
SED-MAN-03			Res & Non-res		
SED-TN-01	Res*	Res	Res & Non-res		
SED-TN-03			Res & Non-res		
SED-TN-04			Res & Non-res		
SED-BTC-01		Res	Res & Non-res		
SED-BTC-02		Res	Res & Non-res		
SED-BTC-03		Res	Res & Non-res		
SED-PTB-02	Res	Res	Res & Non-res		
SCD-2			Res & Non-res		
SMH-3			Res & Non-res*		
Intertidal Surface Samples					
SED-RC-01			Res & Non-res		
SED-RC-02			Res & Non-res		
SED-RC-03			Res & Non-res		
SED-T1-01	Res & Non-res	Res & Non-res	Res & Non-res#	Res	Res
SED-T1-02	Res & Non-res	Res & Non-res	Res & Non-res#	Res	Res
SED-T1-03	Res	Res	Res & Non-res#	Res	Res
SED-CW-01	Res*	Res	Res & Non-res	Res*	
*approaches but does not exceed indicated standard					
#observed concentration at least 10X the standard					

Review of the Sediment Data Presented in the 1997 SEIS

Section 3.2.4 of the April 2009 EA references Section 4 of the 1997 SEIS for a discussion of the sediment quality data collected for the Project prior to 1997. Eight-six (86) sediment core samples were collected in the navigation channel and bend widening areas, and divided into 153 sediment strata for analysis. Section 4 of the 1997 SEIS includes a summary of the sediment data, presenting mean concentrations of all the samples collected within each of five Reaches along the length of the Delaware River. Sediments collected from the navigation channel are not evaluated separately in the 1997 SEIS from those collected in the bend widening areas. However, the 1997 SEIS states that “Bend widening locations provide a ‘worst case’ picture of contaminant concentrations that would potentially be in the dredged material. These areas are not currently dredged, as such contaminants could accumulate over a long period of time. Within the channel, accumulated sediment is quickly removed to maintain project dimensions, thus precluding contaminant accumulation over time.” (Section 4.1, page 4-2).

Section 4.1 of the 1997 SEIS summarizes the bulk sediment chemistry data for the 153 sediment strata. The NJDEP Office of Dredging and Sediment Technology completed a review of this summary, comparing the sediment data to the New Jersey Residential and Non-residential Soil Remediation Standards (Technical Requirements for Site Remediation, N.J.A.C. 7:26E, Appendix 1 - Soil Remediation Standards Tables). Exceedances of the Non-residential Soil Remediation Standards were observed in individual samples for arsenic in Reach C (Table 4-2). Almost all of the organic contaminants were not detected in all of the sediment samples. However, the mean method detection limits (MDLs), the mean Reach concentration, and/or the concentration in individual samples exceeded the Non-residential Soil Remediation Standards for benzo(a)pyrene in all five Reaches of the river. The mean MDLs in all five Reaches of the river were greater than the Non-residential Soil Remediation Standards for the dibenzo(a,h)anthracene (Table 4-5). From the information presented in the 1997 SEIS, it is not possible to identify how many sediment samples in each Reach exceeded the Non-residential Soil Remediation Standards for one or more contaminants, or the volume of dredged material represented by these samples.

The mean MDLs for PCBs and some pesticides were approximately equal to or greater than the Residential Soil Remediation Standards; thus, the data is of limited use in characterizing the sediments (Tables 4-3 and 4-4 of the 1997 SEIS). Individual samples exceeded the Residential Soil Remediation Standard for the PAHs benzo(b)fluoranthene in Reaches A, B, and C, and for benzo(a)anthracene in Reach B. The reported mean MDLs for a number of organic compounds reported in Tables 4-7 and 4-8 of the 1997 SEIS also exceeded the Residential Soil Remediation Standards. Exceedances of the Residential Soil Remediation Standards were observed in individual samples for antimony (Reaches B, C, and D) and thallium (Reaches B and D).

Section 4.2 of the 1997 SEIS summarizes the elutriate data collected for 107 of the 153 sediment strata samples. No Effluent (Modified) Elutriate or surface runoff analyses were performed on these samples. Thus, using the data presented in the 1997 SEIS, it is not possible to predict potential impacts to surface water quality and the aquatic ecosystem resulting from the placement of the dredged material from the proposed Project into upland CDFs, and the subsequent discharge of dewatering effluent and surface runoff to the Delaware River. The 1997 SEIS does not discuss the Modified Elutriate analyses conducted by The Greely-Polhemus Group, Inc. (1993) and discussed in Review of pre-1997 Sediment Data.

Section 4.3 of the 1997 SEIS discusses the analysis of 20 sediment core samples collected in 1994 using the Toxicity Characteristic Leaching Procedure (TCLP). It is not appropriate to use the TCLP to analyze potential impacts to groundwater resulting from the placement of dredged material into upland CDFs; as specified in the USACE (2003) manual, the Sequential Batch Leach Test or the Pancake Column Leach Test must be used. Thus, using the data presented in the 1997 SEIS, it is not possible to predict potential impacts to groundwater quality resulting from the placement of the dredged material from the proposed Project into upland CDFs.

Section 4.5 of the 1997 SEIS discusses the biological effects testing conducted on 38 surface grab sediment samples. Sediment core samples were not collected and used for these analyses; thus, the sediments analyzed in these tests do not fully reflect the sediments that will be dredged as part of the proposed Project. Therefore, it is not possible to predict the potential impacts to the aquatic ecosystem resulting from the dredging operations or the disposal of dredged material at an open water disposal site using the bioassay data presented in the 1997 SEIS.

Section 4.5 of the 1997 SEIS also discuss the results of high-resolution PCB analyses conducted on 15 sediment core samples collected in October 1996 in the navigation channel; no samples were collected in channel side bank or bend widening areas. The NJDEP Office of Dredging and

Sediment Technology completed a review of the Versar, Inc. (1997) report evaluating this sediment PCB data. This review suggests that – based on the Versar, Inc. (1997) and Arthur D. Little (1994) data [cited in the Versar, Inc. (1997) report and the 1997 SEIS] - total PCB levels may be higher in channel side bank and bend widening areas compared to the navigation channel proper. The 1997 SEIS states that statistical analyses suggest “that the accumulation of PCBs in the estuary occurs primarily in shoal areas outside the navigation channel.” (page 4-85).

Review of pre-1997 Sediment Data

The NJDEP Office of Dredging and Sediment Technology completed a review of the sediment data collected in October 1994 in the navigation channel and reported in Greely-Polhemus Group, Inc. (1995). In order for this data to be useful, the reported analytical method detection limits (MDLs) must be equal to or less than the applicable evaluative criteria. For the bulk sediment chemistry analyses, the MDLs were compared to the New Jersey Residential and/or Non-residential Soil Remediation Standards. The reported MDLs were not acceptable (i.e. the data were not useable) in all of the samples for PCBs, chlordane, benzo(a)pyrene, dibenz(a,h)anthracene, hexachlorobenzene, and N-nitroso-di-n-propylamine, and in some/many samples for a number of semi-volatile organic compounds (including some PAHs).

The NJDEP Office of Dredging and Sediment Technology completed a review of the sediment data collected in November 1992 in bend widening areas associated with the project and reported in Greely-Polhemus Group, Inc. (1993). In order for this data to be useful, the reported analytical method detection limits (MDLs) must be equal to or less than the applicable evaluative criteria. For the bulk sediment chemistry analysis, the MDLs were compared to the New Jersey Residential and/or Non-residential Soil Remediation Standards. The reported MDLs were not acceptable (i.e. the data were not useable) in all of the samples for PCBs, and in some/many samples for a number of pesticides and semi-volatile organic compounds (including some PAHs).

The Greely-Polhemus Group, Inc. (1993) report notes that, due to some unspecified Quality Assurance/Quality Control issues, the modified elutriate sample data for detected compounds should be considered estimates; the reliability and useability of this data is thus not known. The MDLs for the modified elutriate data were compared to various Delaware River Basin Commission (DRBC) “stream quality objectives” for marine waters (Tables 5, 6, and 7 in the DRBC Administrative Manual Part III – Water Quality Regulations – with amendments through July 16, 2008; 18 CFR Part 410; dated September 12, 2008). The reported MDLs were not acceptable (i.e. the data were not useable) for a variety of compounds for each of the three applicable types of “stream quality objectives”. In particular, the MDLs were not acceptable (i.e. the data were not useable) for all samples relative to all three applicable types of “stream quality objectives” for PCBs.

The NJDEP Office of Dredging and Sediment Technology completed a review of Greene (1999). The author of this report conducted a detailed study of the bulk sediment chemistry data (metals only) for the samples collected by the ACOE in 1994 in support of the 1997 SEIS; the sediment samples collected in 1991 by the ACOE were not used because of very high detection levels. The sediment samples collected in the main navigation channel (44 samples) and in bend widening locations (91 samples) were evaluated separately and statistically compared to each other. Significant observations and conclusions of Greene (1999) include the following:

- The ACOE concluded in the 1997 SEIS that the Project would not result in significant adverse environmental impacts “without providing an estimate of [the] expected

contaminant mass loading[s][that will be] discharged back to the Delaware [River] during [upland] CDF de-watering operations.”

- b. “[T]he most significant risks associated with this [P]roject may be issues essentially ignored in the [1997 SEIS]; namely, discharges from [upland] CDFs and sediment disturbance in approach channels and berthing areas in the highly urbanized, more contaminated tidal Delaware River.”
- c. “The [ACOE] stated [in the 1997 SEIS] that the level of contamination in the bends is no different than that in the main navigation channel. The [ACOE] provided no support for that conclusion.” Statistical analyses presented in Greene (1999) demonstrate that metals “contaminant concentrations are quite different in the main channel versus the bends.” The median concentrations of antimony, arsenic, beryllium, copper, and thallium were greater in the bend widening areas compared to the main channel. In contrast, the median concentrations of cadmium, lead, and selenium were higher in the navigation channel. No statistically significant differences were found for the median concentrations of mercury, nickel, silver, and zinc.

The above findings and conclusions of Greene (1999) are consistent with the NJDEP position that the ACOE needs to comprehensively sample and characterize the sediments to be dredged from the channel side banks and bend widening areas in order to evaluate the potential impacts of the proposed Project.

Documents Reviewed

CH2MHill 2009. Groundwater monitoring summary reports (various confined disposal facilities) 2002-2004 (or 2006), June 2009 (draft).

Delaware River Main Stem and Channel Deepening Project Environmental Assessment (EA; April 2009).

Greely-Polhemus Group, Inc. 1995. Delaware River – Philadelphia to the Sea: Chemical analysis of sediments, May 1995.

Greely-Polhemus Group, Inc. 1993. Delaware River Comprehensive Navigation - Chemical analysis of sediments, February 1993.

Greene, R. 1999. Metal contamination of sediments in the Delaware River navigation channel: Pre-dredge sediment quality and evaluation of potential water quality criteria excursions during the Main Channel Deepening Project, Delaware Department of Natural Resources and Environmental Control, February 1999 (draft).

National Oceanic and Atmospheric Administration 2006. Final Preassessment Data Report – *M/T Athos I* Oil Spill, Delaware River, June 2006, 36 pp. + Appendices.

Versar, Inc. 2005. Delaware River - Philadelphia, Pennsylvania to New Castle, Delaware - Chemical analysis of dredged river sediments, November 2005, 47 pp.

Versar, Inc. 2003. Chemical analysis of maintenance dredge material from the Marcus Hook, Deepwater Point, and New Castle navigational ranges, October 2003, 50 pp.

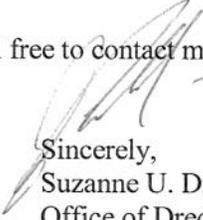
Versar, Inc. 1997. Delaware River – Philadelphia to the Sea Project high resolution PCB analysis of channel sediments, March 1997.

Conclusions

The ACOE has not comprehensively evaluated the characteristics of the sediments to be dredged during the proposed Project, particularly sediments in the channel side banks and bend widening areas (i.e. new work dredging areas), and has not complied with the USEPA/ACOE 1998 Inland Testing Manual, the ACOE 2003 Upland CDF Manual, and the 1997 NJDEP Dredging Manual. The data and associated evaluations presented in the April 2009 EA may not reflect existing conditions in the Delaware River and Bay, and the EA has not evaluated the potential impacts that could result from the proposed Project. Available information on sediment quality in the Project area indicates that implementation of a comprehensive sediment sampling and analysis plan is needed to ensure the protection of the environment and public health. The ACOE must implement a comprehensive sediment sampling and analysis plan in accordance with the above-referenced technical manuals for the entire 102-mile Project area before the proposed Project is implemented.

If you have any questions, please feel free to contact me at (609) 292-8838.

Sincerely,


Joel A. Pechioli
Research Scientist I
for
Suzanne U. Dietrick, Chief
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JUL - 1 2009

Dear Lieutenant Colonel Tickner:

I am writing in response to your issuance of an Environmental Assessment (EA) for the Delaware River Main Stem and Channel Deepening Project issued on April 9, 2009 (CENAP-PL-E-09-04). The EA evaluates the impact of changes to the project that are the result of detailed preconstruction studies, as well as changes to existing conditions from those described in the 1997 Supplemental Environmental Impact Statement (SEIS) and the 1998 Record of Decision (ROD) for the project. Based on information presented in the EA and from recent studies and public comments, the Army Corps has concluded that any changes to the project would have no significant adverse effects on the environment above those addressed in the earlier Environmental Impact Statement (EIS), SEIS, and ROD.

I am writing to express concerns with respect to general conformity under the Clean Air Act, specifically with your reliance upon the final conformity analysis entitled *Delaware River Main Channel Deepening Project General Conformity Analysis and Mitigation Report*, February 2004, Moffat & Nichol. The EA states, "Due to the reduction in dredging quantities and associated changes to the dredged material disposal plan for the Delaware River and beneficial use of dredged material in Delaware Bay, the emissions generated from construction of the deepening project will be less than estimated in 2004" and that "USACE is in the process of updating the emissions analysis."

