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

The names of individuals were redacted prior to publication pursuant to DOD and Army Corps policies.

30 NOV 2015

CESAD-RBT

MEMORANDUM FOR COMMANDER, MOBILE DISTRICT

SUBJECT: Approval of Review Plan for Pascagoula Harbor Federal Navigation Project Information Report, Pascagoula River Channel Deepening

1. References:

a. Memorandum, CESAM-PD-EC, 13 October 2015, subject: Draft Review Plan – Pascagoula Harbor Navigation Project Information Report – Flood Control and Coastal Emergencies – Pascagoula River Channel Deepening (Encl).

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

2. The Review Plan (RP) for the Pascagoula Harbor Federal Navigation Project Information Report (PIR), Pascagoula River Channel Deepening submitted by the Mobile District via reference 1.a has been reviewed by this office. Some minor edits to the RP were coordinated with [redacted] and [redacted] of your organization. The enclosed RP, with the coordinated edits incorporated, is hereby approved in accordance with reference 1.b above.

3. South Atlantic Division (SAD) concurs with the conclusion of the Mobile District that this Pascagoula Harbor Federal Navigation PIR is an "other work product" as defined in reference 1.b above. SAD agrees with the determinations reached in the RP that an Agency Technical Review is required and that a Type I Independent External Peer Review (IEPR) is not required on this PIR. We also concur with the District Chief of Engineering that a Type II IEPR is not required. The primary basis for the concurrence that a Type II IEPR is not required is the determination that failure or loss of the change in operating criteria proposed in this update would not pose a significant threat to human life.

4. The District should take steps to post the approved RP to its web site and provide a link to CESAD-RBT. Before posting to the web site, the names of Corps/Army employees should be removed. Subsequent significant changes, such as scope changes or level of review, to this RP, should they become necessary, will require new written approval from this office.

CESAD-RBT
SUBJECT: Approval of Review Plan for Pascagoula Harbor Federal Navigation Project Information Report, Pascagoula River Cha[redacted]pening

5. The SAD point of contact is [redacted], CESAD-RBT.

Encl

C. DAVID TURNER
Brigadier General, USA
Commanding

CF:
CESAM-EN/Mr. Douglas C. Otto
CESAM-PM-C[redacted]
CESAM-PD-EC[redacted]

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF

CESAM-PD-EC (1105) 13 October 2015

MEMORANDUM FOR CDR, SOUTH ATLANTIC DIVISION, [redacted]
CESAD-RBT

SUBJECT: Draft Review Plan – Pascagoula Harbor Federal Navigation Project Information Report – Flood Control and Coastal Emergencies - Pascagoula River Channel Deepening

1. The Pascagoula Harbor Federal Navigation Project Information Report – Flood Control and Coastal Emergencies - Pascagoula River Channel Deepening final draft Review Plan (RP) (Enclosure 1) is submitted for South Atlantic Division (SAD) approval.

2. The RP incorporates comments made by [redacted] (CESAD-RBT).

3. Upon receipt of SAD approval, the RP will be posted to the Mobile District website with links provided to CESAD-RBT, SAD and Headquarters.

4. Point of contact for this action is [redacted] Please contact [redacted] at [redacted] or e-mail [redacted] with questions.

FOR THE COMMANDER:

Encl

DOUGLAS C. OTTO, JR.
Chief, Engineering Division

Review Plan
For
PROJECT INFORMATION REPORT

Pascagoula Harbor River Channel & Upper Pascagoula Channel Deepening

Jackson County, Mississippi
USACE, Mobile District

October 2015

US Army Corps of Engineers ®

REVIEW PLAN

PROJECT INFORMATION REPORT

Pascagoula Harbor River Channel & Upper Pascagoula Channel Deepening
Jackson County, Mississippi

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan (RP) defines the scope and level of peer review for the Pascagoula Harbor River Channel & Upper Pascagoula Channel Deepening, Pascagoula, Jackson County, Mississippi, Project Information Report (PIR) which will be approved at the South Atlantic Division. Under Engineering Circular (EC) 1165-2-214, the PIR for this project serves neither as a 'decision document' nor an 'implementation document' but as an 'other work product'. As a component of the Project Management Plan (PMP), the RP is a living document and may change as the project progresses.

b. **Applicability.** The development of this plan was based upon the review requirements set forth in:
"Engineering Circular (EC) 1165-2-214, Water Resources Policies and Authorities - Civil Works Review Policy".

