



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

CESAD-PDP

08 MAR 2013

MEMORANDUM FOR Commander, Wilmington District

SUBJECT: Approval of Review Plan for the Morehead City Harbor, NC, Dredged Material Management Plan

1. References:

a. Memorandum, CESA-W-TS-PL, 21 December 2012, Request for Exclusion from Independent External Peer Review (IEPR) for the Morehead City Harbor Integrated Dredged Material Management Plan (DMMP) and Environmental Impact Statement (Enclosed).

b. EC 1165-2-214, Civil Works Review, 15 December 2012.

c. Memorandum, CECW, 20 December 2012, subject: Programmatic Review Plan for Routine Operations and Maintenance Products.

2. South Atlantic Division has reviewed the new current guidance in the Programmatic Review Plan for Routine Operations and Maintenance Products. This guidance provides enclosures that list items HQUSACE has determined to be routine Operation and Maintenance (O&M) Products. The Programmatic Review Plan includes Dredged Material Management Plan (DMMP) as a Routine O&M Product. While acknowledging that the DMMP includes an Environmental Impact Statement, and that the DMMP will analyze disposal alternatives, I conclude this DMMP can be classified as an "other work product" and that independent external peer review is not applicable.

3. I hereby approve this Review Plan, subject to Wilmington District updating this Review Plan to describe the product as an "other work product." Please provide this office a copy of the updated review plan for information. This change will not require subsequent review and approval from this office. The District shall post the revised Review Plan to the District public internet website and provide a link to the DDNPCX for their use. Before posting to the website, the names of Corps employees must be removed.

4. The point of contact for this action is Mr. Daniel Small at (404) 562-5224.

DONALD E. JACKSON, JR.
COL, EN
Commanding

Encl

CF:
CECW-CO-R (Gaffney-Smith w/encl)
CECW-CO-D (McKee w/encl)
CECW-SAD-RIT (S. Brown w/encl)

REVIEW PLAN

Morehead City Harbor Draft Integrated Dredged Material Management Plan and EIS Wilmington District



MSC Approval Date: 8 March 2013
Last Revision Date: March 2013



**US Army Corps
of Engineers** ®

REVIEW PLAN

**Morehead City Harbor, Morehead City, North Carolina,
Integrated Dredged Material Management Plan and EIS**

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of review for the Morehead City Harbor, Carteret County, North Carolina, single purpose Dredged Material Management Plan.

b. References

- 1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- 2) EC 1105-2-410, Assuring Quality of Planning Models, 31 Mar 2011
- 3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- 4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- 5) CESAD Civil Works Planning and Policy Division Quality Management Sub-plan. CESAD R 110-1-8, App C. 28 Feb 2003.
- 6) Project Cooperation Agreement between Department of the Army and the State of North Carolina dated 15 September 1993.

c. Requirements. This review plan is a component of the Project Management Plan and was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. The Major Subordinate Command (MSC), South Atlantic Division, and the Wilmington District, have determined through a risk-informed decision process that the DMMP is a continuation of a prior implementation document (Interim Operations Plan) for efficient operational practices and methods for the maintenance of Morehead City Harbor. Per the new guidance in the Programmatic O&M Review Plan, dated 20 December 2012, DMMPs are listed as routine O&M products. As the programmatic review plan is specifically for items that are not decision documents or implementation documents, HQUSACE has concluded that DMMPs are “other work products.”

d. Types of Review

(1) District Quality Control/Quality Assurance (DQC). All work products and reports, evaluations, and assessments shall undergo necessary and appropriate District Quality Control/Quality Assurance (DQC). DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC.

(2) Agency Technical Review (ATR). ATR is mandatory for all decision and implementation documents. For other work products, a case specific risk-informed decision, as described in EC 1165-2-209, shall be made as to whether ATR is appropriate. The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published US Army Corps of Engineers (USACE) guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR for other work products is managed within USACE by a designated Risk Management Organization (RMO) and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. The RMO for this effort is the

National Deep Draft Navigation Planning Center of Expertise (DDNPCX). ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC.

(3) Independent External Peer Review (IEPR). IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. Any work product, report, evaluation, or assessment that undergoes DQC and ATR also MAY be required to undergo IEPR under certain circumstances. A risk-informed decision, as described in EC 1165-2-209, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR: Type I is generally for decision documents and Type II is generally for implementation products.

(a) Type I IEPR. Type I IEPR reviews are managed outside USACE. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and an biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all the underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-209.

(b) Type II IEPR. Type II IEPR, or Safety Assurance Reviews (SAR), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

(4) Policy and Legal Compliance Review. Study documents supporting budget decisions will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Chief of Engineers. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in study documents. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100, Planning Guidance Notebook.

(5) Cost Engineering Review and Certification. The Cost Engineering Appendix will undergo ATR with the DMMP main report. The Cost Reviewer, a representative of the Cost DX located in the Walla Walla District, will serve as an ATR team member. The Cost DX will provide certification of the total project cost.

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The peer review effort for the Morehead City Harbor DMMP was completed by the Deep Draft Navigation Planning Center of Expertise (DDNPCX). Pursuant to EC 1165-2-214, the MSC (SAD) is the RMO for "other work products," so having the DDNPCX, which is led and managed by SAD, serve as the RMO was appropriate in this circumstance.

The DDNPCX coordinated with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise was included on the review teams to assess the adequacy of cost estimates and contingencies.

