



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

APR 26 2013

CEMVN-PM-OS

MEMORANDUM FOR Commander, Mississippi Valley Division (MVN-DST/R. Wilbanks)

SUBJECT: Outfall Canals (OFC-07) Peer Review Plan

1. The subject Review Plan (Encl 1) and Review Plan Checklist (Encl 2) are hereby submitted for review and approval.
2. The Review Plan and Review Plan Checklist follow the Model Review Plan for implementation documents in accordance with EC 1165-2-209. In addition, the Peer Review Plan was endorsed by the Mississippi Valley Division Technical Division (Encl 3).
3. Due to the majority of the items associated with this project making use of typical designs, the project is not likely to contain influential scientific information or be a highly influential scientific assessment nor does the project design require redundancy, resiliency, or robustness. In addition, all single construction features have an estimated cost below \$45,000,000; therefore, Type II IEPR is not anticipated.
4. I recommend that this Review Plan be approved as it has been endorsed and reviewed in accordance with EC 1165-2-209. If you have any questions, or need additional information concerning this matter, you may contact me or Mr. Thomas A. Holden Jr., P.E., Deputy District Engineer for Project Management, at (504) 862-2204.

3 Encls
as


EDWARD R. FLEMING
Colonel, EN
Commanding



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NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

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3. Due to the majority of the items associated with this project making use of typical designs, the project is not likely to contain influential scientific information or be a highly influential scientific assessment. Nor does the project design require redundancy, resiliency, or robustness. In addition, all single construction features have an estimated cost below \$45,000,000. Therefore, Type II IEPR is not anticipated.
4. I recommend that this Review Plan be approved as it has been endorsed and reviewed in accordance with EC 1165-2-209. If you have any questions, or need additional information concerning this matter, you may contact me or Mr. Thomas A. Holden Jr., P.E., District Engineer for Project Management, at (504) 862-2204.

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EDWARD R. FLEMING
Colonel, EN
Commanding

MJ
M. Thomas
CEMVN-ED

J. Bivona
CEMVN-ED
G. Hawkins
CEMVN-PM

T. Holden
CEMVN-EX

Exec Ofc

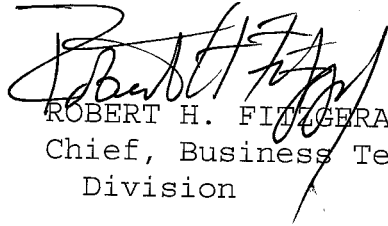
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1 April 2013

MEMORANDUM FOR CEMVD-PD-N (Rayford Wilbanks)

SUBJECT: Review Plan for Remediation of Outfall Canals (OFC 07)

1. Reference memorandum, CEMVN, undated, subject as above.
2. This office concurs with subject Review Plan.
3. The POC for this action is Mr. Will Bradley, 601-634-5644.



ROBERT H. FITZGERALD, P.E.
Chief, Business Technical
Division



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

CEMVN


MEMORANDUM FOR COMMANDER, MISSISSIPPI VALLEY DIVISION (ATTN:
CEMVD-RB-T, Mr. ROBERT FITZGERALD), 1400 WALNUT STREET, VICKSBURG, MS
39180-3262

SUBJECT: Review Plan for Remediation of Outfall Canals (OFC 07)

1. The review plan for Remediation of Outfall Canals (OFC 07) is attached for Mississippi Valley Division's review and approval. The Review Plan was prepared in accordance with EC 11 65-2-209.
2. The Remediation of Outfall Canals project is currently in planning phase. As required by EC 11 65-2-209, request review and approval of the Review Plan.
3. The point of contact for this memorandum is the project manager, Ms. Ana Petkova, at (504)862-2758.