This RP does not cover implementation products. An updated/revised RP will be submitted prior to beginning of the design and implementation phase of the project.

Additionally, this review process was coordinated by members of the Deep Draft Navigation Planning Center of Expertise (DDNPCX) in conformance with the references listed below.

c. **References.**

(1) EC 1165-2-214, Civil Works Review, 15 Dec 2012
(2) Engineering Regulation (ER) 1110-1-12, Engineering and Design Quality Management, 21 Jul 2006
(3) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
(4) ER 1105-2-100, Planning Guidance Notebook
(5) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
(6) Engineering Construction Bulletin (ECB) 2007-6 "Model Certification Issues for Engineering Software in Planning Studies" dated 10 April 2007
(7) Water Resources Reform and Development Act (WRRDA) of 2014, H. R. 3080, 10 June 2014

d. **Requirements.** This RP was developed in accordance with EC 1165-2-214, 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:

1) District Quality Control/Quality Assurance (DQC),

2) Agency Technical Review (ATR),
3) Independent External Peer Review (Type I IEPR), and
4) Policy and Legal Compliance Review.

2. REVIEW MANAGEMENT ORGANIZATION COORDINATION

The Review Management Organization (RMO) is responsible for managing the overall review effort described in this RP. The RMO for this project is the U.S. Army Corps of Engineers (USACE) South Atlantic Division (SAD). The RMO will also coordinate with the Cost Engineering and Agency Technical Review Mandatory Center of Expertise (MCX) to ensure the appropriate expertise is included on review teams to assess adequacy of cost estimates, construction schedules and contingencies.

3. PROJECT INFORMATION AND BACKGROUND

The project consists of deepening the Pascagoula River Channel & Upper Pascagoula Channel segment of the Pascagoula Harbor Navigation Project from the existing depth of 38 feet to the federally-authorized channel depth of 42 feet. Initially new work with subsequent maintenance material was proposed to be placed in the Pascagoula Ocean Dredged Material Disposal Site (ODMDS). Additional placement areas will be evaluated for economic and environmental benefits that retain sediment within the littoral system.

As a result of Hurricane Katrina's landfall on 29 August 2005, Congress passed Public Law (P.L.) 109-148, dated December 2005, providing supplemental appropriations to address hurricanes in the Gulf of Mexico. P.L. 109-148 authorized Flood Control and Coastal Emergencies (FCCE) funds to be used to complete previously unconstructed portions of authorized projects in the State of Mississippi along the Mississippi Gulf Coast at full Federal expense.

The supplemental bill directs the USACE to improve Pascagoula Harbor to 'authorized dimensions', as stated in P.L. 99-662, dated November 1986, which authorized the modification of the existing Pascagoula River Channel and Upper Pascagoula Channel to 42 x 350 feet, the Pascagoula Harbor Entrance Channel to 44 x 550 feet, as well as deepening the Horn Island Impoundment Basin to 56 feet. All of the authorized improvements are constructed, with the exception of the Pascagoula River Channel & Upper Pascagoula Channel deepening of the Main Channel from 38 to 42 feet as well as deepening the Horn Island Impoundment Basin to 56 feet. The PIR for widening the Pascagoula Harbor Entrance Channel to 44 x 550 feet was approved on 27 October 2011 and construction completed in 2014. At the request of the non-Federal Sponsor, Jackson County Port Authority, the deepening of the Pascagoula River Channel & Upper Pascagoula Channel segment of the Pascagoula Harbor Navigation Project from 38 feet to 42 feet, and the deepening of the Impoundment Basin to 56 feet, was not constructed at that time.