3. STUDY INFORMATION

a. Study Document. The U. S. Army Corps of Engineers (USACE), Wilmington District is responsible for the operation and maintenance of the federally-authorized Morehead City Harbor navigation channel. Engineering Regulation (ER) 1105-2-100 requires that a Dredged Material Management Plan (DMMP) be developed for federal navigation projects if a preliminary assessment does not indicate sufficient capacity to accommodate maintenance dredging for at least the next twenty years. The DMMP is a planning document that ensures that sufficient disposal facilities are available for at least the next 20 years and that maintenance dredging activities are performed in an environmentally acceptable manner, use sound engineering techniques, and are economically justified. The final product of this report will be an integrated DMMP and Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA). The DMMP addresses O & M of an existing navigation project and does not require any authorization for implementation. HQUSACE has determined that a DMMP is an "other work product."

b. Study Description. The study area for the Morehead City Harbor DMMP includes the Morehead City Harbor navigation channels, the adjacent mainland area, the beaches of Bogue Banks and Shackleford Banks, the nearshore Atlantic Ocean off of Bogue Banks and Shackleford Banks, the Environmental Protection Agency (EPA) designated Morehead City Ocean Dredged Material Disposal Site (ODMDS), and the existing disposal sites of Brandt Island, Marsh Island and Radio Island (Figure 1).

The current Federal authorization for the Morehead City Harbor project consists of both deep draft and shallow draft channels. The deep draft portion of the project provides navigation channels from the deep water of the Atlantic Ocean to the North Carolina State Ports Authority (NCSPA) facilities. The shallow draft portion of the project provides for navigation channels from the waterfront docks at downtown Morehead City to the deep draft portion of the project. Dredging methods and disposal/placement options depend on the channel location and the *in situ* material characteristics. Based on these sediment characteristics and potential disposal locations, the deep draft channels or ranges are grouped into three sections; 1) the Inner Harbor, 2) the Outer Harbor, and 3) the Outer Entrance Channel.

Inner Harbor maintenance dredging has historically been accomplished by hydraulic pipeline dredge every 2 to 3 years, with placement in either the disposal area at Brandt Island or on the beaches of Bogue Banks. Brandt Island has been used for disposal since 1955. However, from 1978 through 2005 the majority of Inner Harbor dredged material was temporarily placed into Brandt Island and later pumped onto the adjacent beaches of Fort Macon State Park and Atlantic Beach. These beach

placements (Brandt Island Pumpouts) were designed to compensate for any potential shoreline impacts associated with changes in sediment transport attributable to the Federal navigation project (USACE 1976 General Design Memorandum and USACE 2001 Section 111 Report). Both the Design Memorandum and Section 111 report prepared for this project specifically recognized that beach impacts from the navigation project were offset by the Brandt Island pumpouts.

The most recent Brandt Island pumpout (2005) was problematic in that it included placement of an unacceptable amount of fine-grained material onto the beach. This placement of fine-grained material on the beach, along with recent USACE geotechnical investigations, indicates that Brandt Island and portions of the Inner Harbor contain material unfit for beach placement. Since 2005, only fine-grained dredged material has been placed in Brandt Island. Coarse-grained material has been placed in the ebb tide delta within the existing nearshore placement area west of Beaufort Inlet (Nearshore West), in the ODMDS, or on Pine Knoll Shores as part of a beneficial use of dredged material project (Section 933). Remaining coarse-grained material in Brandt Island is inaccessible; therefore, there are no plans for future pumpouts from Brandt Island to the beach.

The Outer Harbor and Outer Entrance Channel maintenance dredging have historically been accomplished by hopper or pipeline dredge on an annual basis. Dredged material from the Outer Harbor has historically been placed in Brandt Island along with Inner Harbor material, but more recently has been placed in the approved nearshore placement area west of Beaufort Inlet or on area beaches. The Outer Entrance Channel material, which is fine-grained material, is typically disposed of in the ODMDS within the southwest corner, the area designated for fine-grained material. Accordingly, the northern half of the Morehead City ODMDS is designated for dredged material that is coarse-grained, making it an accessible source of sand for future beach replenishments.

The Morehead City shallow-draft portion of the Harbor project has not been dredged in over 15 years. Although these ranges were considered during the development of the DMMP, they are dredged so infrequently and contain such small quantities of material that they would not impact disposal site capacities and were therefore not included in the detailed analyses conducted for the other portions of the Harbor.

The 2003 through 2008 sediment sampling efforts identified that the Inner Harbor material consists of fine-grained material that is less than 90 percent (<90%) sand. As a general rule, placement of dredged material on beaches in North Carolina is limited to that material which is greater than or equal to 90 percent ($\geq 90\%$) sand. Therefore, Inner Harbor material is not suitable for placement onto adjacent shorelines. Sampling also showed that the majority of the shoaled material located in the Outer Harbor consists of coarse-grained material that is suitable for beach or nearshore placement (ebb tide delta), with the exception of material in the Outer Entrance Channel from station 110+00 seaward. This new sediment data, as well as the inability to offset potential project impacts through Brandt Island pumpouts, led to the revised management strategy for the Morehead City Harbor project, termed the Interim Operations Plan (IOP). The Environmental Assessment and Finding of No Significant Impact (EA/FONSI) for the IOP were completed in July 2009 and addressed modifications to the existing Morehead City Harbor dredged material disposal practices for an interim period while the Morehead City Harbor DMMP is being developed. The IOP (current base plan) is structured so that Morehead City Harbor maintenance dredging occurs on a three-year dredging cycle. The IOP (Table 1) was developed using past dredging quantities, recent geotechnical data, and current channel and disposal area conditions.

Year	Dredging Area	Disposal/Placement Location	Approx. Quantity
Year-1	Ocean Bar	Fort Macon / Atlantic Beach	1,100,000 cubic yards
Year-2	Ocean Bar Inner Harbor	Nearshore Placement Area Brandt Island	250,000 cubic yards 700,000 cubic yards
Year-3	Ocean Bar Inner Harbor	Nearshore Placement Area ODMDS	750,000 cubic yards 100,000 cubic yards

Table 1. Interim Operations Plan.