AUTHORITY LINE:

Encls


JOHN C. BIVONA, P.E.
Acting Chief
Engineering Division

REVIEW PLAN

OFC-07: Remediation of Outfall Canals

**Mississippi Valley Division
New Orleans District**

February 2013

MSC Approval Date:

Last Revision Date:



**US Army Corps
of Engineers ®**

REVIEW PLAN
Remediation of Outfall Canals
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1. PURPOSE AND REQUIREMENTS

Purpose. This Review Plan defines the scope and level of peer review for the *Remediation of the Outfall Canals*.

a. References

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- (2) EC 1105-2-412, 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) ER 5-1-1, Project Management Business Process (11/1/2006)
<http://140.194.76.129/publications/eng-regs/er5-1-11/entire.pdf>
- (6) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 August 1999
- (7) ER-1110-1-12 Quality Management (6/21/2006)
<http://140.194.76.129/publications/eng-regs/er1110-1-12/entire.pdf>
- (8) ES-08011 QA-QC Process for Study-Design,
<https://kme.usace.army.mil/CE/QMS/QMS%20Documents/2007-10/08011%20QC-QA%20Processes%20for%20Study-Design%20Phase.DOC>
- (9) PMBP Manual, Proc 2000 PMP/PgMP Development
http://bp.usace.army.mil/robo/projects/pmbp_manual/PMBP_Manual/proc2000.htm
- (10) PMBP Manual, REF8008G Quality Management Plan
http://bp.usace.army.mil/robo/projects/pmbp_manual/PMBP_Manual/REF8008G.htm

b. Requirements

This review plan 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. In addition to these levels of review, implementation documents are subject to cost engineering review and certification (per EC 1165-2-209) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for implementation documents is typically either the Risk Management Center (RMC) or the Major Subordinate Command (MSC) depending on the primary purpose of the implementation document. The RMO for the peer review effort described in this Review Plan is the Mississippi Valley Division.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. STUDY INFORMATION

a. Implementation Document

The Remediation of the Outfall Canals Project provides improvements to the existing floodwalls to achieve a maximum operating water level (MOWL) of elevation 8.0. The Implementation Documents consist of a two (2) step process. The first step involves a Geotechnical Assessment Outfall Canal Reevaluation Report. The result of this report will identify areas requiring remediation of the Outfall Canals floodwalls. The second step is associated with the remediation design and preparation of Construction Plans and Specifications.

b. Study/Project Description

The Remediation of the Outfall Canals project study area is located in the New Orleans metropolitan area in Jefferson and Orleans Parishes. 17th Street outfall canal is oriented in the north/south direction between Lake Pontchartrain and Drainage Pump Station (DPS) 6. The Parish governmental boundary traverses the center of the canal with Jefferson Parish on the west bank and Orleans Parish on the east bank. Orleans Avenue outfall canal is oriented in the north/south direction between Lake Pontchartrain and DPS 7 and located in Orleans Parish. London Avenue outfall canal is oriented in the north/south direction between Lake Pontchartrain and DPS3 and DPS4 on the east bank approximately a mile from Lake Pontchartrain and located in Orleans Parish. The proposed action is the placement of sheetpile which will provide additional floodwall stability and seepage cutoff.

c. Factors Affecting the Scope and Level of Review

The Geotechnical Assessment Outfall Canal Reevaluation Report and Remediation Plans and Specifications for the placement of sheetpile will not likely be challenging, nor involve novel methods or the use of innovative materials or techniques, as it will follow remediation methods and techniques approved in the previous remediation efforts. Magnitude of risk is low and a significant threat to human life is not likely to exist in conjunction with the placement of the sheetpile. There has been no request by the Governor of affected states for a peer review by independent experts and the Plans and Specifications are not likely to involve significant public disputes. Redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule will not be used as accepted design techniques.

d. In-Kind Contributions

Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. No in kind services are anticipated.

4. DISTRICT QUALITY CONTROL (DQC)

All implementation documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo 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.

a. Documentation of DQC

DQC will be managed by the home district in accordance with the Major Subordinate Command (MSC) and MVN district Quality Management Plans. MVN's Senior Project Manager will submit its work products to personnel in the District office not involved in the development for review and comment. Each DQC member will enter comments into DrChecks for review and resolution. A Certification of Quality Control Review will be signed by the N.O. District ED Chief.

b. Products to Undergo DQC

Geotechnical Assessment Outfall Canal Reevaluation Report and Remediation Plans and Specifications.

c. Required DQC Expertise

DQC Team Members/Disciplines	Expertise Required
DQC Lead	The DQC lead should be a senior professional with experience in Geotechnical and conducting DQC. The lead should also have the necessary skills and experience to lead a virtual team through the DQC process.
Hydraulic Engineering	The hydraulic reviewer should be a senior hydraulic engineer with experience in pump stations and water surface profiles.
Geotechnical Engineering	The Geotechnical reviewer should be a senior geotechnical engineer with experience in sheet pile installation.
Structural Engineering	The Structural reviewer should be a senior Structural Engineer with experience in sheet pile installation.
Construction/Operations	The Construction/Operations reviewer should be a senior Construction/Operations Manager with experience in sheet pile installations.