However, under the Environmental Protection Agency's (EPA) general conformity requirements rule pertaining to the frequency of conformity determinations at 40 CFR 93.157(a), the conformity status of a Federal action automatically lapses five years from the date a final conformity determination is reported. More than five years have elapsed since the February 2004 conformity determination referenced above and the associated federal action has not commenced. Therefore, that conformity determination has automatically expired and a new conformity determination is now required. This new conformity determination should not only reflect the most recent project assumptions and timeframes, but should also rely upon the most recent supporting available information and planning assumptions, per 40 CFR 93.159. While EPA's regulations do not require a new conformity determination simply because the project has a smaller impact on air quality, the expiration of the prior conformity determination is not eliminated by the reduced scale of the revised project.

Please also note that since the preparation of the 2004 conformity determination, EPA revised its conformity rule (in July 2006) to include de minimus applicability thresholds for PM_{2.5} and it

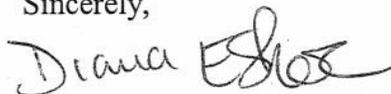
precursors (100 tons per year each, of direct emissions of fine particulates smaller than 2.5 microns (PM_{2.5}), sulfur oxides (SO_x), nitrogen oxides (NO_x), and volatile organic compounds (VOCs)). The Philadelphia-Wilmington area was designated nonattainment for PM_{2.5} after the 2003 air quality analysis done in support of the February 2004 general conformity determination. The Philadelphia-Wilmington-Atlantic City area has also been designated as a moderate 8-hour ozone standard nonattainment area since the time of the 2004 conformity determination and EPA is now in the process of designating the area under the revised 8-hour ozone standard.

My staff has had several meetings with the Army Corps team working on the environmental review for this project, and it is my understanding that the Corps intends to prepare an entirely new air conformity applicability analysis of this project to reflect the newest project scope and assumptions. To date, project emissions have only been analyzed for early segments of the deepening project. A complete analysis for the entire deepening project is a number of months from being completed. Conformity cannot be determined on the individual deepening segments, but must be assessed on the whole federal action. This new conformity determination must be completed in coordination with other agencies and the affected states, and then must undergo public participation, per federal conformity requirements.

I am writing to stress the importance of completing the general conformity process in a timely manner, as a subject federal action may not be taken prior to a determination that the action conforms to the applicable state implementation plan, per 40 CFR 93.150. Before the determination can be made, the project analysis must be completed and any necessary mitigation required for a finding of conformity must be identified, per the requirements of 40 CFR 93.158(d). With the 2004 conformity determination having expired, there will not be a conformity determination in place prior to the construction timeframes specified in the proposed EA. The dredging operations schedule provided in the EA indicates operations will commence in the summer of 2009, but a new conformity analysis and conformity determination will not be completed and have undergone the requisite agency review and public participation requirements by then. The dredging operation time frames stated in the EA for this action do not provide sufficient time for your office to comply with the Clean Air Act conformity requirements.

Please contact me at (215) 814-2706 to discuss this matter further, or have your staff contact Cristina Fernandez, Chief of the Air Quality Planning Branch at (215) 814-2178. Please note that EPA may submit additional comments with respect to other aspects of the EA at a later date.

Sincerely,



Diana Esher, Acting Director
Air Protection Division

cc: Environmental Resources Branch, U.S. Army Corps of Engineers
John H. Estey, Esquire, Chairman, Philadelphia Regional Port Authority
John Pomponio, EPA EAID



PROJECT PARTNERSHIP AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
PHILADELPHIA REGIONAL PORT AUTHORITY
FOR CONSTRUCTION OF THE
DELAWARE RIVER MAIN STEM AND CHANNEL PROJECT

THIS AGREEMENT is entered into this 23rd day of June, 2008, by and between the Department of the Army (hereinafter the "Government"), represented by the Assistant Secretary of the Army (Civil Works), and the Philadelphia Regional Port Authority (hereinafter the "Non-Federal Sponsor"), represented by its Chairman and Executive Director.

WITNESSETH, THAT:

WHEREAS, construction of the Delaware River Main Stem and Channel Project at Delaware, New Jersey, and Pennsylvania, was authorized by Section 101(6) of the Water Resources Development Act of 1992, Public Law 102-580, which was modified by Section 308 of the Water Resources Development Act of 1999, Public Law 106-53, and further modified by Section 306 of the Water Resources Development Act of 2000, Public Law 106-541;

WHEREAS, the Government and the Non-Federal Sponsor desire to enter into a Project Partnership Agreement (hereinafter the "Agreement") for construction of the Delaware River Main Stem And Channel Project (hereinafter the "Project", as defined in Article I.A. of this Agreement);

WHEREAS, Section 101 of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2211), specifies the cost-sharing requirements applicable to the Project;

WHEREAS, Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended (42 U.S.C. 1962d-5b), and Section 101 of the Water Resources Development Act of 1986, Public Law 99-662 (33 U.S.C. 2211), provide, *inter alia*, that the Secretary of the Army shall not commence construction of any water resources project, or separable element thereof, until each non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

WHEREAS, Section 902 of the Water Resources Development Act, Public Law 99-662, as amended (33 U.S.C. 2280), establishes the maximum amount of costs for the Project and sets forth procedures for adjusting such maximum amount;

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the Project in accordance with the terms of this Agreement;

WHEREAS, the Government and the Non-Federal Sponsor, in connection with this Project Partnership Agreement, desire to foster a “partnering” strategy and a working relationship between the Government and the Non-Federal Sponsor through a mutually developed formal strategy of commitment and communication embodied herein, which creates an environment where trust and team work prevent disputes, foster a cooperative bond between the Government and the Non-Federal Sponsor, and facilitate the completion of a successful project;

WHEREAS, the Non-Federal Sponsor desires to acquire certain dredged material disposal facilities sites, which will be provided to meet the Non-Federal Sponsor’s responsibilities for the Project and be available for the disposal of certain dredged material from the Project, as well as non-project dredged materials, subject to compliance with the requirements of all applicable environmental laws, subject to issuance of all necessary permits;

WHEREAS, the Non-Federal Sponsor considers dredge material a resource and may pursue use of the material for mine site placement and the manufacture of lightweight aggregates and top soil subject to compliance with the requirements of all applicable environmental laws, subject to issuance of all necessary permits and subject to such agreements as may be necessary with the Government;

WHEREAS, the Non-Federal Sponsor may offer in writing to accelerate provision to the Government of all or a portion of its required contribution of funds for immediate use by the Government for construction of the general navigation features;

WHEREAS, Section 308 of the Water Resources Development Act of 1999, Public Law 106-53, provides that:

(1) the Secretary of the Army may provide credit against the non-Federal share for the costs of engineering and design and construction management work performed by the Non-Federal Sponsor that the Secretary determines is necessary to implement the Project;

(2) the Secretary may provide credit against the non-Federal share for the costs of construction performed by the Non-Federal Sponsor that the Secretary determines is necessary to implement the Project;

(3) the Secretary may enter into an agreement with a non-Federal interest for the payment of disposal or tipping fees for dredged material from a Federal project, other than for the construction or operation and maintenance of the Project, if the non-Federal interest has supplied the corresponding capacity; and

(4) the Secretary may enter into an agreement with the Non-Federal Sponsor to carry out or cause to have carried out a disposal area management program for dredged material disposal areas necessary to construct, operate and maintain the project and to reimburse the Non-Federal Sponsor for the costs of carrying out the program;

WHEREAS, Section 306 of the Water Resources Development Act of 2000, Public Law 106-541, authorizes the Secretary of the Army to provide credit toward the non-Federal share of the cost of the Project under Section 101(a)(2) of the Water Resources Development Act of 1986, Public Law 99-662 for:

- (1) the cost of providing additional capacity at dredged material disposal areas; and
- (2) the cost of providing community access to the Project (including such disposal areas) and the cost of meeting applicable beautification requirements;

WHEREAS, the Non-Federal Sponsor has performed certain work and proposes to perform certain work (hereinafter referred to as the "Section 308 Work"), which is a part of the Project;

WHEREAS, on January 7, 2002 the Assistant Secretary of the Army (Civil Works) delegated the authority to the U.S. Army Engineer for the Philadelphia District (hereinafter the "District Engineer") to 1) accept items of work accomplished by the Non-Federal Sponsor for credit under Section 308 of the Water Resources Development Act of 1999, Public Law 106-53, which has been determined necessary to implement the Project; and 2) identify the costs for credit toward the Non-Federal Sponsor's required contribution, subject to Government audit, the availability of Federal funds, and other such conditions as prescribed by the Government;

WHEREAS, the Government anticipates that the State of Delaware will issue a State Subaqueous Lands and Wetlands Permit, such permit to be issued prior to the commencement of construction of the Project, under terms acceptable to the Government;

WHEREAS, the Non-Federal Sponsor agrees that all disposal costs for the disposal of dredged or excavated material from the Project shall be the least costly, environmentally acceptable method of disposal as identified in the December 2002 Comprehensive Economic Reanalysis Report, supplemented by the February 2004 report, and the April 2008 Economic Update Report, and that it will pay any costs that exceed that amount, at non-Federal expense, if it proposes a method of disposal of dredged or excavated material, or location of disposal sites, that are not the least costly, environmentally acceptable method of disposal.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I - DEFINITIONS AND GENERAL PROVISIONS

For purposes of this Agreement:

A. The term "Project" shall mean the general navigation features; removals accomplished in accordance with Article II of this Agreement; and all lands, easements, rights-of-way, and relocations that the Government, in accordance with Article III of this Agreement, determines to be necessary for the construction, operation, or maintenance of the general navigation features, but shall not include aids to navigation or the local service facilities.

B. The term “general navigation features” shall mean deepening the 102.5 mile long channel extending from deep water in the Delaware Bay to Philadelphia Harbor, Pennsylvania and to the upstream limit of Beckett Street Terminal, Camden New Jersey, to 45 feet below mean low water; widening 12 of the 16 existing channel bends; deepening a two-space anchorage to a depth of 45 feet at Marcus Hook anchorage; including any overdepth dredging; and Non-Federal Sponsor dredged material disposal facilities, including possible dredged material disposal facilities and land-based and aquatic dredged material disposal facilities that are necessary for the disposal of dredged material required for project construction, and existing Federal dredged material disposal facilities (Reedy Point South, Artificial Island, Killcohook, Penns Neck, Pedricktown South, Pedricktown North, Oldmans, and National Park) as generally described in the February 1992 Interim Feasibility Report, approved by Report of the Chief of Engineers dated June 29, 1992, Supplemented by the approved Limited Reevaluation Report dated February 1998 and approved by the Chief, Planning Division, Headquarters, U.S. Army Corps of Engineers on October 20, 1997, and revised by the December 2002 Comprehensive Economic Reanalysis with a February 2004 Supplement approved by the Director of Civil Works on March 12, 2004, and the April 2008 Economic Update Report.

C. The term “local service facilities” shall mean the facilities that are necessary to realize the benefits of the general navigation features, as generally described in, and required of the Non-Federal Sponsor by the Corps’ February 1992 Interim Feasibility Report, and Supplemented by the approved Limited Reevaluation Report dated February 1998 including, but not necessarily limited to, the disposal of dredged or excavated material associated with construction, operation and maintenance of the local service facilities. The local service facilities are the berthing areas for the docks at Beckett Street Terminal, NJ; Packer Avenue Marine Terminal, PA; Sun Oil at Westville, NJ; Sun Oil Fort Mifflin, PA; Sun Oil Hog Island, PA; Valero Oil Corporation, Paulsboro, NJ; Conoco Phillips, Marcus Hook, PA; and Sun Oil Marcus Hook, PA.

D. The term “total cost of construction of the general navigation features” shall mean all costs incurred by the Non-Federal Sponsor or the Government in accordance with the terms of this Agreement directly related to construction of the general navigation features. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: continuing planning and engineering costs incurred after October 1, 1985; advanced engineering and design costs; preconstruction engineering and design costs including the value of the Non-Federal Sponsor’s Design Coordination Team Activities; engineering and design costs during construction; the costs of investigations to identify the existence and extent of hazardous substances in accordance with Article XV.A.1. and Article XV.A.3. of this Agreement; the Government’s costs of cleanup and response in accordance with Article XV.D.2. of this Agreement; costs of historic preservation activities in accordance with Article XVIII.A. and Article XVIII.D.1. of this Agreement; actual construction costs (including any costs incurred in the construction of dredged or excavated material disposal facilities during any subsequent period of construction, the costs of alteration, lowering, raising, or replacement and attendant demolition of existing bridges over navigable waters of the United States, the costs incurred for the Section 308 Work as determined in accordance with Article II.G. of this Agreement for which the Government affords credit in accordance with Article II.H. of this Agreement); supervision and administration costs; costs of

participation in the Project Coordination Team in accordance with Article V of this Agreement; costs of contract dispute settlements or awards; incidental costs of removals accomplished by the Non-Federal Sponsor before the end of the period of construction or during any subsequent period of construction in accordance with Article II.Q. of this Agreement; direct and incidental costs of removals accomplished by the Government before the end of the period of construction or during any subsequent period of construction in accordance with Article II.P. of this Agreement; and costs of audit in accordance with Articles X.B. and X.C. of this Agreement. The term does not include the value of any lands, easements, rights-of-way, or relocations; any costs of removals accomplished by the Non-Federal Sponsor other than incidental costs; any financial obligations for operation or maintenance of the general navigation features; any costs assigned to an existing Federal navigation project in accordance with Article II.E. of this Agreement; any costs due to betterments; any costs of dispute resolution under Article VII of this Agreement; any costs of aids to navigation; or any costs of construction, operation or maintenance of the local service facilities.

E. The term “financial obligation for construction” shall mean a financial obligation of the Government that results or would result in a cost that is or would be included in the total cost of construction of the general navigation features.