The first step of the DMMP process was the preparation of the Preliminary Assessment (PA), which was completed by the USACE, Wilmington District in 1997 (USACE, 1997). The PA concluded that there were no significant problems to the continued maintenance of the Morehead City Harbor project, therefore, a DMMP was not recommended. Since 1997, changes have occurred regarding the management of dredged material from Morehead City Harbor. In the past, capacity in the Brandt Island confined disposal site was periodically restored when the material from Brandt Island was pumped to the beach. Due to the inaccessibility of coarse-grained material in Brandt Island, pumpouts are no longer an option. Because pumpouts are no longer an option, since 2005 (the last pumpout), only fine-grained material has been placed in Brandt Island. To address these changes and the implications for future management of the Harbor, development of a formal dredged material management plan is now warranted.

The initial phase of the DMMP began with the identification of dredged material management problems and opportunities, the procedure used to identify measures, the methodology used to select alternatives for further analysis, work tasks and the costs and schedule to perform those tasks. Resource agency and public involvement began in 2009 when a public meeting was held to brief attendees on the Morehead City Harbor DMMP project and process, to solicit comments and input and to invite attendees to participate on the Project Delivery Team (PDT). Attendees included representatives from state and federal resource agencies, interest groups, and stakeholders. Several attendees expressed an interest in participating on the PDT and have actively participated in the development of the DMMP.

The DMMP for the Morehead City Harbor project has been developed using a consistent and logical procedure by which dredged material management measures have been identified, evaluated, screened, and recommended so that dredged material placement operations are conducted in a timely, environmentally sensitive, and cost-effective manner. Following identification of problems and opportunities, the PDT identified 21 potential DMMP measures for the Morehead City Harbor DMMP which resulted in over 100 dredging and disposal options to be analyzed for the base plan. Analysis and screening of the measures during the plan formulation process resulted in the elimination of several of the DMMP measures. As shown in the Table 2, below, those measures that remain viable were combined to form the recommended base plan. Implementation of the base plan is estimated to cost approximately \$11,900,000 annually. The State of North Carolina is the non-federal partner and as such is responsible for providing all lands, easements, and rights-of-way, including suitable borrow and excavated or dredged material disposal areas, and perform, or assure performance of, all alterations or relocations of facilities and utilities (except alterations or relocations of highway bridges and railroad bridges and approaches thereto), determined by the Government to be necessary for the maintenance, repair,

replacement, and rehabilitation of the Project. The only costs incurred by the State of North Carolina are approximately \$50,000 annually for maintenance of the spillway boxes at Brandt Island. The general navigation features (maintenance dredging) of the Harbor are 100% federally funded.

DMMP Cycle	Harbor Section	Navigation Range Dredged	Dredge Plant	Proposed Disposal/Placement Location
Years 1, 4, 7, 10...	Outer	S. Range B, Cutoff, N. Range A to Sta. 110+00	30-inch pipeline	Fort Macon State Park/Atlantic Beach & Shackleford Banks
Years 2,5, 8,11...	Outer	S. Range C-N. Range B	hopper	Nearshore West & East
	Outer	S. Range B, Cutoff, N. Range A to Sta. 117+00	hopper	Nearshore West & East
Years 3,6,9,12...	Inner	Northwest Leg, West Leg 1 & East Leg	18-inch pipeline	Brandt Island or ODMDS
	Inner	West Leg 2 & N. Range C	18-inch pipeline	Brandt Island or ODMDS
	Outer	S. Range B, Cutoff, N. Range A to Sta. 117+00	hopper	Nearshore West & East
	Outer Entrance Channel	S. Range A, Sta. 110+00 out	hopper	ODMDS

Table 2. Recommended Base Plan.

Inner Harbor, fine-grained material would be disposed of in Brandt Island until it reaches capacity in 2028, at which time it would be disposed of in the ODMDS. An essential component of this DMMP is the placement of coarse-grained material on the beaches of Fort Macon State Park and Atlantic Beach as well as Shackleford Banks, to counteract the potential effects of erosion caused by dredging in the navigation channel. The 2001 Section 111 Report performed to examine the erosive effects of the project concluded that beach placement on the Fort Macon and Atlantic Beach shorelines was "an integral part of the operation and maintenance of the project," and that the placement of approximately 5 million cubic yards of material between 1978 and 2001 "provided more than adequate compensation or mitigation for this possible impact." It should be noted that Shackleford Banks is managed by the National Park Service (NPS) and in the past the NPS did not want sand from the channel placed on Shackleford Banks. In 2010 the NPS requested that the DMMP consider sand placement on Shackleford Banks as part of the base plan. Therefore, the base plan recommends placement of material on Fort Macon and Atlantic Beach as well as Shackleford Banks, at regular intervals to ameliorate the losses of material caused by dredging. However, the National Park Service has the option to decline placement of sand on Shackleford Banks during any maintenance event throughout the life of the DMMP.

Another very important component of the DMMP is the placement of dredged material in the ebb tide delta to reduce ebb tide delta deflation. For this reason, in years 2 and 3 of the 3-year maintenance cycle, the base plan recommends placement of coarse-grained material (greater than or equal to 80%

sand) in Nearshore Placement Areas on both sides of Beaufort Inlet, including the existing Nearshore West with a proposed expanded area and a new Nearshore East placement area.

The placement of dredged material on the ebb tide delta, which is part of the littoral system, is expected to contribute to the stability of the ebb tide delta thus positively affecting the littoral system and the associated features. Placement of material directly on the beaches would contribute to improvement of beach stability for beaches of Bogue Banks and Shackleford Banks. However, any time dredged material is not placed in the ebb tide delta, it may adversely affect the deflating ebb tide delta. An understanding of coastal inlet processes suggests that continued erosion of the ebb tide delta complex is likely to eventually impact the adjacent beaches. The locations, severity and timing of the impact are unknown at this time. It is likely that any impact to the shoreline along Bogue Banks up to this point has been mitigated by previous placement of federal navigation maintenance material along the eastern end of the island as found by the Section 111 report; however, continued deflation of the ebb tide delta may eventually overtake those efforts. Every practical and sound effort, including reasonable use of light-loaded vessels, will be made to retain littoral material dredged from the navigation channels within the inlet complex to minimize this ebb tide delta deflation. A comprehensive physical monitoring program, as outlined in the Morehead City Harbor Monitoring Plan, will allow the assessment of ongoing operations and provide guidance regarding the need for possible modification of future dredging practices to maximize efficacy of dredged material placement within the system.