4. DISTRICT QUALITY CONTROL

All products (including supporting data, analyses, environmental compliance documents, etc.) must undergo DQC review. This is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the PMP. Major Subordinate Command (MSC) and District quality management plans address the conduct and documentation of this fundamental level of review. The DQC review will be managed by the Mobile District. The Project Delivery Team (PDT) is responsible for assuring the overall integrity of the documents produced. The DQC review will be completed prior to submitting documents for ATR. Duties of the DQC team will include the following:

- Review report contents for compliance with established principles and procedures, using clearly justified and valid assumptions.
- Review methods and procedures used to determine appropriateness, correctness and reasonableness of results.
- Provide the review team leader with documentation of comments, issues, and decisions arising out of the DQC review. Comments along with their resolutions will be documented using 'DrChecks' review software.

The list of DQC review team members can be found in Table 2 of Attachment 1.

5. AGENCY TECHNICAL REVIEW

All documents produced as part of this effort will undergo ATR to ensure consistency with established criteria, guidance, procedures, and policy. ATR is not required for 'other work products', however the PDT has determined that an ATR is necessary for this project. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance. The ATR Team Lead will be endorsed and possibly resourced by the USACE DDNPCX.

The ATR team will consist of individuals that represent significant disciplines involved in the accomplishment of work. The ATR Team will be comprised of individuals and organizations within the USACE that are separate and independent from those in Mobile District that accomplished the work. The ATR Team will be from outside the home district.

a. **Products to Undergo ATR.** The PIR (including National Environmental Policy Act (NEPA) and supporting documentation) will undergo ATR

b. **Disciplines Required for Review**. At a minimum, the following eight disciplines should be represented on the ATR team:

ATR Team Members/Disciplines	Required Expertise

ATR Team Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works 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 can be a co-duty with any ATR discipline.
Economics	The Economics reviewer(s) is required to be an economist certified by the DDNPCX.
Environmental Resources	The Environmental Resources reviewer should have extensive knowledge of Federal regulations and NEPA, as well as endangered coastal species and experience on navigation projects. Knowledge of sediment characterization and Hazardous, Toxic and Radioactive Wastes (HTRW) considerations in deep draft navigation planning projects is also required.
Coastal (Hydraulic) Engineering	The Coastal Engineering reviewer should have experience designing deep draft navigation improvement projects including channel deepening projects and have knowledge of requirements for coastal engineering. They shall also be certified in the Corps of Engineers Reviewer Certification and Access (CERCAP).
Navigation (Operations) – Dredged Material Management	The Navigation reviewer should have experience in dredged material management, sediment characterization, suitability determinations, and disposal plans in deep draft navigation planning projects.
Geotechnical Engineering	The Geotechnical Engineering reviewer should have experience in geologic and geotechnical analyses that are used to support the development of Plans and Specifications for deep draft navigation projects.
Cost Engineering	The Cost Engineering reviewer will be identified by the Cost Engineering MCX and will have certifiable experience using Micro-Computer Aided Cost Estimating System (MCACES) and experience developing cost estimates for deep draft navigation improvements, dredging, and coastal dredged material disposal.

a. **Documentation of ATR.** DrChecks review software will be utilized to document all ATR comments, responses and associated resolutions accomplished throughout the review process. The review comments will follow the format listed below:

   i. The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;
   ii. The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
   iii. 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

iv. The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, and a brief summary of the pertinent points in any discussion. The ATR Team Lead will prepare an ATR Report including ATR charge, team bios, summary and certification.

6. INDEPENDENT EXTERNAL PEER REVIEW

Independent External Peer Review (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 the USACE is warranted. There are variations in the scope and procedures for IEPR, depending on the phase and purposes of the project under review. There are two types of IEPR:

- Type I IEPR: Type I IEPR is managed outside the USACE and is conducted on project studies. 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 biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review (SAR)) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214. The Mobile District will not seek a waiver from the requirements of a Type I IEPR, because it does not meet any of the mandatory Type I IEPR triggers.

- Type II IEPR: Type II IEPR or SAR, is managed outside the USACE and is 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.