F. The term “non-Federal proportionate share” shall mean the ratio of the Non-Federal Sponsor’s total contribution required in accordance with Article II.F. of this Agreement to total financial obligations for construction, as projected by the Government.

G. The term “period of construction” shall mean the time from the date the Government first notifies the Non-Federal Sponsor in writing, in accordance with Article VI.B. of this Agreement, of the scheduled date for either issuance of the solicitation for the first contract for construction of the general navigation features or commencement of construction of the general navigation features using the Government’s own forces, to the date that the U.S. Army Engineer for the Philadelphia District (hereinafter the “District Engineer”) notifies the Non-Federal Sponsor in writing of the Government’s determination that construction of the general navigation features is complete, except for construction of any dredged or excavated material disposal facility identified in Article I.B. of this Agreement for which a construction contract has not been awarded at the time of the written notice.

H. The term “subsequent period of construction” shall mean a period of time after the period of construction beginning with the date that the Government first notifies the Non-Federal Sponsor in writing of the scheduled date for either issuance of the solicitation for the contract or commencement using the Government’s own forces of construction of a dredged or excavated material disposal facility that is part of the general navigation features as defined in Article I.B. of this Agreement and ending with the date that the District Engineer notifies the Non-Federal Sponsor in writing of the Government’s determination that construction is complete. There may be more than one subsequent period of construction.

I. The term “highway” shall mean any public highway, roadway, street, or way, including any bridge thereof.

J. The term “bridge over navigable waters of the United States” shall mean a lawful bridge over the navigable waters of the United States, including approaches, fenders, and appurtenances thereto, which is used and operated for the purpose of carrying railroad traffic, or both railroad and highway traffic, or if a State, county, municipality, or other political subdivision is the owner or joint owner thereof, which is used and operated for the purpose of carrying highway traffic.

K. The term “relocation” shall mean providing a functionally equivalent facility, to the owner of an existing utility, cemetery, highway, railroad (including any bridge thereof), or public facility, excluding existing bridges over navigable waters of the United States, when such action is authorized in accordance with applicable legal principles of just compensation or providing a functionally equivalent facility when such action is specifically provided for, and is identified as a relocation, in the authorizing legislation for the Project or any report referenced therein. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant demolition of the affected facility or part thereof.

L. The term “removal” shall mean eliminating an obstruction (other than a bridge over the navigable waters of the United States) where the Government determines, after consultation with the Non-Federal Sponsor, that: 1) elimination is necessary for the construction, operation, or maintenance of the general navigation features, including the borrowing of material or the disposal of dredged or excavated material associated therewith; 2) elimination must be accomplished before the end of the period of construction or during a subsequent period of construction, and 3) the Non-Federal Sponsor, the States of New Jersey or Delaware or the Commonwealth of Pennsylvania, or the Government has the legal capability to accomplish elimination of the obstruction at the expense of the owner or operator thereof. The term also shall mean the elimination of an obstruction to the construction, operation, or maintenance of the general navigation features when such elimination is specifically provided for, and is identified as a removal, in the authorizing legislation for the Project or any report referenced therein.

M. The term “fiscal year” shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

N. The term “betterment” shall mean a change in the design and construction of an element of the general navigation features accomplished at the request of the Non-Federal Sponsor resulting from the application of standards that the Government determines exceed those that the Government would otherwise apply for accomplishing the design and construction of that element.

O. The term “dredged or excavated material disposal facility” shall mean the improvements necessary on lands, easements, or rights-of-way to enable the disposal of dredged or excavated material associated with the construction, operation, or maintenance of the other general navigation features. Such improvements may include but are not necessarily limited to, retaining dikes, wasteweirs, bulkheads, embankments, monitoring features, stilling basins, or de-watering pumps or

pipes. The term also includes modifications to a dredged or excavated material disposal facility to increase capacity beyond that created by regularly recurring operation and maintenance activities.

P. The term “over-depth” shall mean additional depth required to accomplish advanced maintenance, if any, and to compensate for dredging inaccuracies.

Q. The term “utility” shall mean that which the States of Delaware or New Jersey or the Commonwealth of Pennsylvania, pursuant to generally applicable state law, defines as a public utility.

R. The term “Design Coordination Team Activities” shall mean the oversight of issues related to design, including scheduling of report and work products; development of plans and specifications; anticipated real property and relocation requirements for construction or implementation of the Project; contract awards and modifications; contract costs; the Government’s cost projections; anticipated requirements and needed capabilities for performance of operation, maintenance, repair, replacement and rehabilitation of the Project; and other related matters.

S. The term “value of the Non-Federal Sponsor’s Design Coordination Team Activities” shall mean the reasonable, allowable, and allocable costs incurred by the Non-Federal Sponsor after October 1, 1996 for Design Coordination Team Activities, as determined by the Government and subject to an audit in accordance with Article X of this Agreement.

T. The term “Section 308 Work” means work on the Project that the Non-Federal Sponsor performed or causes to be performed for which the Government will afford credit pursuant to Section 308 of Public Law 106-53 and includes but is not limited to performing engineering studies and designs; construction plans and specifications; technical reviews; quality assurance services such as surveying, inspection and reporting; construction management and construction of dredged material disposal facilities. All such Section 308 Work is subject to the approval of the Government and subject to compliance with all applicable environmental laws and regulations.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, subject to receiving funds appropriated by the Congress of the United States (hereinafter the “Congress”) and using those funds and funds provided by the Non-Federal Sponsor, shall expeditiously construct the general navigation features (excluding the Section 308 Work but including alteration, lowering, raising, or replacement and attendant removal of existing bridges over navigable waters of the United States), applying those procedures usually applied to Federal projects, pursuant to Federal laws, regulations, and policies.

I. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all Government contracts, including relevant plans and specifications, prior to the Government’s issuance of such solicitations. The Government shall not

issue the solicitation for the first construction contract until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the Project and the local service facilities. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review in advance and comment on all subsequent solicitations for all contracts and all contract modifications, including change orders. In any instance where providing the Non-Federal Sponsor with notification of a contract modification is not possible prior to execution of the contract modification, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of solicitations, award of contracts, execution of contract modifications, resolution of contract claims, and performance of all work on the general navigation features, except for the Section 308 Work, shall be exclusively within the control of the Government.

2. Throughout the period of construction and during any subsequent period of construction, the District Engineer shall furnish the Non-Federal Sponsor with a copy of the Government's Written Notice of Acceptance of Completed Work for each contract awarded by the Government for the general navigation features.

3. For applicable Section 308 Work, the Government shall be afforded an opportunity to review and comment on the solicitations for all Non-Federal Sponsor contracts including relevant plans and specifications, prior to the Non-Federal Sponsor's issuance of such solicitations. Construction of Section 308 Work shall not commence until the designs, detailed plans and specifications, and arrangements for prosecution of such work have been approved in writing by the District Engineer, or his representative. All bids received and proposed provisions of any contract shall be subject to review by the Government prior to contract award. In addition, all proposed changes in approved designs, plans, and specifications shall be reviewed and approved by the District Engineer or his representative in writing in advance of the related construction where practicable. In any instance where providing the Government with notification of a change or contract modification is not possible prior to execution of the change or modification, the Non-Federal Sponsor shall provide notification and supporting documentation to enable Government review at the earliest date possible. To the extent possible, the Non-Federal Sponsor also shall afford the Government the opportunity to review and comment on all contract claims prior to resolution thereof. The Non-Federal Sponsor shall consider in good faith the comments of the Government made as a result of its review, but the contents of solicitations, award of contract claims, and performance of applicable Section 308 Work shall be exclusively within the control of the Non-Federal Sponsor. However, the failure of the Non-Federal Sponsor to comply with direction received from the District Engineer, with respect to the Section 308 Work, may result in the costs associated with such work being determined ineligible for credit towards the Non-Federal Sponsor's share of Project costs.

4. Notwithstanding paragraph A.1. of this Article, if the award of any contract for construction of the general navigation features would result in cumulative financial obligations for construction exceeding \$331,313,000 (FY 2008 price level inflated to the mid-year of construction),

the Government and the Non-Federal Sponsor agree to defer award of that contract and all subsequent contracts for construction of the general navigation features until such time as the Government and the Non-Federal Sponsor agree to proceed with further contract awards for the general navigation features, but in no event shall the award of contracts be deferred for more than three years. Notwithstanding this general provision for deferral of contract awards, the Government, after consultation with the Non-Federal Sponsor, may award a contract or contracts after the Assistant Secretary of the Army (Civil Works) makes a written determination that the award of such contract or contracts must proceed in order to comply with law or to protect human life or property from imminent and substantial harm.

5. As of the effective date of this Agreement, \$24,070,000 of Federal funds have been made available for the Project. The Government makes no commitment to budget additional Federal funds for the Project. Notwithstanding any other provision of this Agreement, the Government's financial participation in the Project is limited to this amount together with any additional funds that the Congress may appropriate for the Project. In the event that the Congress does not appropriate funds for the Project sufficient to meet the Federal share of the costs of work on the Project in the then-current or upcoming fiscal year, the Government shall notify the Non-Federal Sponsor of the insufficiency of funds and the parties, within the Federal and non-Federal funds available for the Project, shall suspend construction or terminate this Agreement in accordance with Article XIV.B. of this Agreement. To provide for this eventuality, the Government may reserve a percentage of total Federal funds available for the Project and an equal percentage of the total funds contributed by the Non-Federal Sponsor in accordance with Article II.F. of this Agreement, as applicable, as a contingency to pay costs of termination, including any costs of resolution of contract claims and contract modifications.

B. The Non-Federal Sponsor may request the Government to accomplish betterments. Such requests shall be in writing and shall describe the betterments requested to be accomplished. If the Government in its sole discretion elects to accomplish the requested betterments or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs due to the requested betterments and shall pay all such costs in accordance with Article VI.C. of this Agreement.

C. In accordance with Article III of this Agreement, the Non-Federal Sponsor shall provide all lands, easements, or rights-of-way that the Government determines the Non-Federal Sponsor must provide for the construction, operation, or maintenance of the general navigation features, including the borrowing of material or the disposal of dredged or excavated material associated therewith, and shall perform or ensure performance of all relocations that the Government determines to be necessary for the construction, operation, or maintenance of the general navigation features.

D. The Non-Federal Sponsor may request the Government to provide lands, easements, or rights-of-way, including those necessary for the borrowing of material or the disposal of dredged or

excavated material, or to perform relocations for the general navigation features on behalf of the Non-Federal Sponsor. Such requests shall be in writing and shall describe the services requested to be performed. If in its sole discretion the Government elects to perform the requested services or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs of the requested services and shall pay all such costs in accordance with Article VI.C. of this Agreement. Notwithstanding the provision of lands, easements, or rights-of-way, or performance of relocations by the Government, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.D. of this Agreement.

E. The Government shall assign all costs associated with the dredging of material from the dimensions, including over-depth, of any existing Federal navigation project to the costs of operation and maintenance of the existing Federal navigation project. The Government, in accordance with Federal laws, regulations, and policies, shall assign all costs included or to be included in the total cost of construction of the general navigation features to a Project depth of 45 feet. The Government shall include any costs associated with over-depth dredging accomplished as part of the general navigation features in the costs assigned to the Project depth.

F. The Non-Federal Sponsor shall contribute 25 percent of the total cost of construction of the general navigation features (including any costs of dredged or excavated material disposal facilities during the period of construction and all subsequent periods of construction).

1. If the Government projects at any time that the collective value of the Non-Federal Sponsor's Design Coordination Team Activities and the Non-Federal Sponsor's contributions under paragraph Q.3. of this Article and Article V, Article X, and Article XV.A.1. of this Agreement determined by the Government to be attributable to the general navigation features constructed during the period of construction will be less than the Non-Federal Sponsor's required share of 25 percent of the portion of total cost of construction of the general navigation features that will be incurred during the period of construction, the Government shall determine the amount of funds that would be necessary to meet the Non-Federal Sponsor's required share prior to any consideration of the credit the Government projects will be afforded pursuant to paragraph H. and paragraph S. of this Article.

2. The Non-Federal Sponsor shall provide funds in the amount determined by this paragraph in accordance with Article VI.B. of this Agreement. To determine the contribution of funds the Non-Federal Sponsor shall provide for the period of construction, the Government shall reduce the amount determined in accordance with paragraph F.1. of this Article by the amount of credit the Government projects will be afforded pursuant to paragraph H. and paragraph S. of this Article.

3. If the Government projects at any time that the collective value of the Non-Federal Sponsor's Design Coordination Team Activities and the Non-Federal Sponsor's contributions under paragraph Q.3. of this Article and Article V, Article X, and Article XV.A.1. of this Agreement

determined by the Government to be attributable to the general navigation features constructed during a subsequent period of construction will be less than the Non-Federal Sponsor's required share of 25 percent of the portion of total cost of construction of the general navigation features that will be incurred during such subsequent period of construction, the Government shall determine the amount of funds that would be necessary to meet the Non-Federal Sponsor's required share prior to any consideration of the credit the Government projects will be afforded pursuant to paragraph H. and paragraph S. of this Article.

4. The Non-Federal Sponsor shall provide funds in the amount determined by this paragraph in accordance with Article VI.B. of this Agreement. To determine the contribution of funds the Non-Federal Sponsor shall provide for each subsequent period of construction, the Government shall reduce the amount determined in accordance with paragraph F.3. of this Article by the amount of credit the Government projects will be afforded pursuant to paragraph H. and paragraph S. of this Article.

G. The Government shall determine and include in total cost of construction of the general navigation features any costs incurred by the Non-Federal Sponsor for Section 308 Work, subject to the conditions and limitations of this paragraph. The Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the amount of costs to be included in total cost of construction of the general navigation features for Section 308 Work.

1. The Non-Federal Sponsor, in consultation with the Government, shall obtain all applicable Federal, State, and local permits required for the performance of the applicable Section 308 Work.

2. Section 308 Work shall be subject to certification by the Government that the work was accomplished in a satisfactory manner and in accordance with the provisions of this Agreement and is suitable for inclusion in the Project.