Review Milestone	Review Products	Date Planned
100% DQC review	1) Geotechnical Assessment Outfall Canal Reevaluation Report and Plans and Specifications	2 rd Qtr FY13

Review Milestone	#reviewers/total hours	Approximate cost/hr	Totals
100%DQC review	9/56	\$125	\$7,000

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all implementation documents (including supporting data, analyses, environmental compliance documents, etc.). 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 USACE guidance, and that the document explains the analyses and

results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated 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. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR

Geotechnical Assessment Outfall Canal Reevaluation Report and Remediation Plans and Specifications.

b. Required ATR Team Expertise

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with experience in Geotechnical and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process.
Hydraulic Engineering	The hydraulic reviewer should be a senior hydraulic engineer with experience in pump stations and water surface profiles.
Geotechnical Engineering	The Geotechnical reviewer should be a senior geotechnical engineer with experience in sheet pile installation.
Structural Engineering	The Structural reviewer should be a senior Structural engineer with experience in sheet pile installation.

c. Documentation of ATR

DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- (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 be 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 in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include 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. If an ATR

concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be 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, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for implementation documents under certain circumstances. 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. 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 IEPR. Type I IEPR reviews are managed outside the USACE and are 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 implementation 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.
- Type II IEPR. Type II IEPR, or Safety Assurance Review (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

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 the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. 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).

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 Corps 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 models are anticipated during the development of Plans and Specifications.

b. Engineering Models

Geotechnical computer models used for the various analyses are as follows:

- Geo-Studio
 - Slope/W
 - Seep/W
- GMS
 - Seep2D
- CWALSH
- Finite Element Programs
 - FLAC
 - Plaxis

10. REVIEW SCHEDULES AND COSTS

ATR Schedule and Cost

Review Milestone	Review Products	Date Planned
Initial ATR review	1) Geotechnical Assessment Outfall Canal Reevaluation Report and Plans and Specifications	2 rd Qtr FY13
ATR Back Check	1) Geotechnical Assessment Outfall Canal Reevaluation Report and Plans and Specifications	2 rd Qtr FY13
100% ATR review	1) Geotechnical Assessment Outfall Canal Reevaluation Report and Plans and Specifications	2 rd Qtr FY13

Review Milestone	#reviewers/total hours	Approximate cost/hr	Totals
Initial ATR review	4/112	\$140	\$15,680
ATR Back Check	4/56	\$140	\$7,840
100% ATR review	4/7	\$140	\$980
		TOTAL	\$24,500

a. Type II IEPR Schedule and Cost

Not Applicable

b. Model Certification/Approval Schedule and Cost.

Not Applicable

11. PUBLIC PARTICIPATION

Draft Plans and Specifications will be provided to the Local Sponsor, who will be free to receive public comments. Unless specifically requested, the public will not comment on the development of the Plans and Specifications otherwise.

12. REVIEW PLAN APPROVAL AND UPDATES

The Mississippi Valley Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the implementation document. 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 are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should 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 Commanders' 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.

13. REVIEW PLAN POINTS OF CONTACT

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

- Daniel Bradley 504-862-2696
- Mincer Minor 601-634-5841
- Jim Wojtala 601-634-5931

ATTACHMENT 1: TEAM ROSTERS

Name	Office	Contact
Daniel Bradley	PM	504 862 2696
Avis Gaines	PM	504 862 1519
Charles Brannon	PM	504 862 2263
Karen Clement	OM	504 862 2313
Laura Lee Wilkinson	Env	504 862 1212
Mitchell Thomas	Eng	504 862 2101
Wayne Duplantier	Eng	504 862 1989
Carl Balint	Eng	504 862 2706
Danielle Schroeder	Eng	504 862 2173
Daniel Haggerty	Eng	504 862 2403
Maurya Kilroy	OC	504 862 1298

ATTACHMENT 2: STATEMENT OF TECHNICAL REVIEW

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the ***Remediation of Outfall Canals Project***. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Architect Engineer Project Manager¹

Company, location

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: Describe the major technical concerns and their resolution.