The proposed Morehead City Harbor DMMP is not expected to result in any significant adverse environmental effects. Significant resources (including terrestrial and marine biota, cultural resources, threatened and endangered species, air and water quality, socio-economics, esthetics, and recreation) will not be adversely impacted by implementation of the proposed DMMP. Localized, short-term, and reversible adverse impacts to intertidal macrofauna (beach infauna) may occur. However, beach placement areas on both Bogue and Shackleford Banks would recover quickly since only beach compatible material (greater than or equal to 90% sand) would be placed on these beaches.

In summary, over 1 million cubic yards of dredged material are removed from the Morehead City Harbor annually. Current maintenance disposal practices, without modification, result in the need for “new” or expanded disposal sites or modified disposal options, including beneficial uses after 2028. The proposed DMMP (base plan) provides virtually unlimited disposal capacity for the Morehead City Harbor navigation project by recommending the following: continued use of Brandt Island without expansion, placement of coarse-grained material on the beaches of Fort Macon State Park, Atlantic Beach, and Shackleford Banks, expansion of the Nearshore West placement area, a new Nearshore East placement area and continued use of the EPA designated ODMDS. The proposed base plan will provide more than adequate disposal capacity to maintain the Morehead City Harbor navigation project to the fully authorized dimensions for at least the next 20 years.

c. Factors Affecting the Scope and Level of Review.

This section discusses the factors affecting the risk informed decisions on the appropriate scope and level of review. The discussion is intended to be detailed enough to assess the level and focus of review and support the PDT, PCX, and vertical team decisions on the appropriate level of review and types of expertise represented on the various review teams. Factors affecting the risk informed decisions on the appropriate scope and level of review include the following:

- If parts of the study will likely be challenging (with some discussion as to why or why not and, if so, in what ways-consider technical, institutional, and social challenges, etc.);*

The DMMP addresses O & M of an existing Harbor with typical disposal practices, including the continued use of the Brandt Island confined disposal facility, the existing and proposed nearshore placement areas, the beaches of Bogue Banks and Shackleford Banks, and the ODMDS. The greatest challenge, which is not considered significant, is estimating the future quantities of dredged material to be removed annually from the navigation channel and the appropriate placement locations and volumes to be placed on the adjacent beaches and in the ebb tide delta (nearshore areas) to reduce sediment losses that result from navigation channel maintenance.
- A preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be (e.g., what are the uncertainties and how might they affect the success of the project);*

The project has been implemented successfully since 2009 in accordance with the IOP. This DMMP proposes three changes to the current disposal plan (IOP) and those are expansion of the existing nearshore placement area west of Beaufort Inlet, a new nearshore placement area east of the Inlet and placement of beach quality sand on Shackleford Banks as requested by the National Park Service (NPS). No new disposal facilities are proposed for construction. The DMMP outlines the key assumptions and associated minor risks involved with sediment testing, shoaling rates and sea level rise. When these risks are combined, the cumulative risk to the project is still very low.
- If the project is likely to have significant economic, environmental, and/or social effects to the Nation (with some discussion as to why or why not and, if so, in what ways);*

The DMMP will not have significant economic, environmental, or social effects to the Nation, and only minor effects will result from addition of the new dredged material placement areas. Implementation of the DMMP ultimately will have positive economic, environmental and social effects by renourishing the deflating ebb tide delta and the adjacent beaches, including National Park Service lands. Failure to adequately maintain Morehead City Harbor in accordance with the DMMP could have negative economic effects on the Region and Nation.
- If the project likely involves significant threat to human life/safety assurance (with some discussion as to why or why not and, if so, in what ways-consider at minimum the safety assurance factors described in EC 1165-2-209 including, but not necessarily limited to, the consequences of non-performance on project economics, the environmental and social well-being {public safety and social justice; residual risk; uncertainty due to climate variability, etc.};*

The DMMP addresses O & M of an existing Harbor with typical disposal practices that would not add significant threat to human life/safety assurance. Uncertainties discussed above related to sediment testing, shoaling rates and sea level rise would have no bearing on life safety. Standard safety precautions associated with dredging of federal channels and placement of dredged material on public beaches would be enforced to ensure public safety.

- *If the project/study is likely to have significant interagency interest (with some discussion as to why or why not and, if so, in what ways);*

The DMMP has been and will continue to be coordinated with the appropriate resource agencies. The current DMMP is supported by the resource agencies and there are no objections to the base plan. As requested by the NPS, they are a cooperating agency on the DMMP and have significant interest in the DMMP. They strongly support the base plan to place beach quality material from the navigation channel on Shackleford Banks, which is managed by the NPS.

- *If the project/study will be highly controversial (with some discussion as to why or why not and, if so, in what ways);*

The DMMP is not highly controversial however, one stakeholder, Carteret County, is concerned that the dredged material disposal measures recommended in the DMMP would not adequately offset the impacts of the navigation channel on the beaches of Bogue Banks. As discussed in detail in the DMMP, recommendations for future beach placement operations along Bogue Banks would be based on the volumetric loss within the area of Atlantic Beach and Fort Macon. The quantity and location of future placements will be based on changes observed through the monitoring program and should be sufficient to ameliorate losses that have occurred between beach placement operations.