3. The Non-Federal Sponsor's costs for Section 308 Work that may be eligible for inclusion in total cost of construction of the general navigation features pursuant to this Agreement shall be subject to an audit in accordance with Article X.C. of this Agreement to determine the reasonableness, allocability and allowability of such costs.

4. The Non-Federal Sponsor's costs for Section 308 Work that may be eligible for inclusion in total cost of construction of the general navigation features pursuant to this Agreement are not subject to interest charges, nor are they subject to adjustment to reflect changes in price levels between the time the Section 308 Work is completed and the time the costs are included in total cost of construction of the general navigation features.

5. The Government shall not include in total cost of construction of the general navigation features any costs for Section 308 Work paid by the Non-Federal Sponsor using Federal funds unless the Federal granting agency verifies in writing that expenditure of such funds for such

purpose is expressly authorized by Federal law.

6. The Government shall not include in total cost of construction of the general navigation features any costs for Section 308 Work in excess of the Government's estimate of the costs of the Section 308 Work had the work been accomplished by the Government.

7. In the performance of any construction portion of the Section 308 Work, the Non-Federal Sponsor must comply with applicable Federal labor laws covering non-Federal construction, including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)). Costs for any construction portion of Section 308 Work may be excluded from total cost of construction of the general navigation features by the Government, in whole or in part, as a result of the Non-Federal Sponsor's failure to comply with its obligations under these laws.

H. The Government, in accordance with this paragraph, shall afford credit for the costs of the Section 308 Work determined in accordance with paragraph G. of this Article as described below. However, the maximum amount of credit that can be afforded for the Section 308 Work shall not exceed the lesser of the following amounts as determined by the Government: the sum of the amount of funds determined in accordance with paragraph F.2. and paragraph F.4. and paragraph K. of this Article or the costs of the Section 308 Work determined in accordance with paragraph G. of this Article.

1. First, the credit will be afforded toward the amount of funds determined in accordance with paragraph K. of this Article.

2. Second, the credit will be afforded toward the amount of funds determined in accordance with paragraph F.2. of this Article.

3. Lastly, the credit will be afforded toward the amount of funds determined in accordance with paragraph F.4. of this Article.

I. Notwithstanding any other provision of this Agreement, the Non-Federal Sponsor shall not be entitled to reimbursement of any costs of the Section 308 Work determined in accordance with paragraph G. of this Article that exceed the amount of credit afforded for the Section 308 Work pursuant to paragraph H. of this Article. The Non-Federal Sponsor shall be responsible for 100 percent of all costs of the Section 308 Work that exceed the amount of credit afforded.

J. The District Engineer shall promptly notify the Non-Federal Sponsor in writing of the conclusion of the period of construction and the conclusion of each subsequent period of construction. Upon providing each notification, the Government shall conduct an accounting, in accordance with Article VI of this Agreement, and furnish the results to the Non-Federal Sponsor.

K. In accordance with Article VI.F. of this Agreement, the Non-Federal Sponsor shall pay an additional amount equal to 10 percent of total cost of construction of the general navigation features less the amount of credit afforded by the Government for the value of the lands, easements, rights-of-way, and relocations. The Non-Federal Sponsor shall not be entitled to reimbursement for any value of lands, easements, rights-of-way, and relocations provided or performed pursuant to Article III of this Agreement that exceeds 10 percent of total cost of construction of the general navigation features.

L. Subject to applicable Federal laws and regulations, the Non-Federal Sponsor, at no cost to the Government and in a timely manner, shall construct or cause to be constructed the local service facilities, including dredging, excavation, and disposal of material therefrom, and shall be responsible for taking all actions to enable such construction. The Government shall have no obligation under this Agreement for construction of the local service facilities or construction of any other facilities to be provided by the Non-Federal Sponsor or a third party.

M. In accordance with Article VIII.A. of this Agreement, the Non-Federal Sponsor, at no cost to the Government, shall operate and maintain or cause to be operated and maintained the local service facilities, including dredging, excavation, and disposal of material therefrom. The Government shall have no obligation under this Agreement for operation and maintenance of the local service facilities or operation and maintenance of any other facilities to be provided by the Non-Federal Sponsor or a third party.

N. The Government shall operate and maintain the general navigation features in accordance with Article VIII.B. of this Agreement.

O. The Non-Federal Sponsor shall not use Federal funds to meet its obligations for the Project under this Agreement unless the Federal granting agency verifies in writing that the expenditure of such funds for such purpose is expressly authorized by Federal law.

P. The Government shall accomplish all removals that neither the Non-Federal Sponsor nor the State of Delaware nor the State of New Jersey nor the Commonwealth of Pennsylvania has the legal capability to accomplish where both the Non-Federal Sponsor and either the States of Delaware or the State of New Jersey or the Commonwealth of Pennsylvania, whichever is appropriate, make a written request for the Government to accomplish such removals, and shall accomplish all removals that the Government is expressly required to accomplish in the authorizing legislation for the Project or any report referenced therein.

I. In the event a court determines that the owner of an obstruction is entitled to payment of just compensation as the result of elimination of the obstruction, such removal shall be reclassified as part of the Non-Federal Sponsor's responsibility to provide lands, easements, and rights-of-way, or to perform relocations, as appropriate, in accordance with Article II.C. of this Agreement.

2. All costs incurred by the Government in accomplishing removals shall be included in the total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement.

Q. The Non-Federal Sponsor shall accomplish all removals, other than those removals specifically assigned to the Government by paragraph P. of this Article, in accordance with the provisions of this paragraph.

1. The Government, at least 90 days prior to award of the first construction contract, shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such removals, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with accomplishing such removals. Unless the Government agrees to a later date in writing, prior to the issuance of the solicitation for each Government contract for construction, operation, or maintenance of the general navigation features, or prior to the Government incurring any financial obligation for construction, operation, or maintenance of the general navigation features that it elects to perform with its own forces, the Non-Federal Sponsor shall accomplish all removals set forth in such descriptions that the Government determines to be necessary for that work.

2. In the event a court determines that the owner of an obstruction is entitled to payment of just compensation as the result of elimination of the obstruction, such removal shall be reclassified as part of the Non-Federal Sponsor's responsibility to provide lands, easements, and rights-of-way, or to perform relocations, as appropriate, in accordance with Article II.C. of this Agreement.

3. The documented incidental costs incurred by the Non-Federal Sponsor in accomplishing removals, shall be included in the total cost of construction of the general navigation features, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs, and shared in accordance with the provisions of this Agreement. Incidental costs may include legal and administrative costs (including but not limited to owner or operator notification costs, public notice or hearing costs, attorney's fees, and litigation costs) incurred by the Non-Federal Sponsor in accomplishing removals, but shall not include any costs that the Non-Federal Sponsor or the States of Delaware or New Jersey or the Commonwealth of Pennsylvania has the legal capability to require of, assign to, or recover from the owner or operator of the obstruction.

R. The Non-Federal Sponsor may offer in writing to accelerate a portion or all of its cash contribution required by paragraph F.2., paragraph F.4., and paragraph K. of this Article during the period of construction or a subsequent period of construction, as applicable, for immediate use by the Government. This offer shall be limited to an amount that does not exceed the most current estimate of the total of the Non-Federal Sponsor's cash contribution required by paragraph F.2., paragraph F.4., and paragraph K. of this Article, as determined by the Government in coordination with the Non-Federal Sponsor, less any funds previously contributed by the Non-Federal Sponsor.

Upon receipt of such offer or offers, the Government, subject to receiving such approvals and concurrences as customarily are required to accept such funds, may accept the funds, or such portion thereof as the Government determines to be necessary to meet the costs of construction of the general navigation features. If the Government elects to accept such funds, it shall notify the Non-Federal Sponsor of such acceptance in a writing that sets forth any applicable terms and conditions. In the event of a conflict between this Agreement and any such writing, this Agreement shall control. Such funds shall be used by the Government for construction of the general navigation features.

S. As Federal appropriations are made available to pay the Federal share of construction of the general navigation features, the Government shall afford credit for funds provided during the period of construction or a subsequent period of construction, as applicable, in accordance with paragraph R. of this Article. The Government shall credit this amount, provided during the period of construction or a subsequent period of construction, as applicable, first, toward the Non-Federal Sponsor's cash contribution required by paragraph K. of this Article, and then toward the Non-Federal Sponsor's cash contribution required by paragraph F.2. and paragraph F.4. of this Article. If after the final accounting at the end of the period of construction or a subsequent period of construction, as applicable, it is determined that the Non-Federal Sponsor has provided funds in excess of its cash contribution required by paragraph F.2., paragraph F.4., and paragraph K. of this Article, the Government shall proceed in accordance with Article VI.D.2. or Article VI.E.2. of this Agreement, as applicable, to determine whether a refund is applicable. However, if in the event of a final accounting due to termination pursuant to Article XIV.C. of this Agreement prior to the end of the period of construction or a subsequent period of construction, as applicable, it is determined that the Non-Federal Sponsor has provided funds in excess of its cash contribution required by paragraph F.2., paragraph F.4., and paragraph K. of this Article, the Government shall not reimburse the Non-Federal Sponsor for any such excess funds, except that any such excess funds which have not been obligated by the Government on the general navigation features shall be refunded to the Non-Federal Sponsor, subject to the availability of funds.

T. The Non-Federal Sponsor shall use its best efforts to provide and maintain adequate public terminal and transfer facilities open to all on equal terms and such depths from the Federal channel line to and between the wharves at the terminals (berthing areas) as may be required for the accommodation of vessels at the terminals, consistent with the Federal project.

U. The Non-Federal Sponsor shall use its best efforts to prohibit the erection of any structures that would encroach on the authorized general navigation features

V. The Non-Federal Sponsor may request the Government to design, construct, or operate and maintain the local service facilities on behalf of the Non-Federal Sponsor in conjunction with the design, construction, or operation and maintenance of the associated general navigation features. For the purposes of this paragraph, the local service facilities include, but are not limited to: the berthing areas of Beckett Street Terminal, NJ; Packer Avenue Marine Terminal, PA; Sun Oil at Westville, NJ; Sun Oil Fort Mifflin, PA; Sun Oil Hog Island, PA; Valero Oil Corporation, Paulsboro, NJ; Conoco Phillips, Marcus Hook, PA; and Sun Oil Marcus Hook, PA. Any such

request shall be in writing and describe the services requested to be performed. If, in its sole discretion, the Government elects to perform the requested services, or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing setting forth any applicable terms and conditions consistent with the Agreement. If there is a conflict between such a writing and this Agreement, the Agreement controls. The Non-Federal Sponsor is solely responsible for all costs of the requested services, and shall pay all such costs in accordance with Article VI.C. of this Agreement.

ARTICLE III - LANDS, RELOCATIONS, AND PUBLIC LAW 91-646 COMPLIANCE

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the lands, easements, or rights-of-way necessary for the construction, operation, or maintenance of the general navigation features, including those lands, easements, or rights-of-way necessary for the borrowing of material, the disposal of dredged or excavated material, relocations, and including those lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the lands, easements, or rights-of-way that the Government determines the Non-Federal Sponsor must provide, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition of such lands, easements, or rights-of-way. Prior to the end of the period of construction, or the subsequent period of construction, as applicable, the Non-Federal Sponsor shall acquire all lands, easements, or rights-of-way necessary for the construction of the general navigation features, as set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government contract for construction, operation, or maintenance of the general navigation features or prior to the Government incurring any financial obligation for construction, operation, or maintenance it elects to perform with its own forces, the Non-Federal Sponsor shall acquire all lands, easements, or rights-of-way the Government determines the Non-Federal Sponsor must provide for that work and shall provide the Government with authorization for entry thereto.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the relocations necessary for the construction, operation, or maintenance of the general navigation features, including those necessary to enable the borrowing of material or the disposal of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such relocations in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with such relocations. Unless the Government agrees to a later date in writing, prior to issuance of the solicitation for each Government contract for construction, operation, or maintenance of the general navigation features or prior to the Government incurring any financial obligation for construction, operation, or maintenance it elects to perform by its own forces, the Non-Federal Sponsor shall prepare or ensure the preparation of plans and specifications for, and perform or ensure the performance of, all relocations the Government determines to be necessary for that work.

C. Until the Government furnishes the Non-Federal Sponsor with the results of the final accounting in accordance with Article VI.D. of this Agreement, or the credit afforded in accordance with Article II.K. of this Agreement equals the 10 percent amount, whichever occurs later, the Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the value of any contribution provided in accordance with paragraph A. or B. of this Article. Upon receipt of such documents the Government in a timely manner shall afford credit for the value of such contribution in accordance with Article II.K. of this Agreement.

D. The Non-Federal Sponsor shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, or rights-of-way necessary for the construction, operation, or maintenance of the general navigation features, including those necessary for relocations, the borrowing of material, or the disposal of dredged or excavated material, and shall inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV - CREDIT FOR VALUE OF LANDS AND RELOCATIONS

A. The Non-Federal Sponsor shall receive credit in accordance with Article II.K. of this Agreement for the value of the lands, easements, or rights-of-way that the Non-Federal Sponsor must provide in accordance with Article III of this Agreement, and for the value of the relocations that the Non-Federal Sponsor must perform or for which it must ensure performance in accordance with Article III of this Agreement. However, the Non-Federal Sponsor shall not receive credit for the value of any lands, easements, rights-of-way, or relocations that have been provided previously as an item of cooperation for another Federal project. The Non-Federal Sponsor also shall not receive credit for the value of lands, easements, rights-of-way or relocations to the extent that such items are provided or performed using Federal funds unless the Federal granting agency verifies in writing that such credit is expressly authorized by statute.

B. For the sole purpose of affording credit in accordance with this Agreement, the value of lands, easements, and rights-of-way, including those necessary for relocations other than those the Government acquires on behalf of the Non-Federal Sponsor in accordance with Article II.D. of this Agreement, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. Date of Valuation. The fair market value of lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement shall be the fair market value of such real property interests as of the date the Non-Federal Sponsor provides the Government with authorization for entry thereto. The fair market value of lands, easements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement

shall be the fair market value of such real property interests at the time the interests are acquired.