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

Name

Chief, Engineering Division

Office Symbol

Date

SIGNATURE

Name

Chief, Planning Division

Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office of Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home District/MS	The District or MSC responsible for the preparation of the implementation document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act

ATTACHMENT 5: EXPLANATION OF RATIONALE FOR RECOMMENDATION TO NOT CONDUCT A TYPE II IEPR (SAR)

Risk Based Determination of Need to NOT conduct a Type II IEPR (aka Safety Assurance Review (SAR))

Per EC 1165-2-209, two factors mandate a SAR and three additional factors should be considered in determination whether or not a SAR should be conducted. These factors and their relevancy to this project are discussed below. If there is any lingering concern regarding the rationale presented in the following table a vertical team should be assembled upon request.

Factor		Relevancy to this Project
1) Is the project was justified by life safety?	Mandate	No, remediation work is to improve existing I-walls as a result of analyses required by ETL 1110-2-575
2) Would the project's failure pose a significant threat to human life?	Mandate	Potentially, chances of failure would only occur if loading from a tropical storm exceeds the criteria for design.
3) Does the project involve the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices?	Consider	No, the methods used The vast majority of the items associated with this project make use of typical designs that have been in use successfully for an extended period of time.
4) Does the project design require redundancy, resiliency, or robustness?	Consider	No, The project is not likely to contain influential scientific information or be a highly influential scientific assessment, nor does the project design require redundancy, resiliency, or robustness.
5) Does the project have unique construction sequencing or a reduced or overlapping design construction schedule?	Consider	No, the proposed work is continuation of remediation work previously performed and will use the same proven construction means and methods.

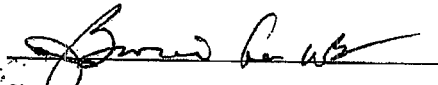
Background Information about Project: Between 2009 and 2011, remediation work was performed along the three (3) New Orleans outfall canals base on high water loading. In 2012, additional analyses were performed for both high and low water load cases using methods required by ETL 1110-2-575. The analyses resulted in one (1) reach on 17th Street canal and four (4) reaches on London Canal requires remediation work to achieve the required factor of safety.

Discussion on analyses and failure modes considered: This work is ongoing as part of the Lake Pontchartrain and Vicinity project which was accelerated due to failures caused by Hurricane Katrina.

RECOMMENDATION REGARDING TYPE II IEPR (SAR)

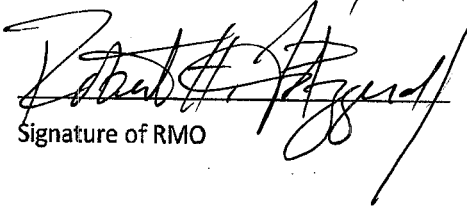
Based on the above assessment, it is the risk-informed recommendation of the Project Delivery Team and the Chief of E&C or Engineering that Type II IEPR (SAR) is NOT required for this project.

The decision to not conduct a Type II IEPR (SAR) is recommended by:


Signature of Chief, EC

2/20/13
Date

The above recommendation is ☒ Approved ☐ Disapproved by


Signature of RMO

4/01/13
Date

Review Plan Checklist for Implementation Documents

Date: March 1, 2013
Originating District: New Orleans District (MVN)
Project/Study Title: OFC 07 Remediation of Outfall Canals
PWI #: 009350
District POC: Daniel Bradley, SPM

Please fill out this checklist and submit with the draft Review Plan when coordinating with the appropriate RMO. For DQC, the District is the RMO; for ATR of Dam and Levee Safety Studies, the Risk Management Center is the RMO; and for non-Dam and Levee Safety projects and other work products, MVD is the RMO; for Type II IEPR, the Risk Management Center is the RMO. Any evaluation boxes checked 'No' indicate the RP possibly may not comply with EC 1165-2-209 and should be explained. Additional coordination and issue resolution may be required prior to MSC approval of the Review Plan.