Placement of material along the beaches of Shackleford Banks will also be based on the volumetric loss measured between placement events. Comparison of the volumetric losses shows that the recent loss trends for both islands are relatively similar. The loss rate for the Bogue Banks side of the inlet is approximately 218,800 cubic yards per year, while a similar loss rate along Shackleford Banks of 166,450 cubic yards per year was also calculated. With this approximate 57/43 split of sediment entering the navigation channel from both the east and west, the DMMP recommends that dredged material be returned to the beaches in similar ratios during future beach placement operations. Following the initial placement, these ratios may be reevaluated based on the performance of the material placed. This will ensure equitable distribution of available material to both islands.

Currently Carteret County contends that the sediment split should be 65/35 and the ratio fixed for the life of the DMMP rather than based on the results of monitoring between placement events. This is considered a minor controversy that will be resolved prior to completion of the final DMMP. All other dredging practices discussed in the DMMP are standard in USACE and the dredging industry and no other controversy related to the DMMP exists.

- *If the project report is likely to contain influential scientific information or be a highly influential scientific assessment (with some discussion as to why or why not and, if so, in what ways);*

The DMMP does not contain influential scientific information and is not a highly influential scientific assessment.

- *If the information in the study document or proposed project design will likely be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices (with some discussion as to*

why or why not and, if so, in what ways);

The information in the DMMP is not based on novel methods, does not use innovative materials or techniques, does not present complex challenges, and is not precedent setting. The DMMP could change the prevailing practice of only placing beach quality sand on the beaches and in the nearshore area west of Beaufort Inlet rather than placing material on both sides of the Inlet. From a coastal engineering and environmental perspective, this would benefit the littoral system by attempting to ameliorate sediment losses in the system that result from maintenance with placement at balanced throughout the system. Previously, at the request of NPS, no material had been placed on Shackleford Banks. However, new information regarding navigation channel impacts on Shackleford Banks caused the NPS to investigate the beach placement option in compliance with its policies and as such requested that the USACE include beach placement on Shackleford Banks as an option in the DMMP.

- *If the proposed project design will require redundancy, resiliency, and/or robustness (with some discussion as to why or why not and, if so, in what ways- see EC 1165-2-209, Appendix E, Paragraph 2 for more information about redundancy, resiliency, and robustness); and*
The DMMP does not recommend the construction of new upland sites or the restoration of previously used inactive sites. There are no project features that require redundancy, resiliency or robustness.
- *If the proposed project has unique construction sequencing or a reduced or overlapping design construction schedule (with some discussion as to why or why not and, if so, in what ways).*
The DMMP does not involve construction therefore construction sequencing and scheduling are non-issues. The 20 year DMMP is based on the 3-year rotational O & M cycle that is described above in Section 3.b.

d. Risk Informed Decisions on Appropriate Reviews. *The following questions shall be explicitly considered, in accordance with EC 1165-2-209 paragraph 15b:*

(1) *Does it include any design (structural, mechanical, hydraulic, etc)?*

No

(2) *Does it evaluate alternatives?*

Yes, to a lesser degree than a full Feasibility Study

(3) *Does it include a recommendation?*

Yes

(4) *Does it have a formal cost estimate?*

Yes; it will be certified by the Cost DX

(5) *Does it have or will it require a NEPA document?*

Yes, the report is an integrated DMMP and EIS. The decision to prepare an EIS for the DMMP as opposed to an EA is due to the potential inclusion of a new beach placement area on National Park Service lands (Shackleford Banks).

(6) *Does it impact a structure or feature of a structure whose performance involves potential life safety risks?*

No

(7) *What are the consequences of non-performance?*

If the recommended base plan is implemented, no lives would be at risk. If the recommended DMMP is not implemented, no lives will be at risk but there could be negative economic effects as well

as negative effects to the ebb tide delta.

(8) *Does it support a significant investment of public monies?*

Yes

(9) *Does it support a budget request?*

Yes

(10) *Does it change the operation of the project?*

No, project operation would not change, however, some maintenance practices would change – as described above.

(11) *Does it involve ground disturbances?*

The only ground disturbance expected would be from the heavy equipment on the beaches during beach placement events. This type of activity is routine for SAW and has minimal risk.

(12) *Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided?*

No

(13) *Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?*

No

(14) *Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos?*

No

(15) *Does it reference use of or reliance on manufacturers' engineers' specifications for items such as prefabricated buildings, playground equipment, etc?*

No

(16) *Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc?*

No

(17) *Is there or is there expected to be any controversy surrounding the Federal action associated with the work product?*

The DMMP is not highly controversial, however, one stakeholder, Carteret County, is concerned that the dredged material disposal measures recommended in the DMMP do not adequately offset the impacts of the navigation channel on the beaches of Bogue Banks. See discussion above in paragraph c. for more information.

e. In-Kind Contributions. There are no planned in-kind sponsor contributions.

4. DISTRICT QUALITY CONTROL (DQC)

a. Documentation of DQC. District Quality Control will be conducted by the SAW Morehead City Harbor DMMP PDT, SAW independent reviewers, as well as chiefs of relevant key disciplines, where each of the reviewers will review the documents for accuracy. All reviewers are listed in Attachment 1. All DQC comments and responses will be documented by the Planning Technical Lead and made available to the ATR team for their use.

b. Products to Undergo DQC. The DQC for the DMMP AFB report was completed in 2010 and DQC of the Draft DMMP and EIS was conducted in August 2012. The Final Integrated DMMP and EIS will also undergo DQC at the appropriate time.

c. Required DQC Expertise. The SAW Morehead City Harbor DMMP PDT consists of key disciplines relevant to DMMP and EIS: Planning, Operations, Environmental, Legal, Cost, Economics

and Engineering, including geotechnical and coastal. DQC reviewers consist of non-PDT experts and experts in the supervisory chain.

5. AGENCY TECHNICAL REVIEW (ATR)

a. Products to Undergo ATR.