2. General Valuation Procedure. Except as provided in paragraph B.3. or B.5. of this Article, the fair market value of lands, easements, or rights-of-way shall be determined in accordance with paragraph B.2.a. of this Article, unless thereafter a different amount is determined to represent fair market value in accordance with paragraph B.2.b. of this Article.

a. The Non-Federal Sponsor shall obtain, for that real property interest, an appraisal that is prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and the Government. The Non-Federal Sponsor shall provide the Government with the appraisal no later than 6 months after the Non-Federal Sponsor provides the Government with an authorization for entry for such real property interest, or, in the event an authorization for entry is not required, no later than the end of the period of construction or the end of the subsequent period of construction, as applicable. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government. The fair market value shall be the amount set forth in the Non-Federal Sponsor's appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's appraisal, the Non-Federal Sponsor may obtain a second appraisal, and the fair market value shall be the amount set forth in the Non-Federal Sponsor's second appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's second appraisal, the Non-Federal Sponsor chooses not to obtain a second appraisal, or the Non-Federal Sponsor does not provide the first appraisal as required in this paragraph, the Government shall obtain an appraisal, and the fair market value shall be the amount set forth in the Government's appraisal, if such appraisal is approved by the Non-Federal Sponsor. In the event the Non-Federal Sponsor does not approve the Government's appraisal, the Government, after consultation with the Non-Federal Sponsor, shall consider the Government's and the Non-Federal Sponsor's appraisals and determine an amount based thereon, which shall be deemed to be the fair market value.

b. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined in accordance with paragraph B.2.a. of this Article, the Government, at the request of the Non-Federal Sponsor, shall consider all factors relevant to determining fair market value and, in its sole discretion, after consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined in accordance with paragraph B.2.a. of this Article, but not to exceed the amount actually paid or proposed to be paid. If the Government approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined in accordance with paragraph B.2.a. of this Article.

3. Eminent Domain Valuation Procedure. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall, prior to instituting such proceedings, submit to the Government notification in writing of its intent to institute such proceedings and an appraisal of the specific

real property interests to be acquired in such proceedings. The Government shall have 60 days after receipt of such a notice and appraisal within which to review the appraisal, if not previously approved by the Government in writing.

a. If the Government previously has approved the appraisal in writing, or if the Government provides written approval of, or takes no action on, the appraisal within such 60-day period, the Non-Federal Sponsor shall use the amount set forth in such appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

b. If the Government provides written disapproval of the appraisal, including the reasons for disapproval, within such 60-day period, the Government and the Non-Federal Sponsor shall consult in good faith to promptly resolve the issues or areas of disagreement that are identified in the Government's written disapproval. If, after such good faith consultation, the Government and the Non-Federal Sponsor agree as to an appropriate amount, then the Non-Federal Sponsor shall use that amount as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If, after such good faith consultation, the Government and the Non-Federal Sponsor cannot agree as to an appropriate amount, then the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

c. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted in accordance with paragraph B.3. of this Article, fair market value shall be either the amount of the court award for the real property interests taken, to the extent the Government determined such interests are necessary for the construction, operation, and maintenance of the general navigation features, or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

4. Incidental Costs. For lands, easements, or rights-of-way acquired by the Non-Federal Sponsor within a five-year period preceding the effective date of this Agreement, or at any time after the effective date of this Agreement, the value of the interest shall include the documented incidental costs of acquiring the interest, as determined by the Government, consistent with Government practices and procedures in effect at the time, that the interest is acquired, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. In the event the Government modifies its determination made in accordance with Article III.A. of this Agreement, the Non-Federal Sponsor shall receive credit for the documented incidental costs associated with preparing to acquire lands, easements, or rights-of-way identified in the original determination, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, costs of investigations and studies supporting a prudent acquisition decision provided that such land, easements and rights-of-way were actually acquired, cost of internal legal staff and attorney's fees for outside counsel that do not duplicate costs incurred by internal legal staff, survey costs, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits provided in accordance with Article III.D. of this Agreement.

5. Waiver of Appraisal. Except as required by paragraph B.3. of this Article, the Government may waive the requirement for an appraisal for the purpose of determining the value of a real property interest for crediting purposes if it determines that an appraisal is unnecessary because the valuation is uncomplicated and that the estimated fair market value of the real property interest is \$10,000 or less based upon a review of available data. In such event, the Government and the Non-Federal Sponsor must agree in writing to the value of such real property interest in an amount not in excess of \$10,000.

C. For the sole purpose of affording credit in accordance with this Agreement, the value of lands, easements, and rights-of-way, including those necessary for relocations that the Government acquires on behalf of the Non-Federal Sponsor in accordance with Article II.D. of this Agreement, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. The fair market value of such real property interests shall be the amount paid by the Government.

2. The value of the interest shall include the documented incidental costs of acquiring the interest. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits.

D. After consultation with the Non-Federal Sponsor, the Government shall determine the value of relocations in accordance with the provisions of this paragraph.

1. For a relocation other than a highway or a utility, the value shall be only that portion of relocation costs that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

2. For a relocation of a highway, the value shall be only that portion of relocation costs that would be necessary to accomplish the relocation in accordance with the design standard that the States of Delaware or New Jersey or the Commonwealth of Pennsylvania, as appropriate, would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

3. For a relocation of a utility, the value shall be only that portion of relocation costs borne by the Non-Federal Sponsor that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items. Provided, however, that prior to undertaking such a utility relocation the Non-Federal Sponsor may consult with the Government to determine what portion of relocation costs the Government will accept as being necessary to provide a functionally equivalent facility and the

Government shall cooperate by providing a response within 60 days of receiving such a request from the Non-Federal Sponsor.

4. Relocation costs shall include, but not necessarily be limited to, actual costs of performing the relocation; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with performance of the relocation, but shall not include any costs due to betterments, as determined by the Government, nor any additional cost of using new material when suitable used material is available. Relocation costs shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

5. Crediting for relocations performed within the Project boundaries is subject to satisfactory compliance with applicable Federal labor laws covering non-Federal construction, including, but not limited to the Davis-Bacon Act (40 USC 276a *et seq.*), the Contract Work Hours and Safety Standards Act (40 USC 327 *et seq.*), and the Copeland Anti-Kickback Act (40 USC 276c). Crediting may be withheld, in whole or in part, as a result of the Non-Federal Sponsor's failure to comply with its obligations under these laws.

ARTICLE V - PROJECT COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 days after the effective date of this Agreement, shall appoint named senior representatives to a Project Coordination Team. Such representatives are not required to be employees of the Non-Federal Sponsor should the Non-Federal Sponsor choose to have a Third Party represent its interest and officially designate the representatives. Thereafter, the Project Coordination Team shall meet at least once per month until the end of the period of construction and during each subsequent period of construction. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Coordination Team. The Non-Federal Sponsor and the Government shall appoint an equal number of representatives to the Project Coordination Team, but in no case shall the number of representatives exceed 5 from each party.

B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Coordination Team informed of the progress of construction and of significant pending issues and actions, and shall seek the views of the Project Coordination Team on matters that the Project Coordination Team generally oversees.

C. Until the end of the period of construction and during each subsequent period of construction, the Project Coordination Team shall generally oversee the Project, including but not necessarily limited to matters related to design; quality assurance, plans and specifications; scheduling; real property, relocation, and removal requirements; real property acquisition; contract awards or modifications; contract costs; the application of and compliance with 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the

provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)) for relocations and the construction portion of the Section 308 Work; the Government's cost projections; the performance of, scheduling for, and determining costs of the Section 308 Work; final inspection of the entire Project or functional portions of the Project; preparation of the management plan for proposed dredged or excavated material disposal; anticipated requirements for operation and maintenance of the general navigation features; and other Project-related matters. The Project Coordination Team also shall generally oversee the coordination of schedules for the Project and the local service facilities. Oversight of the Project shall be consistent with a project management plan developed by the Government after consultation with the Non-Federal Sponsor.

D. The Project Coordination Team may make recommendations that it deems warranted to the District Engineer and the Non-Federal Sponsor's Executive Director on Project-related matters that the Project Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The District Engineer and the Non-Federal Sponsor's Executive Director in good faith shall consider the recommendations of the Project Coordination Team and shall attempt to reach a mutually acceptable agreement. The Government, having the legal authority and responsibility for construction of the general navigation features, has the discretion to accept or reject, in whole or in part, the Project Coordination Team's recommendations. The failure of the parties to agree on a matter that was forwarded to the District Engineer and the Non-Federal Sponsor's Executive Director may be considered a dispute subject to the provisions of Article VII of this Agreement.

E. The costs of participation in the Project Coordination Team shall be included in the total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement.

ARTICLE VI - METHOD OF PAYMENT

A. Until the Government furnishes the Non-Federal Sponsor with the results of the final accounting, the Government shall maintain current records of contributions provided by the parties and current projections of the total cost of construction of the general navigation features and costs due to additional work under Article II.B., Article II.D., Article II.V., or Article XXII.B. of this Agreement. At least quarterly, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of the total cost of construction of the general navigation features, of total costs due to additional work under Article II.B., Article II.D., Article II.V., or Article XXII.B. of this Agreement, of the maximum amount determined in accordance with Article XX of this Agreement, of the Non-Federal Sponsor's total contributions required in accordance with Article II.B., Article II.D., Article II.V., Article XXII.B., and Article II.F. of this Agreement, of the non-Federal proportionate share, of the funds required from the Non-Federal Sponsor for the upcoming fiscal year, of the credit to be afforded in accordance with Article II.K. of this Agreement for the value of lands, easements, rights-of way, or

relocations contributed before the end of the period of construction and during any subsequent period of construction, of the credits to be afforded pursuant to Article II.H. and Article II.S. of this Agreement, of the 10 percent amount, of the principal amount, and of the installments to be paid in accordance with paragraph E.2. of this Article. Thereafter, until the outstanding portion of the principal amount equals \$0, the Government, at least annually, shall provide the Non-Federal Sponsor with a report setting forth the outstanding portion of the principal amount and the current projection of the remaining installments to be paid in accordance with paragraph E.2. of this Article. On the effective date of this Agreement, the total cost of construction of the general navigation features is projected to be \$331,313,000 (FY 2008 price level updated to mid-year of construction) and the Non-Federal Sponsor's contribution required under Article II.F. of this Agreement is projected to be \$82,828,000 (FY 2008 price level updated to mid-year of construction). These amounts are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall provide the contribution required by Article II.F.2. and Article II.F.4. of this Agreement in accordance with the provisions of this paragraph.

1. Not less than 60 calendar days prior to the scheduled date for issuance of the solicitation for the first contract for construction of the general navigation features to be constructed during the period of construction or commencement of construction of the general navigation features to be constructed during the period of construction using the Government's own forces, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government determines to be required from the Non-Federal Sponsor to meet: (a) the non-Federal proportionate share of financial obligations for construction incurred prior to the commencement of the period of construction; and (b) the projected non-Federal proportionate share of financial obligations for construction to be incurred in the first fiscal year or, if use of a continuing contract has been approved pursuant to Federal laws, regulations, and policies, the projected non-Federal proportionate share of financial obligations for construction through the first fiscal. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of such required funds by delivering a check payable to "FAO, USAED, Philadelphia" to the District Engineer, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by presenting the Government with an irrevocable letter of credit acceptable to the Government for such required funds, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

2. Thereafter, until the construction of all the general navigation features is complete, the Government shall notify the Non-Federal Sponsor in writing of the funds the Government determines to be required from the Non-Federal Sponsor, and the Non-Federal Sponsor shall provide such funds in accordance with the provisions of this paragraph.

a. Where the Government will use a continuing contract approved pursuant to Federal laws, regulations, and policies to make financial obligations for engineering and design

or construction of the general navigation features, the Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of each fiscal year in which the Government projects that it will make such financial obligations, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected non-Federal proportionate share of financial obligations for construction for that fiscal year for such continuing contract. No later than 30 calendar days prior to the beginning of that fiscal year the Non-Federal Sponsor shall make the full amount of such required funds for that fiscal year available to the Government through any of the payment mechanisms specified in paragraph B.I. of this Article.

b. For each contract where the Government will not use a continuing contract to make financial obligations for engineering and design or construction of the general navigation features, the Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the scheduled date for issuance of the solicitation for such contract, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected non-Federal proportionate share of financial obligations for construction to be incurred for such contract. No later than such scheduled date, the Non-Federal Sponsor shall make the full amount of such required funds available to the Government through any of the payment mechanisms specified in paragraph B.I. of this Article.

c. Where the Government projects that it will make financial obligations for engineering and design or construction of the general navigation features using the Government's own forces, the Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of each fiscal year in which the Government projects that it will make such financial obligations, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected non-Federal proportionate share of financial obligations for construction using the Government's own forces for that fiscal year. No later than 30 calendar days prior to the beginning of that fiscal year, the Non-Federal Sponsor shall make the full amount of such required funds for that fiscal year available to the Government through any of the payment mechanisms specified in paragraph B.I. of this Article.

3. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover: (a) the non-Federal proportionate share of financial obligations for construction incurred prior to the commencement of the period of construction; (b) the non-Federal proportionate share of financial obligations for construction as financial obligations for construction are incurred; and (c) to the extent funds are offered and accepted in accordance with Article II.R. of this Agreement, any other financial obligations for construction in excess of the non-Federal proportionate share as they are incurred during the period of construction or a subsequent period of construction, as applicable. If at any time the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's share of such financial obligations in the current fiscal year, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 60 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional required funds through any of the payment mechanisms specified in paragraph B.I. of

this Article.