1) **Decision on Type I IEPR:** The project covered under this review plan does not require Type I IEPR because it does not meet any of the following mandatory Type I IEPR triggers:

   a. Significant threat to human life;

   b. Where the estimated total cost of the project, including mitigation costs, is greater than $45 million (increased to $200 million via WRRDA 2014 Section 1044) based on a reasonable estimate at the end of the reconnaissance phase. If a project has a cost estimate of less than $45 million at the end of the reconnaissance phase, but the estimated costs subsequently increase to more than $45 million, a determination will be made by Headquarters (HQ) USACE whether a Type I IEPR is required;

   c. Where the Governor of an affected State requests a peer review by independent experts; or

   d. Where the Chief of Engineers determines that the project study is controversial due to significant public dispute over either the size, nature, or effects of the project or the economic or environmental costs or benefits of the project.

   The deepening of the Pascagoula River Channel and Upper Pascagoula Channel and subsequent placement of dredged material does not pose a significant threat to human life and life safety issues do not exist. The project does require an Environmental Assessment (EA) to evaluate impacts for the placement of dredged material at two (2) beneficial use sites, but it is not considered to be controversial. The deepening of the channel(s) will simply be to the authorized dimensions, and will have positive impacts in the form of improving navigational safety. No private lands will be impacted during project construction or future operation and maintenance (O&M). Furthermore, this action is not controversial due to the small size, nature and effects of the project. A Type I IEPR would not materially benefit the final decision. Therefore, Mobile District does not recommend and does not plan to perform a Type I IEPR on this PIR. Should the scope of the PIR change, this determination will be reassessed and this Review Plan will be revised and submitted for MSC approval.

2) **Decision on Type II IEPR.** The Mobile District Engineering Division Chief, as the Engineer-In-Responsible-Charge, is responsible for the determination of whether a Type II IEPR SAR is applicable for this project. The project purpose is not hurricane and storm risk management or flood risk management, and the project does not have potential hazards that 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 design. Also, the project has no unique construction sequencing, or a reduced or overlapping design construction schedule. Therefore, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review for this PIR. Should the scope of the PIR change, this determination will be reassessed and this Review Plan will be revised and submitted for MSC approval.

3) **Products to Undergo Type II IEPR.** Not-Applicable.

4) **Required Type II IEPR Panel Expertise.** Not-Applicable.

5) **Documentation of Type II IEPR.** Not-Applicable.

7. POLICY AND LEGAL COMPLIANCE REVIEW

Authorization: As a result of Hurricane Katrina which made landfall on 29 August 2005, Congress passed P.L. 109-148, dated December 2005, that provided supplemental appropriations to address hurricanes in the Gulf of Mexico. P.L. 109-148 authorized FCCE to be used to accelerated completion of unconstructed portions of authorized projects in the State of Mississippi along the Mississippi Gulf Coast at full Federal expense.

The documents are reviewed throughout their production process for compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100 and ER and Engineering Pamphlet (EP) 500-1-1 for use of FCCE funds. 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. The DQC and ATR augment and complement policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and presentation of findings.

8. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address problems and take advantage of opportunities, to evaluate potential effects of alternatives, and to support decision making. Use of a certified/approved planning model does not constitute technical review of the planning product. Selection and application of the model and the input and output

data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on USACE studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. **Planning Models.** No Planning or environmental models will be used in the preparation of the PIR.

b. **Engineering Models.** The following engineering model, as established by Engineering Technical Letter (ETL) 1110-2-573, is anticipated to be used in the development of the PIR:

   MCACES, Second Generation (MII), Version 4.1. The MCACES MII software provides an integrated costs estimating system that meets the USACE requirements for preparing cost estimates. MCACES will be used to produce estimates and will be reported using Microsoft Excel.