REQUIREMENT	REFERENCE	EVALUATION
1. Is the Review Plan (RP) a standalone document?	EC 1165-2-209, Appendix B, Para 4a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
a. Does it include a cover page identifying it as a RP and listing the project/study title, originating district or office, and date of the plan?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Does it include a table of contents?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c. Is the purpose of the RP clearly stated and EC 1165-2-209 referenced?	EC 1165-2-209 Para 7a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d. Does it reference the Project Management Plan (PMP) of which the RP is a component including P2 Project #?	EC 1165-2-209 Para 7a (2)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e. Does it include a paragraph stating the title, subject, and purpose of the work product to be reviewed?	EC 1165-2-209 Appendix B, Para 4a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
f. Does it list the names and disciplines in the home district, MSC and RMO to whom inquiries about the plan may be directed?*	EC 1165-2-209, Appendix B, Para 4a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>*Note: It is highly recommended to put all team member names and contact information in an appendix for easy updating as team members change or the RP is updated.</i>		

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2. Documentation of risk-informed decisions on which levels of review are appropriate.	EC 1165-2-209, Appendix B, Para 4b	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
a. Does it succinctly describe the three levels of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR)?	EC 1165-2-209 Para 7a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Does it contain a summary of the CW implementation products required?	EC1165-2-209 Para 15	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c. DQC is always required. The RP will need to address the following questions:	EC1165-2-209 Para 15a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
i. Does it state that DQC will be managed by the home district in accordance with the Major Subordinate Command (MSC) and district Quality Management Plans?	EC1165-2-209 Para 8a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
ii. Does it list the DQC activities (for example, 30, 60, 90, BCOE reviews, etc)	EC 1165-2-209 Appendix B (1)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
iii. Does it list the review teams who will perform the DQC activities?	EC 1165-2-209 Appendix B, Para 4g	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
iv. Does it provide tasks and related resource funding and schedule showing when the DQC activities will be performed?	EC 1165-2-209 Appendix B, Para 4c	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d. Does it assume an ATR is required and if an ATR is not required does it provide a risk based decision of why it is not required? If an ATR is required the RP will need to address the following questions:	EC1165-2-209 Para 15a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
i. Does it identify the ATR District, MSC, and RMO points of contact?	EC 1165-2-209 Para 7a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
ii. Does it identify the ATR lead from outside the home MSC?	EC 1165-2-209 Para 9c	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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REQUIREMENT	REFERENCE	EVALUATION
<p>iii. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)? If the reviewers are listed by name, does the RP describe the qualifications and years of relevant experience of the ATR team members?*</p> <p><i>*Note: It is highly recommended to put all team member names and contact information in an appendix for easy updating as team members change or the RP is updated.</i></p>	EC 1165-2-209 Appendix B, Para 4g	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
iv. Does it provide tasks and related resource, funding and schedule showing when the ATR activities will be performed?	EC 1165-2-209 Appendix C, Para 3e	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
v. Does the RP address the requirement to document ATR comments using Dr Checks?	EC 1165-2-209 Para 7d (1)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
e. Does it assume a Type II IEPR is required and if a Type II IEPR is not required does it provide a risk based decision of why it is not required including RMC/ MSC concurrence? If a Type II IEPR is required the RP will need to address the following questions:	EC1165-2-209 Para 15a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
i. Does it provide a defensible rationale for the decision on Type II IEPR?	EC 1165-2-209 Para 7a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
ii. Does it identify the Type II IEPR District, MSC, and RMO points of contact?	EC 1165-2-209 Appendix B, Para 4a	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
iii. Does it state that for a Type II IEPR, it will be contracted with an A/E contractor or arranged with another government agency to manage external to the Corps of Engineers?	EC 1165-2-209 Appendix B, Para 4k (4)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
iv. Does it state for a Type II IEPR, that the selection of IEPR review panel members will be made up of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of expertise suitable for the review being conducted?	EC 1165-2-209 Appendix B, Para 4k(1) and Appendix E, Para's 1a & 7	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