C. In advance of the Government incurring any financial obligation associated with additional work under Article II.B., Article II.D., Article II.V., or Article XXII.B. of this Agreement, the Non-Federal Sponsor shall provide the Government with the full amount of the funds required to pay for such additional work through the payment mechanisms specified in paragraph B.1. of this Article. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover the Government's financial obligations for such additional work as they are incurred. In the event the Government determines that the Non-Federal Sponsor must provide additional funds to meet its contribution, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 30 calendar days thereafter, the Non-Federal Sponsor shall provide the Government with the full amount of the additional required funds through the payment mechanism specified in paragraph B.1. of this Article.

D. Upon conclusion of the period of construction and resolution of all relevant claims and appeals and eminent domain proceedings, the Government shall conduct a final accounting for the period of construction and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. If outstanding relevant claims and appeals or eminent domain proceedings prevent a final accounting for the period of construction from being conducted in a timely manner, the Government shall conduct an interim accounting for the period of construction and furnish the Non-Federal Sponsor with written notice of the results of such interim accounting. Once all outstanding relevant claims and appeals and eminent domain proceedings for the period of construction are resolved, the Government shall amend the interim accounting for the period of construction to complete the final accounting for the period of construction and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. The final or interim accounting, as applicable, for the period of construction shall determine the portion of total cost of construction of the general navigation features incurred during the period of construction and the costs due to additional work under Article II.B., Article II.D., Article II.V., and Article XXII.B. of this Agreement incurred during the period of construction, as of the date of such accounting. The final or interim accounting, as applicable, for the period of construction shall determine each party's required share thereof and each party's total contributions thereto as of the date of such accounting.

1. Should the final or interim accounting, as applicable, for the period of construction show that the Non-Federal Sponsor's total required shares of the portion of total cost of construction of the general navigation features incurred during the period of construction and the costs due to additional work under Article II.B., Article II.D., Article II.V., and Article XXII.B. of this Agreement incurred during the period of construction exceed the Non-Federal Sponsor's total contributions provided thereto (including credit afforded pursuant to Article II.H. and Article II.S. of this Agreement), the Non-Federal Sponsor, no later than 90 calendar days after receipt of written notice, shall make a payment to the Government in an amount equal to the difference by delivering a check payable to "FAO, USAED, Philadelphia" to the District Engineer or by providing an Electronic Funds Transfer in accordance with procedures established by the Government.

2. Should the final or interim accounting, as applicable, for the period of construction show that the total contributions provided by the Non-Federal Sponsor (including credit afforded pursuant to Article II.H. and Article II.S. of this Agreement) for the portion of total cost of construction of the general navigation features incurred during the period of construction and the costs due to additional work under Article II.B., Article II.D., Article II.V., and Article XXII.B. of this Agreement incurred during the period of construction exceed the Non-Federal Sponsor's total required shares thereof, the Government, subject to the availability of funds and as limited by Article II.I. of this Agreement, shall refund the excess to the Non-Federal Sponsor no later than 90 calendar days after providing written notice. In the event funds are not available to refund the excess to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund. To the extent that such appropriations are not received, the Government, after consultation with the Non-Federal Sponsor, shall apply the excess toward the Non-Federal Sponsor's upcoming installment payment, if any, in accordance with paragraph F. of this Article. However, if the final accounting is conducted prior to the end of the period of construction due to termination of the Agreement pursuant to Article XV.D. of this Agreement, and the Non-Federal Sponsor accelerated provision of its required contribution of funds in accordance with Article II.R. of this Agreement, the Government shall refund to the Non-Federal Sponsor only that portion of such accelerated funds that were not obligated by the Government for work on the Project, subject to the availability of funds.

E. Upon conclusion of each subsequent period of construction and resolution of all relevant claims and appeals and eminent domain proceedings, the Government shall conduct a final accounting for such subsequent period of construction and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. If outstanding relevant claims and appeals or eminent domain proceedings prevent a final accounting for such subsequent period of construction from being conducted in a timely manner, the Government shall conduct an interim accounting for such subsequent period of construction and furnish the Non-Federal Sponsor with written notice of the results of such interim accounting. Once all outstanding relevant claims and appeals and eminent domain proceedings for such subsequent period of construction are resolved, the Government shall amend the interim accounting for such subsequent period of construction to complete the final accounting for such subsequent period of construction and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. The final or interim accounting, as applicable, for such subsequent period of construction shall determine the portion of total cost of construction of the general navigation features incurred during such subsequent period of construction and the costs due to additional work under Article II.B., Article II.D., Article II.V., and Article XXII.B. of this Agreement incurred during such subsequent period of construction, each party's required share thereof, and each party's total contributions thereto as of the date of such accounting.

1. Should the final or interim accounting, as applicable, for such subsequent period of construction show that the Non-Federal Sponsor's total required shares of the portion of total cost of construction of the general navigation features incurred during such subsequent period of construction and the costs due to additional work under Article II.B., Article II.D., Article II.V., and Article XXII.B. of this Agreement incurred during such subsequent period of construction exceed

the Non-Federal Sponsor's total contributions provided thereto (including credit afforded pursuant to Article II.H. and Article II.S. of this Agreement), the Non-Federal Sponsor, no later than 90 calendar days after receipt of written notice, shall make a payment to the Government in an amount equal to the difference by delivering a check payable to "FAO, USAED, Philadelphia" to the District Engineer or by providing an Electronic Funds Transfer in accordance with procedures established by the Government.

2. Should the final or interim accounting, as applicable, for such subsequent period of construction show that the total contributions provided by the Non-Federal Sponsor (including credit afforded pursuant to Article II.H. and Article II.S. of this Agreement) for the portion of total cost of construction of the general navigation features incurred during such subsequent period of construction and the costs due to additional work under Article II.B., Article II.D., Article II.V., and Article XXII.B. of this Agreement incurred during such subsequent period of construction exceed the Non-Federal Sponsor's total required shares thereof, the Government, subject to the availability of funds and as limited by Article II.I. of this Agreement, shall refund the excess to the Non-Federal Sponsor no later than 90 calendar days after providing written notice. In the event funds are not available to refund the excess to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund. To the extent that such appropriations are not received, the Government shall apply the excess toward the Non-Federal Sponsor's upcoming installment payment, if any, in accordance with paragraph F. of this Article. However, if the final accounting is conducted prior to the end of such subsequent period of construction due to termination of the Agreement pursuant to Article XV.D. of this Agreement, and the Non-Federal Sponsor accelerated provision of its required contribution of funds in accordance with Article II.R. of this Agreement, the Government shall refund to the Non-Federal Sponsor only that portion of such accelerated funds that were not obligated by the Government for work on the Project, subject to the availability of funds.

F. The Non-Federal Sponsor shall pay, with interest, any additional amount required by Article II.K. of this Agreement in accordance with the provisions of this paragraph.

I. Each time the Government conducts a final or interim accounting for the period of construction and for each subsequent period of construction, the Government shall determine:

a. an amount equal to 10 percent of total cost of construction of the general navigation features as of the end of the period of construction or the most recent subsequent period of construction, whichever is latest;

b. the value, in accordance with Article IV of this Agreement, of the lands, easements, rights-of-way, relocations provided or performed pursuant to Article III of this Agreement as of the end of the period of construction or the most recent subsequent period of construction, whichever is latest; and

c. the additional amount to be paid by the Non-Federal Sponsor as of the end of the period of construction or the most recent subsequent period of construction, whichever is

latest. The additional amount is equal to the amount determined pursuant to paragraph F.I.a. of this Article reduced by the credit afforded for the value of the lands, easements, rights-of-way, relocations determined pursuant to paragraph F.I.b. of this Article further reduced by the credit afforded for Section 308 Work determined in accordance with Article II.G. of this Agreement and by the amount of credit afforded pursuant to Article II.S. of this Agreement. In the event the result of the aforesaid calculation is a negative number, the additional amount shall be zero.

2. At the time of the first final or interim accounting in which the Government determines that the additional amount is greater than zero, the Government shall calculate annual installments for payment of the additional amount, and such annual installments shall be substantially equal. To calculate the annual installments, the Government shall amortize the additional amount over a period of 30 years (hereinafter the "payment period"), beginning on the date the Government notifies the Non-Federal Sponsor of the additional amount, using an interest rate determined by the Secretary of the Treasury in accordance with this paragraph. The Government shall notify the Non-Federal Sponsor in writing of the additional amount and the annual installments.

a. If the calculation that first determined that the additional amount is greater than zero was based upon the final or interim accounting for the period of construction, the Secretary of the Treasury, in determining the interest rate used to calculate the annual installments, shall take into consideration the average market yields on outstanding marketable obligations of the United States with remaining periods of maturity comparable to the payment period during the month preceding the fiscal year in which the period of construction commences, plus a premium of one-eighth of one percentage point for transaction costs.

b. If the calculation that first determined the additional amount is greater than zero was based upon the final or interim accounting for a subsequent period of construction, the Secretary of the Treasury, in determining the interest rate used to calculate the annual installments, shall take into consideration the average market yields on outstanding marketable obligations of the United States with remaining periods of maturity comparable to the payment period during the month preceding the fiscal year in which such subsequent period of construction commences, plus a premium of one-eighth of one percentage point for transaction costs.

3. Thereafter, at the time of each subsequent final or interim accounting until the payment period has elapsed, the Government shall recalculate the annual installments by amortizing the outstanding portion of the additional amount over the remaining portion of the payment period using an interest rate determined by the Secretary of the Treasury, taking into consideration such average market yields on outstanding marketable obligations of the United States with remaining periods of maturity comparable to the remaining portion of the payment period during the month preceding the fiscal year in which the recalculation is made, plus a premium of one-eighth of one percentage point for transaction costs. The Government shall notify the Non-Federal Sponsor in writing of the recalculated additional amount and the recalculated annual installments and the Non-Federal Sponsor shall pay the recalculated annual installments in lieu of the previous annual installments.

4. Thereafter, at the time of each final or interim accounting after the payment period has elapsed, the Government shall notify the Non-Federal Sponsor in writing of the recalculated additional amount. The Non-Federal Sponsor, not later than 90 days from receipt of such notice, shall pay to the Government the outstanding portion of the additional amount by delivering a check payable to "FAO, USAED, Philadelphia" to the District Engineer or providing an Electronic Funds Transfer in accordance with procedures established by the Government.

5. In addition to any recalculation of the annual installments in accordance with paragraph F.3. of this Article, the Government shall recalculate the annual installments at five year intervals by amortizing the outstanding portion of the additional amount over the remaining portion of the payment period using an interest rate determined by the Secretary of the Treasury, taking into consideration such average market yields on outstanding marketable obligations of the United States with remaining periods of maturity comparable to the payment period during the month preceding the fiscal year in which the recalculation is made, plus a premium of one-eighth of one percentage point for transaction costs. The Government shall notify the Non-Federal Sponsor in writing of the recalculated annual installments and the Non-Federal Sponsor shall pay the recalculated annual installments in lieu of the previous annual installments.

6. Subject to paragraph D.2. and paragraph E.2. of this Article, the Non-Federal Sponsor shall pay the installments calculated or recalculated pursuant to paragraphs F.2., F.3., or F.5. of this Article each year on the anniversary of the date the Government notifies the Non-Federal Sponsor of the additional amount, over a period not to exceed the payment period, by delivering a check payable to "FAO, USAED, Philadelphia" to the District Engineer or providing an Electronic Funds Transfer in accordance with procedures established by the Government.

7. Notwithstanding paragraph F.6. of this Article, the Non-Federal Sponsor, in its sole discretion, may prepay the additional amount, in whole or in part, at any time. Notwithstanding paragraphs F.2., F.3., or F.5. of this Article, there shall be no charges for interest on any portion of the additional amount that is paid within 90 days after the Government notifies the Non-Federal Sponsor of the additional amount, nor shall there be interest charges on any portion of an increase to the additional amount that is caused by recalculation of the additional amount and that is paid within 90 days after the Government notifies the Non-Federal Sponsor of such recalculated additional amount.

8. If the Government determines that the Non-Federal Sponsor has made payments (including credit afforded pursuant to Article II.H. and Article II.S. of this Agreement), toward the additional amount that exceed the additional amount, the Government, subject to the availability of funds and as limited by Article II.I. of this Agreement, shall refund the amount of the excess, without interest. In the event funds are not available to make such refund, the Government shall seek such appropriations as are necessary to make such refund.

ARTICLE VII - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, or as otherwise specified in Article V.D. or Article VIII.D. of this Agreement, that party must first notify the other party in writing of the nature of the purported breach or dispute and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance in accordance with this Agreement.

ARTICLE VIII - OPERATION AND MAINTENANCE

A. Subject to applicable Federal laws and regulations and for so long as the Project remains authorized, and commensurate with the Government's operation and maintenance of the general navigation features, the Non-Federal Sponsor, at no cost to the Government, shall operate and maintain or cause to be operated and maintained the local service facilities in a manner compatible with the authorized purposes of the Project including dredging, excavation, and disposal of material therefrom. The Non-Federal Sponsor shall be responsible for taking all actions to enable such operation and maintenance.

B. The Government, as it determines necessary, shall operate and maintain the general navigation features and shall be responsible for all financial obligations for operation and maintenance of the general navigation features.

C. The Non-Federal Sponsor hereby authorizes the Government to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor now or hereafter owns or controls for the purpose of operating and maintaining the general navigation features. Nothing contained herein, however, shall convey to the Government any interest in real property owned or controlled by the Non-Federal Sponsor.

D. Further, to the extent not inconsistent with the interest in real property owned by the Non-Federal Sponsor, the Non-Federal Sponsor hereby authorizes the Government to perform all activities on the lands, easements, and rights-of-way provided by the Non-Federal Sponsor to enable the disposal of dredged or excavated material that, in the Government's sole discretion, are necessary for the operation, maintenance, or management of the dredged or excavated material disposal facilities including, but not necessarily limited to, construction, operation, or maintenance of the dredged or excavated material disposal facilities; disposal of dredged or excavated material associated with the construction, operation, or maintenance of the general navigation features. The right of either party to remove material from the dredged or excavated material disposal facilities for reuse or other purposes shall be subject to discussion between the parties and, if necessary, amendment to this Agreement pursuant to Article XXI of this Agreement. The failure of the parties

to agree may be considered a dispute subject to the provisions of Article VII of this Agreement.