- (1) DMMP AFB Report – ATR certified in May 2010
- (2) Draft Integrated DMMP and EIS – ATR certified in November 2012

b. Required ATR Team Expertise. The Deep Draft Navigation (DDNPCX) accomplished the Morehead City Harbor DMMP ATR. The ATR Team reflected the major technical disciplines of the Morehead City Harbor DMMP PDT. As such, the ATR team consisted of the following disciplines: Planning, Operations, Environmental, Real Estate, Legal, Cost, Economics and Engineering, including, geotechnical and coastal.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works study documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead will also serve as the Plan Formulation reviewer. They should be a senior water resources planner with experience in navigation projects and associated planning reports and documents. The ATR Lead will be from a district outside the MSC.
Plan Formulation	Expertise in plan formulation for O & M of deep draft navigation projects.
Economics	Expertise in economics appropriate for a DMMP level to verify trends and commodities within the affected Port.
NEPA Compliance	Expertise in NEPA compliance for coastal deep draft navigation projects.
Coastal Engineering	Expertise in shoaling analyses and coastal processes.
Geotechnical Engineering	Expertise in geotechnical soils and materials assessments related to coastal deep draft navigation projects.
Cost Engineering	Expertise in deep draft navigation projects.
Operations	Expertise in the maintaining deep draft navigation projects.
Real Estate	Expertise in real estate requirements for beach placement associated with deep draft navigation projects.

d. Documentation of ATR. DrChecks review software was used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments were limited to those required to ensure adequacy of the product. The four key parts of a quality review

comment included:

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks included the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. All ATR concerns were satisfactorily resolved between the ATR team and the PDT.

At the conclusion of each ATR effort, the ATR Lead prepared a Review Report summarizing the review. This review report is considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the AFB and draft report. The Statement for the ATR of the DMMP AFB report is included in Attachment 2 and a sample Statement for ATR of the Draft DMMP is included in Attachment 3.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

a. Decision on IEPR. Per the new guidance in the Programmatic O&M Review Plan, dated 20 December 2012, DMMPs are listed as routine O&M products. As the programmatic review plan is specifically for items that are not decision documents or implementation documents, HQUSACE has concluded that DMMPs are “other work products.” Although some changes to current O & M practices are recommended in the DMMP, the changes are limited in scope and impact and therefore

would not significantly benefit from an independent external peer review. The PDT, based on its risk informed evaluation, determined that a Type I IEPR is not warranted on the Morehead City Harbor DMMP. Based on criteria contained in EC 1165-2-209, the District Chief of Engineering, as the Engineer-In-Charge, has not recommended a Type II IEPR Safety Assurance Review (SAR). The Federal action is not justified by life safety, and project failure would not pose a significant threat to human life. Innovative materials or novel engineering methods will not be used. Redundancy, resiliency, or robustness is not required for implementation of the plan. Also, the project involves no construction. The risk informed decision for not performing a Type I IEPR or a Type II IEPR explicitly considered the following:

- *If the decision document meets the mandatory triggers for Type I IEPR described in Paragraph 11.d.(1) and Appendix D of EC 1165-2-209; and if it doesn't, then also:*
 - o *the consequences of non-performance on project economics, the environmental and social well-being (public safety and social justice);*
The Morehead City Harbor DMMP is an "other work product", not a decision document. The DMMP proposes minor changes to O & M practices that have performed well in the past, and the consequences of non-performance on project economics, the environmental and social well-being are likely to be insignificant.
 - o *whether the product is likely to contain influential scientific information or be highly influential scientific assessment; and*
The DMMP does not contain influential scientific information or highly influential scientific assessments.
 - o *if and how the decision document meets any of the possible exclusions described in Paragraph II.d.(3) and Appendix D of EC 1165-2-209.*
The Morehead City Harbor DMMP is an "other work product." Appendix D of Engineering Circular 1165-2-209 dated 31 January 2010 lists the factors that trigger the requirement of Type I Independent External Peer Review (IEPR). The details provided below describe how the subject "other work project" addresses these factors.
- *Would a selected plan be likely to pose a significant threat to human life?*
No. There are no aspects of the proposed DMMP that could pose a threat to human life.
- *Is total project cost estimated to exceed \$45M?*
There are no construction costs associated with the base plan, but the costs of the study and the O&M projected for the next 20 years are greater than \$45 million. The objective of this DMMP is to ensure that there is sufficient disposal capacity to support O & M of the Morehead City Harbor Navigation Project for at least the next 20 years.
- *Requested by affected State Governor?*
No.
- *Significant public dispute over the size, nature, or effects of the project?*
There is a degree of public dispute related to the DMMP. Carteret County, a local stakeholder, is concerned that the dredged material disposal measures recommended in the DMMP do not adequately offset the impacts of the navigation channel on the beaches of Bogue Banks. Although the DMMP considered the impacts of the navigation project on the ebb tide delta and the adjacent beaches in order to develop the base plan, the DMMP does not attempt to fully evaluate nor address the impacts of the Morehead City Navigation project. See information in Section 3. c. above that addresses this in more detail.
- *Significant public dispute as to the economic or environmental cost or benefit of the project?*
No.