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v. Does it state for a Type II IEPR, that the selection of IEPR review panel members will be selected using the National Academy of Science (NAS) Policy which sets the standard for "independence" in the review process?	EC 1165-2-209 Para 6b (4) and Para 10b	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
vi. If the Type II IEPR panel is established by USACE, has local (i.e. District) counsel reviewed the Type II IEPR execution for FACA requirements?	EC1165-2-209 Appendix E, Para 7c(1)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
vii. Does it provide tasks and related resource, funding and schedule showing when the Type II IEPR activities will be performed?	EC1165-2-209 Appendix E, Para 5a	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
viii. Does the project address hurricane and storm risk management or flood risk management or any other aspects where Federal action is justified by life safety or significant threat to human life? Is it likely? If yes, Type II IEPR must be addressed.	EC1165-2-209 Appendix E, Para 2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
ix. Does the RP address Type II IEPR factors? Factors to be considered include: <ul style="list-style-type: none"> • Does the project involve the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent setting methods or models, or presents conclusions that are likely to change prevailing practices? • Does the project design require redundancy, resiliency and robustness • Does the project have unique construction sequencing or a reduced or overlapping design construction schedule; for example, significant project features accomplished using the Design-Build or Early Contractor Involvement (ECI) delivery systems. 		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
f. Does it address policy compliance and legal review? If no, does it provide a risk based decision of why it is not required?	EC 1165-2-209 Para 14	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

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3. Does the RP present the tasks, timing, and sequence of the reviews (including deferrals)? a. Does it provide an overall review schedule that shows timing and sequence of all reviews? b. Does the review plan establish a milestone schedule aligned with the critical features of the project design and construction?	EC 1165-2-209, Appendix B, Para 4c EC 1165-2-209, Appendix C, Para 3g EC 1165-2-209, Appendix E, Para 6c	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Does the RP address engineering model certification requirements? a. Does it list the models and data anticipated to be used in developing recommendations? b. Does it indicate the certification /approval status of those models and if certification or approval of any model(s) will be needed? c. If needed, does the RP propose the appropriate level of certification/approval for the model(s) and how it will be accomplished?	EC 1165-2-209, Appendix B, Para 4i	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
5. Does the RP explain how and when there will be opportunities for the public to comment on the study or project to be reviewed? a. Does it discuss posting the RP on the District website? b. Does it indicate the web address, and schedule and duration of the posting?	EC 1165-2-209, Appendix B, Para 4d	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
6. Does the RP explain when significant and relevant public comments will be provided to the reviewers before they conduct their review? a. Does it discuss the schedule of receiving public comments? b. Does it discuss the schedule of when significant comments will be provided to the reviewers?	EC 1165-2-209, Appendix B, Para 4e	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

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7. Does the RP address whether the public, including scientific or professional societies, will be asked to nominate professional reviewers?* a. If the public is asked to nominate professional reviewers then does the RP provide a description of the requirements and answer who, what, when, where, and how questions? <i>* Typically the public will not be asked to nominate potential reviewer</i>	EC 1165-2-209, Appendix B, Para 4h	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
8. Does the RP address expected in-kind contributions to be provided by the sponsor? a. If expected in-kind contributions are to be provided by the sponsor, does the RP list the expected in-kind contributions to be provided by the sponsor?	EC 1165-2-209, Appendix B, Para 4j	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
9. Does the RP explain how the reviews will be documented? a. Does the RP address the requirement to document ATR comments using Dr Checks and Type II IEPR published comments and responses pertaining to the design and construction activities summarized in a report reviewed and approved by the MSC and posted on the home district website? b. Does the RP explain how the Type II IEPR will be documented in a Review Report? c. Does the RP document how written responses to the Type II IEPR Review Report will be prepared? d. Does the RP detail how the district/PCX/MSC and CECW-CP will disseminate the final Type II IEPR Review Report, USACE response, and all other materials related to the Type II IEPR on the internet?	EC 1165-2-209, Para 7d EC 1165-2-209 Appendix B , Para 4k (14) EC 1165-2-209 Appendix B, Para 4k (14) EC 1165-2-209 Appendix B, Para 5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
10. Has the approval memorandum been prepared and does it accompany the RP?	EC 1165-2-209, Appendix B, Para 7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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