ARTICLE IX - HOLD AND SAVE

The Non-Federal Sponsor shall hold and save the Government free from all damages arising from construction, operation, or maintenance of the Project, any betterments, and the local service facilities except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X - MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, or other evidence pertaining to costs and expenses incurred in accordance with this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The Government and the Non-Federal Sponsor shall maintain such books, records, documents, or other evidence in accordance with these procedures and for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence were required. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, documents, records, or other evidence.

B. In accordance with 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act Amendments of 1996, 31 U.S.C. Sections 7501-7507, as implemented by Office of Management and Budget (OMB) Circular No. A-133 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph before the Government furnishes the Non-Federal Sponsor with the results of the final accounting shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-133, and such costs as are allocated to the Project shall be included in the total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act Amendments of 1996. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph before the Government furnishes the Non-Federal Sponsor with the

results of the final accounting shall be included in the total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement.

ARTICLE XI - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government agree to comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)).

ARTICLE XII - RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release, or take any other action, that waives or purports to waive any rights the other party may have to seek relief or redress against that contractor either pursuant to any cause of action that the other party may have or for violation of any law.

ARTICLE XIII - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XIV - TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under this Agreement, the Assistant Secretary of the Army (Civil Works) shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the general navigation features is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the Project.

B. If the Government fails to receive annual appropriations in amounts sufficient to meet its share of scheduled expenditures for the general navigation features for the then-current or upcoming fiscal year, the Government shall so notify the Non-Federal Sponsor in writing, and 60 calendar days thereafter either party may elect without penalty to terminate this Agreement or to suspend future performance under this Agreement. In the event that either party elects to suspend future performance under this Agreement in accordance with this paragraph, such suspension shall remain in effect until such time as the Government receives sufficient appropriations or until either the Government or the Non-Federal Sponsor elects to terminate this Agreement, whichever occurs first.

C. In the event that either party elects to terminate this Agreement in accordance with this Article or Article XV.D. of this Agreement, both parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI of this Agreement.

D. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article or Article XV.D. of this Agreement shall not relieve the parties of liability for any obligation previously incurred. Any delinquent payment from the Non-Federal Sponsor shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3-month period if the period of delinquency exceeds 3 months.

ARTICLE XV - HAZARDOUS SUBSTANCES

A. After execution of this Agreement and upon direction by the District Engineer, the Non-Federal Sponsor shall perform, or cause to be performed, any investigations for hazardous substances that the Government or the Non-Federal Sponsor determines to be necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Government determines, in accordance with Article III of this Agreement, to be necessary for the construction, operation, or maintenance of the general navigation features, except for any such lands, easements, and rights-of-way that the Government determines to be subject to the navigation servitude or any lands that are owned by the United States and administered by the Government. For lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Engineer provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction. Further, the Government shall perform, or ensure performance of, such investigations on lands that are owned by the United States and administered by the Government.

1. All actual costs incurred by the Non-Federal Sponsor before the end of the period of construction or during any subsequent period of construction for such investigations for hazardous substances shall be included in the total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

2. All actual costs incurred by the Non-Federal Sponsor after the period of construction, other than during a subsequent period of construction, for such investigations for hazardous substances shall be considered incidental costs under Article IV.B.4. and be credited in accordance with Article II.K. of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

3. All actual costs incurred by the Government before the end of the period of construction or during any subsequent period of construction for such investigations for hazardous substances shall be included in the total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement.

4. All actual costs incurred by the Government after the period of construction, other than during a subsequent period of construction, for such investigations for hazardous substances shall be considered financial obligations for operation and maintenance of the general navigation features and shared in accordance with Article VIII.B. of this Agreement.

B. The Non-Federal Sponsor may perform, or cause to be performed, any investigations it determines to be necessary to identify the existence and extent of any hazardous substances regulated under CERCLA that may exist in, on, or under lands, easements, or rights-of-way necessary solely for the construction, operation, or maintenance of the local service facilities. However, for any of those lands that the Government determines to be subject to the navigation servitude, the Non-Federal Sponsor must obtain prior written instructions from the District Engineer regarding the method of testing and must perform such investigations only in accordance with those instructions. The costs of any investigations performed under this paragraph shall be borne entirely by the Non-Federal Sponsor. The Government shall have no obligation under this Agreement for the costs of any investigations performed under this paragraph.

C. In the event it is discovered through any investigation for hazardous substances or other means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or rights-of-way that the Government determines, in accordance with Article III of this Agreement, to be necessary for the construction, operation, or maintenance of the general navigation features, the Non-Federal Sponsor and the Government shall, in addition to providing any other notice required by applicable law, provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of the real property interests until both parties agree that the Non-Federal Sponsor should proceed. In the event it is discovered through any means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or

rights-of-way necessary for the construction, operation, or maintenance of the local service facilities, the Non-Federal Sponsor and the Government shall, in addition to providing any other notice required by applicable law, provide prompt written notice to each other.

D. The Government and the Non-Federal Sponsor shall determine whether to initiate construction, operation, or maintenance of the general navigation features, or, if already in construction, operation, or maintenance, whether to continue with construction, operation, or maintenance of the general navigation features, suspend future performance under this Agreement, or terminate this Agreement for the convenience of the Government, in any case where hazardous substances regulated under CERCLA are found to exist in, on, or under any lands, easements, or rights-of-way that the Government determines, in accordance with Article III of this Agreement, to be necessary for the construction, operation, or maintenance of the general navigation features.

1. Should the Government and the Non-Federal Sponsor determine to initiate or continue with construction, operation, or maintenance after considering any liability that may arise under CERCLA, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response including the costs of any studies and investigations necessary to determine an appropriate response to the contamination, except for any costs of cleanup and response on lands owned by the United States and administered by the Government. Cleanup and response costs that are the responsibility of the Non-Federal Sponsor under this paragraph shall not be considered a part of the total cost of construction of the general navigation features.

2. Should the Government and the Non-Federal Sponsor determine to initiate or continue with construction, operation, or maintenance after considering any liability that may arise under CERCLA, the Government shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response, including the costs of any studies and investigations necessary to determine an appropriate response to the contamination, on lands owned by the United States and administered by the Government. All actual costs incurred by the Government for such cleanup and response shall be included in total cost of construction of the general navigation features and shared in accordance with the provisions of this Agreement.

3. In the event the Non-Federal Sponsor fails to provide any funds necessary to pay for clean up and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under paragraph D. of this Article upon direction by the Government, the Government may, in its sole discretion, either terminate this Agreement for the convenience of the Government, suspend future performance under this Agreement, or continue work on the general navigation features. The Government shall have no obligation under this Agreement for the costs of any clean-up and response, including the costs of any studies and investigations necessary to determine an appropriate response to the contamination, on lands, easements, or rights-of-way necessary solely for the local service facilities.

E. The Non-Federal Sponsor and the Government shall consult with each other in accordance with Article V of this Agreement in an effort to ensure that responsible parties bear

any necessary clean up and response costs as defined in CERCLA. Any decision made in accordance with paragraph D. of this Article, shall not relieve any third party from any liability that may arise under CERCLA.

F. To the maximum extent practicable, the Government and the Non-Federal Sponsor shall perform their responsibilities under this Agreement in a manner that will not cause liability to arise under CERCLA.

ARTICLE XVI - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and either delivered personally or by telegram or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:

Executive Director, Philadelphia Regional Port Authority
3460 N. Delaware Avenue
Philadelphia, PA 19134-6311

If to the Government:

District Engineer U. S. Army Philadelphia District,
Wanamaker Building
100 Penn Square East,
Philadelphia, Pennsylvania 19107-3396

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

C. Any notice, request, demand, or other communication made in accordance with this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XVII - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVIII - HISTORIC PRESERVATION

A. The costs of identification, survey, and evaluation of historic properties incurred before the end of the period of construction or during a subsequent period of construction shall be included in the total cost of construction of the general navigation features and shared in accordance with Article II.F. and Article II.K. of this Agreement.

B. The costs of identification, survey, and evaluation of historic properties incurred after the period of construction, other than during a subsequent period of construction, shall be considered financial obligations for operation and maintenance of the general navigation features and shared in accordance with Article VIII.B. of this Agreement.

C. As specified in Section 7(a) of Public Law 93-291 (16 U.S.C. Section 469c(a)), the costs of archeological data recovery activities associated with historic preservation shall be borne entirely by the Government and shall not be included in the total cost of construction of the general navigation features, up to the statutory limit of one percent of the total amount authorized to be appropriated to the Government for the construction of the general navigation features.

D. The Government shall not incur costs for archeological data recovery activities that exceed the statutory one percent limit specified in paragraph C. of this Article unless and until the Assistant Secretary of the Army (Civil Works) has waived that limit and the Secretary of the Interior has concurred in that waiver in accordance with Section 208(3) of Public Law 96-515 (16 U.S.C. Section 469c-2(3)).

1. Any costs of archeological data recovery activities that exceed the one percent limit and are incurred before the end of the period of construction or during a subsequent period of construction shall be included in the total cost of construction of the general navigation features and shall be shared in accordance with Article II.F. and Article II.K. of this Agreement.

2. Any costs of archeological data recovery activities that exceed the one percent limit and are incurred after the period of construction, other than during a subsequent period of construction, shall be considered financial obligations for operation and maintenance of the general navigation features and shared in accordance with Article VIII.B. of this Agreement.

ARTICLE XIX - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

A. Nothing in this Agreement is intended, nor may be construed to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not party to this Agreement.

B. No member, director, officer, agent or employee of the Non-Federal Sponsor, nor any officer, agent, consultant, or employee of the Government, shall be charged personally with any liability, or held liable under the terms or provisions of this Agreement, or because of its execution or attempted execution, or because of any breach, attempted breach, or alleged breach thereof,

except as provided in Section 912 of the Water Resources Development Act of 1986, Public Law 99-662, or other applicable law.

ARTICLE XX - SECTION 902 PROJECT COST LIMITS

The Non-Federal Sponsor has reviewed the provisions set forth in Section 902 of the Water Resources Development Act, Public Law 99-662, as amended, and understands that Section 902 establishes the maximum cost of the Project and the local service facilities. Notwithstanding any other provision of this Agreement, the Government shall not make a new Project financial obligation, make a Project expenditure, or afford credit toward total cost of construction of the general navigation features for the value of any contribution provided by the Non-Federal Sponsor, if such obligation, expenditure, or credit would result in the total cost of construction of the general navigation features plus the value of any contribution provided by the Non-Federal Sponsor in accordance with Article III of this Agreement plus the costs of the local service facilities exceeding this maximum amount, unless otherwise authorized by law. On the effective date of this Agreement, this maximum amount is estimated to be \$727,506,000 (FY 2008 price level) as calculated in accordance with the cost authorization in the Water Resources Development Act of 1992 and ER 1105-2-100. The Government shall adjust this maximum amount in accordance with Section 902 of the Water Resources Development Act, Public Law 99-662, as amended.

ARTICLE XXI – AMENDMENTS

Amendments to this Agreement must be in writing executed by all parties to the said Agreement. In the event of a change in the law applicable to the Agreement, the parties hereto, on notice from either party to the other according to the notice provisions hereof, shall meet to agree upon the form and substance of any amendment that may be required in order that the Agreement shall accord with the current provisions of law. In addition, this Agreement shall be amended to include provisions to provide credit toward the non-Federal share of the cost of the project for costs incurred by the Non-Federal Sponsor, as provided for in Section 306 of the Water Resources Development Act of 2000, Public Law 106-541, after the Secretary of the Army approves a plan for such work. Secretary of the Army approval requires documentation by the Army Corps of Engineers that justifies the work that may be eligible for such credit and a recommendation for the amount of such credit. In no event, shall the Government afford credit for Section 306 work performed prior to amendment of this Agreement.

ARTICLE XXII – SPECIAL PROJECT CONDITIONS

A. The Government has applied to the State of Delaware for a State Subaqueous Lands and Wetlands Permit, and the Government at present does not intend to commence construction on this

Project, or on any Project related betterment, until the State of Delaware has issued a State Subaqueous Lands and Wetlands Permit to the Government, with terms and conditions acceptable to the Government, or unless the State of Delaware fails to issue said state permit in a timely manner. If the State of Delaware does not issue said state permit with terms and conditions acceptable to the Government, and within a period of time deemed by the Government to be reasonable and timely, the Government reserves the right to determine whether said Delaware state permit is legally required as a matter of Federal law.

B. In accordance with Articles II.C. and III.A. of this Agreement, the Non-Federal Sponsor is required to provide all lands, easements, or rights-of-way for the disposal of dredged or excavated material resulting from the construction, operation, or maintenance of the general navigation features of the Project. The Non-Federal Sponsor may request, in writing, that the Government consider an alternative plan for the disposal of dredged or excavated material from the general navigation features of the Project that differs from the plan described in the December 2002 Comprehensive Economic Reanalysis, supplemented by the February 2004 Report for this Project. If in its sole discretion the Government elects to honor the Non-Federal Sponsor's request, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. Should the Government determine that this alternative disposal plan is not the least costly, environmentally acceptable disposal plan, the Non-Federal Sponsor shall be responsible for the difference between the costs to utilize the Non-Federal Sponsor's requested plan and the costs to utilize the Government's currently approved disposal plan (hereinafter the "incremental costs"). In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for the incremental costs and shall pay such costs in accordance with Article VI.C. of this Agreement.

ARTICLE XXIII - OBLIGATIONS OF FUTURE APPROPRIATIONS

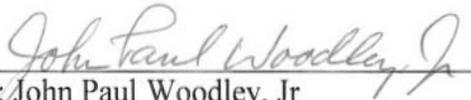
A. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the legislature of the Commonwealth of Pennsylvania.