- *Request by head of a reviewing Federal Agency, if determined likely to have an adverse impact on environmental, cultural, or other resources under his/her jurisdiction (after implementation of proposed mitigation plans)?*
No.
- *Is an Environmental Impact Statement required for this study?*
Wilmington District, in coordination with the National Park Service (Cooperating Agency) decided that an EIS would be more prudent for the Morehead City Harbor DMMP than an EA. The decision to prepare an EIS for the DMMP is due to the potential inclusion of a new beach placement area (Shackleford Banks), which is managed by the National Park Service. Shackleford Banks provides critical habitat for the federally listed piping plover and nesting habitat for federally listed sea turtles. However, as documented in the EIS portions of the DMMP, implementation of the DMMP is not expected to result in significant impacts to any resources in the study area. The NPS concurs with USACE's impact assessment and if there was any question about the level of impacts to Shackleford Banks, the NPS would request that dredged material placement on Shackleford Banks be removed as an option in the DMMP and USACE would comply.
- *Plan based on novel methods, presents complex challenges for interpretation, contains precedent setting methods or models, or presents conclusions that are likely to change prevailing practices?*
No.
- *Any other circumstances where the Chief of Engineers determined IEPR is warranted?*
No.

b. Products to Undergo Type I IEPR. Not-Applicable.

c. Required Type I IEPR Panel Expertise. Not-Applicable.

d. Documentation of Type I IEPR. Not Applicable.

7. MODEL CERTIFICATION AND APPROVAL

a. Planning Models. No planning models were used in the development of the DMMP. A variation of the direct scoring method, also called the "Borda" method*, was used to inform the process to develop the least cost, engineeringly sound, environmentally acceptable base plan for the Morehead City Harbor DMMP.

*Pomerol, J., and S. Barba-Romero. 2000. *Multicriterion decision in management: Principles and practices*. Boston, MA: Kluwer Academic Publishers.)

b. Engineering Models. The following engineering model was used during development of the DMMP:

Geotechnical Engineering. The software used to perform the stability analysis for the Brandt Island confined disposal facility is the UTEXAS4 program. UTEXAS4 is a general-purpose software program for limit equilibrium slope stability computations. A stability analysis is a way to quantify, with a factor of safety, the hazard that a sliding or overturning failure will occur. Specific engineering criteria for the stability analysis dictates the minimum factor of safety, which is typically between 1.3 and 1.5 depending on the case. UTEXAS4 computes a factor of safety, F, with respect to shear strength. The

method of analysis used to determine the factor of safety for Brandt Island is Spencer's procedure (Spencer 1967, Wright 1970). Spencer's procedure fully satisfies static equilibrium for each slice within the failure area. Both circular and non-circular failure surfaces are analyzed by the UTEXAS4 software program. UTEXAS4 is the Corps of Engineers- sponsored slope stability program and is one of three slope stability programs recommended by the Geotechnical Community of Practice.

8. REVIEW SCHEDULES AND ATR COSTS

- a. **ATR Schedule and Cost.** ATR of the Morehead City Harbor DMMP AFB report was completed in May 2010 at a cost of \$48,500; and ATR of the draft DMMP was completed in November 2012 at a cost of \$48,000.
- b. **Type I IEPR Schedule and Cost.** Not Applicable.
- c. **Model Certification/Approval Schedule and Cost.** No planning models were used in the development of the DMMP. The UTEXAS4 program is the Corps of Engineers- sponsored slope stability program and is approved for use by the Geotechnical Community of Practice.

9. PUBLIC PARTICIPATION

On November 26, 2007, a scoping letter for the proposed DMMP was sent to federal and state agencies, interest groups, and the public requesting identification of significant resources and issues of concern. On March 4, 2009, a public meeting was held to brief attendees on the Morehead City Harbor DMMP project and process, to solicit comments and input and to invite attendees to participate on the Project Delivery Team (PDT). Attendees included representatives from state and federal resource agencies, interest groups, and stakeholders. All concerns identified in response to the scoping letter and at the public meeting were considered in the development of the Draft DMMP. Several attendees of the public meeting expressed an interest in participating on the PDT, regularly attend PDT meetings and have made important contributions to the planning and development of the DMMP.

A Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement (DEIS) was published in the Federal Register on March 27, 2009.

Interested stakeholders and resource agencies had the opportunity to review the AFB read-ahead package and to attend the AFB, which was held on July 15, 2010. Based on input from the National Park Service following the AFB, the Corps and the National Park Service formally became cooperating agencies on February 15, 2011 and continually coordinate on the DMMP and will do so through development and implementation of the DMMP.

The Integrated DMMP/EIS will be disseminated to resource agencies, interest groups, and the public as part of the NEPA environmental compliance review. All draft and final reports will be provided to the public via the US Postal Service or email and will be posted on the District web page and all input received will be considered in the preparation of the final report. Attachment 1 includes the review team roster (DMMP PDT, Independent Reviewers and the AFB ATR team).

10. REVIEW PLAN APPROVAL AND UPDATES

The South Atlantic Division Commander is responsible for approving this Review Plan, including by delegation within the MSC. The MSC Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for this DMMP. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval will be documented in Attachment 4. Significant changes to the Review Plan (such as changes to the scope and/or level of review) must be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the MSC Commander's approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

11. REVIEW PLAN POINTS OF CONTACT

Questions and/or comments on this review plan can be directed to the following points of contact:

- Wilmington District Project Manager, (910) 251-4709
- Wilmington District Project Technical Lead, (910) 251-4757
- South Atlantic Division Point of Contact, (404) 562-5225
- Deep Draft Navigation Planning Center of Expertise, (251) 694-3884

ATTACHMENT 1: Team Rosters

Project Delivery Team (PDT)

ROLE	AGENCY
Project Manager	CESAW-PM-C
Technical & Planning Leader	CESAW-TS-PE
Design	CESAW-TS-ED CESAW-TS-ED
Navigation	CESAW-CW
Cultural Resources	CESAW-TS-PE
Coastal/H&H	CESAW-TS-EC CESAW-TS-EC
Geotechnical Engineering	CESAW-TS-EG CESAW-TS-EG
Navigation	CESAW-OP-N
Cost Engineering	CESAW-TS-EE
Economics	CESAW-TS-PF
Real Estate	CESAS-RE-RP
Office of Counsel	CESAW-OC
Operations	CESAW-OP-N
Non-Federal Sponsor	State of North Carolina Division of Water Resources
Resource Agencies	US Fish and Wildlife Service National Park Service NC Wildlife Resources Commission National Marine Fisheries Service NC Division of Marine Fisheries NC Division of Water Quality
Stakeholders	NC State Ports Authority Carteret County