9. REVIEW SCHEDULES

a. Schedule of Major Milestones. The document review dates are as follows:

Schedule of Major Milestones

Task	Completion Date
Submit PIR for DQC	November 30, 2015
DQC team enters comments in DrChecks	December 11, 2015
PDT provides responses to DQC comments	December 18, 2015
Back Check of DQC comments	December 23, 2015
DQC Complete with Certification	January 4, 2016
Submit PIR for ATR	January 8, 2016
ATR Team provides PIR comments in DrChecks	January 22 , 2016
PDT responses to ATR comments	January 29, 2016
ATR comments back check	February 12, 2016
ATR Team Lead provide certification of ATR	February 19, 2016

b. Type I IEPR Schedule and Cost. Not-applicable.

c. Model Certification/Approval Schedule and Cost. Not-applicable.

10. MAJOR SUBORDINATE COMMAND APPROVAL

The MSC is responsible for approving the RP. Approval is provided by the MSC Commander. The Commander's approval reflects team input as to the appropriate scope and level of review. Like the PMP, the RP is a living document and may change as the project progresses. The Home District is responsible for keeping the RP up to date. Minor changes to the RP since the last MSC Commander approval are documented in Attachment 2. Significant changes to the RP (such as changes to the scope and/or level of review) will be approved by the MSC Commander following the process used for initially approving the plan.

11. VALUE ENGINEERING

Value Engineering (VE) is required for Federal funded projects meeting certain total project costs regardless of the number of phases/contracts to accomplish the project. In accordance with ER 11-1-321 Change 1, dated 1 Jan 2011, and USACE Office of Value Engineering policy memorandum dated 16 April 2015, projects with total costs equal to or greater than $2.0 million VE shall be addressed during the D&I phase of the project. Additionally, studies with total costs equal to or greater than $10 million VE shall be addressed during the feasibility study phase of the project.

The PIR will not require a VE study for approval. However, a VE evaluation shall be conducted during the design phase of this project as required by the current ER.

ATTACHMENT 1: TEAM ROSTERS

TABLE 1
PROJECT DELIVERY TEAM

RESOURCE NAME	RESOURCE CODE	LEAD TEAM MEMBERS	PHONE NUMBER
Project Manager	CESAM-PM-CM	[redacted]	(251) 690-3254
Program Engineer (PAE)	CESAM-EN-HH	[redacted]	(251) 690-2263
Plan Formulator/Senior Planner	CESAM-PD-EC	[redacted]	(251) 694-3026
Hydrology & Hydraulic Design	CESAM-EN-HH	[redacted]	(251) 690-2263
Environmental	CESAM-PD-EC	[redacted]	(251) 694-3026 (251) 690-2724
Cost Estimator	CESAM-EN-E	[redacted]	(251) 694-3749
Geotechnical	CESAM-EN-GG	[redacted]	(251) 690-3435
Operations- Navigation	CESAM-OP-TN	[redacted]	(251) 694-3722
Economics	CESAM-PD-FE/DDNCX	[redacted]	(251) 690-2608
Real Estate	CESAM-RE	[redacted]	(251)694-3675
Sponsor Support	Jackson County Port Authority	[redacted]	(228) 762-4041

TABLE 2
DISTRICT QUALITY CONTROL REVIEW TEAM

RESOURCE NAME	RESOURCE CODE	LEAD TEAM MEMBERS	PHONE NUMBER
Plan Formulation	CESAM-PD-FP	[redacted]	(251) 690-3411
Economics	CESAM-PD-FE	[redacted]	(251) 694-3841
Environmental Resources	CESAM-PD-EC	[redacted]	(251) 690-2023
Hydrology & Hydraulic Engineering	CESAM-EN-HH	[redacted]	(251) 690-3314
Cost Engineering	CESAM-EN-E	[redacted]	(251) 694-3746
Real Estate	CESAM-RE-P	[redacted]	(251) 694-3662
Geotechnical Engineer	CESAM-EN-GG	[redacted]	(251) 694-3625

TABLE 3 AGENCY TECHNICAL REVIEW TEAM			
RESOURCE NAME	**RESOURCE CODE**	**LEAD TEAM MEMBERS**	**PHONE NUMBER**
ATR Lead	TBD		
Plan Formulation	TBD		
Economics	TBD		
Environmental Resources	TBD		
Geotechnical Engineer	TBD		
Cost Engineering	TBD		
Operations	TBD		

ATTACHMENT 2: APPROVED REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number