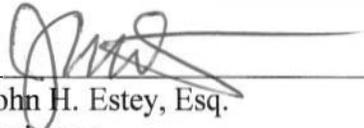
B. The Non-Federal Sponsor intends to fulfill its obligations under this Agreement. The Non-Federal Sponsor shall include in its budget request or otherwise propose appropriations of funds in amounts sufficient to fulfill these obligations for that year, and shall use all reasonable and lawful means to secure those appropriations. The Non-Federal Sponsor reasonably believes that funds in amounts sufficient to fulfill these obligations lawfully can and will be appropriated and made available for this purpose. In the event funds are not appropriated in amounts sufficient to fulfill these obligations, the Non-Federal Sponsor shall use its best efforts to satisfy any requirements for payments or contributions of funds under this Agreement from any other source of funds legally available for this purpose. Further, if the Non-Federal Sponsor is unable to fulfill these obligations, the Government may exercise any legal rights it has to protect the Government's interests related to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the Assistant Secretary of the Army (Civil Works) .

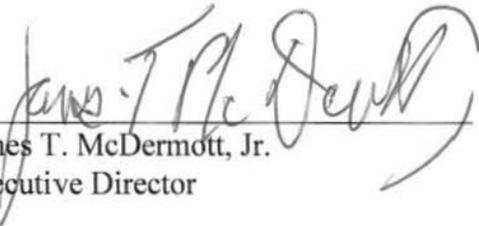
THE DEPARTMENT OF THE ARMY

THE PHILADELPHIA REGIONAL
PORT AUTHORITY

By: 
Name: John Paul Woodley, Jr
Title: Assistant Secretary of the Army
(Civil Works)

By: 
Name: John H. Estey, Esq.
Title: Chairman

THE PHILADELPHIA REGIONAL
PORT AUTHORITY

By: 
Name: James T. McDermott, Jr.
Title: Executive Director

CERTIFICATE OF AUTHORITY

I, Gregory V. Iannarelli, do hereby certify that I am the principal legal officer of the PHILADELPHIA REGIONAL PORT AUTHORITY, that the PHILADELPHIA REGIONAL PORT AUTHORITY is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and the PHILADELPHIA REGIONAL PORT AUTHORITY in connection with the DELAWARE RIVER MAINSTEM AND CHANNEL DEEPENING PROJECT, and to pay damages in accordance with the terms of this Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Agreement on behalf of the PHILADELPHIA REGIONAL PORT AUTHORITY have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this 27th day of June 2008.



GREGORY V. IANNARELLI, ESQ.
COUNSEL
PHILADELPHIA REGIONAL PORT AUTHORITY

DATE: June 27, 2008

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



JOHN H. ESTEY, ESQ.
CHAIRMAN
PHILADELPHIA REGIONAL
PORT AUTHORITY



JAMES T. MC DERMOTT JR.
EXECUTIVE DIRECTOR,
PHILADELPHIA REGIONAL
PORT AUTHORITY

CERTIFICATION OF LEGAL REVIEW

The Project Cooperation Agreement for the construction of the DELAWARE RIVER MAIN STEM AND CHANNEL DEEPENING PROJECT, at DELAWARE, NEW JERSEY, AND PENNSYLVANIA has been fully reviewed by the Office of Counsel, U.S. Army Engineer District, Philadelphia, and is legally sufficient.



MARK DOLCHIN
District Counsel

DATE: 23 Jun 2008

AMENDMENT NO. 1 TO
PROJECT PARTNERSHIP AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
PHILADELPHIA REGIONAL PORT AUTHORITY
FOR CONSTRUCTION OF THE
DELAWARE RIVER MAIN STEM AND CHANNEL PROJECT

THIS AMENDMENT NO. 1 is entered into this 23 day of FEBRUARY, 2010 by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"), represented by the District Commander, U.S. Army Corps of Engineers, Philadelphia, and the PHILADELPHIA REGIONAL PORT AUTHORITY (hereinafter the "Non-Federal Sponsor"), represented by its Chairman and Executive Director.

WITNESSETH, THAT:

WHEREAS, on June 23, 2008, the Non-Federal Sponsor and the Government entered into a Project Partnership Agreement (hereinafter the "Agreement") for the construction of the Delaware River Main Channel Deepening Project (hereinafter the "Project");

WHEREAS, on January 27, 2010 the United States District Court for the District of Delaware ruled that the Government had failed to sufficiently identify a specific source and amount of emission reduction credits to demonstrate an 'enforceable measure' that would ensure compliance with the Clean Air Act for the life of the Project;

WHEREAS, the Government has confirmed that the purchase of emission reduction credits will satisfy the requirements of the Clean Air Act as determined by the Project's Final Statement of Conformity, dated December 30, 2009;

WHEREAS, the Non-Federal Sponsor has acquired 873 tpy of NOx emission reduction credits to satisfy the requirements of the Clean Air Act as determined by the Project's Final Statement of Conformity, dated December 30, 2009, and the Non-Federal Sponsor desires to dedicate such emission reduction credits to the Project to satisfy the requirements of the Clean Air Act as determined by the Project's Final Statement of Conformity dated December 30, 2009.

NOW, THEREFORE, the parties agree to amend the Agreement as follows:

1. Article I.D. – The definition of "total cost of construction of the general navigation features" is amended by replacing "; and costs of audit in accordance with Articles X.B. and X.C. of this Agreement" with "; costs of emission reduction credits in accordance with Article XXII.C. of this Agreement; and costs of audit in accordance with Articles X.B. and X.C. of this Agreement" at the end of the second sentence of the paragraph.

2. Article XXII of the Agreement is amended by adding new paragraph C, which shall read as follows:

“C. The Non-Federal Sponsor shall dedicate and pledge the Emission Reduction Credits (hereinafter the “ERCs”) identified on the ERC Log as set forth in Exhibit “A” for use on the Project to satisfy the requirements of the Clean Air Act as determined by the Project’s Final Statement of Conformity dated December 30, 2009. The Non-Federal Sponsor shall continue to dedicate ERCs that the Government determines to be required for the Project. The Non-Federal Sponsor shall not transfer, pledge or otherwise encumber the ERCs for any other purpose unless the Government authorizes such change in writing. The Non-Federal Sponsor may dedicate additional ERCs to the Project for purposes of regulatory compliance upon receiving written approval from the Government to revise the ERC Log. The costs of acquiring the ERCs, including the incidental costs of obtaining such ERCs, shall be included in the total cost of construction of the general navigation features and shared in accordance with the terms of this Agreement, subject to audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs.”

3. All other terms and conditions of the Agreement remain unchanged.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 1 to the 2008 Project Partnership Agreement, which shall become effective upon the date it is signed by the District Commander, U.S. Army Corps of Engineers, Philadelphia.

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



CHAIRMAN
PHILADELPHIA REGIONAL
PORT AUTHORITY



JAMES T. MC DERMOTT JR.
EXECUTIVE DIRECTOR,
PHILADELPHIA REGIONAL
PORT AUTHORITY

THE DEPARTMENT OF THE ARMY

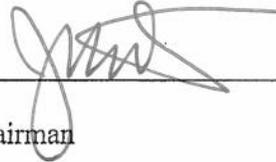
By:



LTC Thomas J. Tickner
District Commander
U.S. Army Corps of Engineers,
Philadelphia

THE PHILADELPHIA REGIONAL
PORT AUTHORITY

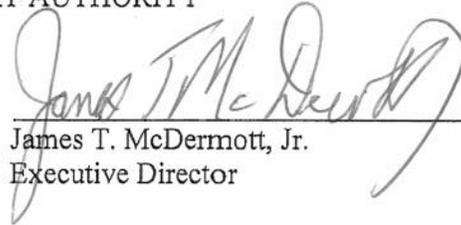
By:



Chairman

THE PHILADELPHIA REGIONAL
PORT AUTHORITY

By:

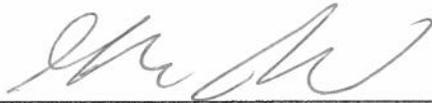


James T. McDermott, Jr.
Executive Director

CERTIFICATE OF AUTHORITY

I, Gregory V. Iannarelli, do hereby certify that I am the principal legal officer of the PHILADELPHIA REGIONAL PORT AUTHORITY, that the PHILADELPHIA REGIONAL PORT AUTHORITY is a legally constituted public body with full authority and legal capability to perform the terms of Amendment No.1 to the Agreement between the Department of the Army and the PHILADELPHIA REGIONAL PORT AUTHORITY in connection with the DELAWARE RIVER MAINSTEM AND CHANNEL DEEPENING PROJECT, and to pay damages in accordance with the terms of this Agreement, if necessary, in the event of the failure to perform, as required by Section 221 of Public Law 91-611 (42 U.S.C. Section 1962d-5b), and that the persons who have executed this Amendment No.1 to the Agreement on behalf of the PHILADELPHIA REGIONAL PORT AUTHORITY have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this 25th day of February 2010.



GREGORY V. IANNARELLI, ESQ.
COUNSEL
PHILADELPHIA REGIONAL PORT AUTHORITY

DATE: 2/25/2010



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
927 North Main Street (Bldg. D1)
Pleasantville, New Jersey 08232

IN REPLY REFER TO:

ES-95/183

Tel: 609-646-9310
FAX: 609-646-0352

January 18, 1996

Robert L. Callegari, Chief
Environmental Resources Branch, Planning Division
Department of the Army
Philadelphia District, Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, Pennsylvania 19107-3390

Dear Mr. Callegari:

This responds to the Department of the Army, Corps of Engineers (Corps), Philadelphia District's (District) October 31, 1995 request to the U.S. Fish and Wildlife Service (Service) for formal consultation regarding potential impacts to the federally listed threatened bald eagle (*Haliaeetus leucocephalus*) and endangered peregrine falcon (*Falco peregrinus*) from the proposed Delaware River Main Channel Deepening Project.

This response is provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species and does not address all Service concerns for fish and wildlife resources. These comments do not preclude separate review and comments by the Service as afforded by the Fish and Wildlife Coordination Act (48 Stat. 401, 16 U.S.C. 661 *et seq.*), if any permits are required from the Corps pursuant to the Clean Water Act of 1977 (33 U.S.C. 1344 *et seq.*), nor do they preclude comments on any forthcoming environmental documents pursuant to the National Environmental Policy Act of 1969 as amended (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

By letter dated February 10, 1992, the Service notified the District that the bald eagle and peregrine falcon are known to nest and forage within the project area and requested that the District prepare a Biological Assessment (BA) to address potential direct, indirect, and cumulative impacts to the bald eagle and peregrine falcon from proposed project activities. Of particular concern was potential exposure to contaminants from dredged materials and disturbance during the nesting period.

In response to the Service's request, the District prepared a BA addressing potential impacts to the bald eagle and peregrine falcon entitled, "Biological Assessment of the Bald Eagle (*Haliaeetus leucocephalus*) and the Peregrine Falcon (*Falco peregrinus*) for the Delaware River Main Channel Deepening Project." The BA included results of sediment testing for contaminants conducted by the District within the project area.

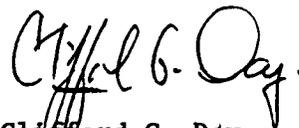
The Service has reviewed the information provided within the BA and concurs with the District's determination that the proposed Delaware River Main Channel Deepening Project is not likely to adversely affect the bald eagle or peregrine falcon. The Service's concurrence with the District's determination is based upon the following information contained within the BA:

- o Results of chemical analyses provided within the BA indicate that contaminant loads in the sediments tested are low. The mean and range of contaminant concentrations were provided for each reach of the proposed project area. Mean contaminant concentrations fell within ranges considered to be background for soils and sediments in New Jersey. Maximum concentrations that exceed background appear to be in isolated samples, and are, therefore, limited in spatial distribution. Additionally, no demonstrable acute toxicity or bioaccumulation of sediment-associated contaminants were demonstrated in laboratory tests.
- o To avoid disturbance to nesting bald eagles, the District will coordinate with the Service and the New Jersey Department of Environmental Protection (NJDEP), Endangered and Nongame Species Program (ENSP), prior to construction of upland dredged material disposal sites. If active bald eagle nests are found within 0.25 miles or a line of sight distance of 0.5 miles from the disposal area, construction of the site and the use of the site for the disposal of dredged materials will be seasonally restricted to avoid disturbance to nesting eagles.
- o To avoid disturbance to nesting peregrine falcons, the District will coordinate with the NJDEP, ENSP prior to initiating any new work at the Raccoon Island upland dredged material disposal site. No new work will be initiated at the Raccoon Island site during the beginning of the nesting period (March 15 to April 15). Prior to restoration of wetlands at Egg Island Point and Kelly Island, the District will coordinate with the NJDEP, ENSP. The District will move an existing peregrine falcon nesting structure located at Egg Island Point to a location as determined in coordination with the NJDEP, ENSP, that will be undisturbed.

The Service concurs with the District's determination that the Delaware River Main Channel Deepening Project is not likely to adversely affect federally listed species under the Service's jurisdiction. Therefore, informal consultation regarding the subject project has been concluded and formal consultation is not required. No further consultation pursuant to Section 7(a)(2) is required by the Service. If additional information on listed and proposed species becomes available or if project plans change, this determination may be reconsidered. It is the Service's understanding that periodic testing of sediments will be conducted throughout the life of the project. Should such sampling reveal the presence of any contaminated sediments within the project area, and at greater concentrations than reported in the BA, an evaluation of potential impacts on federally listed threatened and endangered species must be conducted and consultation with the Service must be re-initiated.

The Service requests that no part of this letter be taken out of context and if reproduced, the letter should appear in its entirety. Please contact Annette Scherer of my staff if you have any questions or require further assistance regarding threatened or endangered species.

Sincerely,

A handwritten signature in black ink that reads "Clifford G. Day". The signature is written in a cursive style with a large initial "C" and a long horizontal stroke at the end.

Clifford G. Day
Supervisor