INDEPENDENT REVIEWERS

ROLE	AGENCY
Chief, Planning & Environmental	CESAW-TS-P
Chief, Environmental	CESAW-TS-PE
Chief, Engineering	CESAW-TS-EC
Chief, Geotechnical Engineering	CESAW-TS-EG
Chief, Operations	CESAW-OP
Office of Counsel	CESAW-OC
Cooperating Agency	National Park Service – Southeast Regional Office

AFB ATR Team

DISCIPLINE	ORGANIZATION
DDNPCX ATR Manager	Mobile/SAD
District ATR Coordinator	SAW
ATR Lead/Plan Formulation	SAM
Coastal/H & H	SAM
Operations	SAM
Geotechnical Engineering	SAM
Environmental	SAM
Real Estate	SAM
Economics	POH

Draft DMMP ATR Team

DISCIPLINE	ORGANIZATION
DDNPCX ATR Manager	Mobile/SAD
District ATR Coordinator	SAW
Plan Formulation	SAM
Coastal/H & H	SAJ
Operations	SAM
Geotechnical Engineering	SAM
Environmental	SAM
Real Estate	MVN
ATR Lead\Economics	POH
Cost Engineering	Cost DX

Attachment 2: Certification of ATR for AFB Report

Completion of Agency Technical Review

MOREHEAD CITY HARBOR DMMP

Wilmington, North Carolina

May 2010

Wilmington District has completed the dredged material management plan for the Morehead City Harbor Navigation Project. Notice is hereby given that an Agency Technical Review (ATR) has been conducted that is appropriate to the level of risk and complexity inherent in the project. The dredged material management plan (DMMP) was reviewed for compliance with established principles and procedures, using clearly justified and valid assumptions. Further, methods and procedures were reviewed to determine the appropriateness, correctness, and reasonableness of results, including determination of whether the plan meets the customer's needs consistent with law and existing United States Army Corps of Engineers policy.

An independent technical review team composed of members from, Honolulu, Mobile, and Walla Walla Districts performed the review. The Deep Draft Navigation Planning Center of Expertise (DDNPCX) managed the conduct of this review using the DrChecks software. The ATR was initiated on 29 March 2010, and completed on 21 May 2010. A complete copy of the final comment report from DrChecks is enclosed.

The ATR team placed 101 comments in DrChecks. After evaluations were completed by the Project Delivery Team (PDT), there were 15 "NonConcur" during the Backcheck by the ATR team. Coordination between the ATR team and PDT on the areas of concern resulted in satisfactory resolution of these comments. All of the review comments and evaluations are found in the attached ProjNet Report.

The Cost DX at Walla Walla has certified the costs in the report. The overall report has been fully reviewed, and all associated documentation required by the National Environmental Policy Act has been complied with. We certify that the DMMP for the Morehead City Harbor Navigation Project ATR was performed as required by Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, dated 31 January 2010.

A handwritten signature in black ink, appearing to read "Bernard E. Moseby", is written over a horizontal line. To the right of the signature, there are four small black squares arranged horizontally.

Bernard E. Moseby
Deputy Director
Deep Draft Navigation
Planning Center of Expertise

Enclosure

Attachment 3: Certification of ATR for DRAFT DMMP/EIS



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

CESAM-PD-D (1105-2-40a)

8 November 2012

MEMORANDUM FOR MS. JENNIFER OWENS (CESAW-TS-PE) U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT, 69 DARLINGTON AVENUE, WILMINGTON, NORTH CAROLINA, 28402-1890

SUBJECT: Certification and Completion of Agency Technical Review, Morehead City Harbor Draft Integrated Dredging Material Management Plan and EIS

1. References:

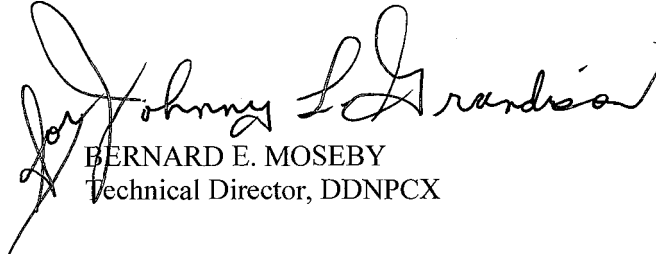
- a. EC 1165-2-209, Civil Works Review Policy, 31 January 2010
- b. EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011
- c. Memorandum, CECW-CP, 30 March 2007, Subject: Peer Review Process
- d. Supplemental information for the "Peer Review Process" Memo, dated March 2007

2. In accordance with EC 1165-2-209, "Civil Works Review Policy," dated 31 January 2010, Final Agency Technical Review (ATR) of the Draft Dredging Material Management Plan (DMMP) and Environmental Impact Statement (EIS) dated August 2012, has been coordinated with and executed through the Deep Draft Navigation Planning Center of Expertise (DDNPCX).

3. ATR comments were posted in DrChecks, evaluated by the Project Delivery Team (PDT), and back checked and closed out by the ATR team for incorporation into the DMMP. The cost engineering products supporting the DMMP (estimates, schedules, risk analyses and cost roll-ups) were formally and successfully ATRd by the Cost Engineering MCX and no significant outstanding issues or concerns were found. The DDNPCX point of contact is Mr. Johnny L Grandison, CESAM-PD-D, (251) 694-3804.

Encls

CF:
CESAD-PDS/PAYNES
CESAD-PDS/STRATTON
CESAD-PDS/SMALL



BERNARD E. MOSEBY
Technical Director, DDNPCX

Attachment 4: Review Plan Revisions

Revision Date	Description of Change	Page / Para. Number