



REPLY TO  
ATTENTION OF:

# DEPARTMENT OF THE ARMY

MISSISSIPPI VALLEY DIVISION, CORPS OF ENGINEERS  
P.O. BOX 80  
VICKSBURG, MISSISSIPPI 39181-0080

03 JUN 2013

CEMVD-PD-KM

MEMORANDUM FOR Commander, Vicksburg District, ATTN: CEMVK-PP-D

SUBJECT: Approval of Implementation Review Plan for Erosion  
Repair Lock 2, West Pearl River Navigation Canal, St. Tammany  
Parish, Louisiana

1. References:

a. Memorandum, CEMVK-PP-D, 21 May 2013, subject as above  
(encl 1).

b. Memorandum, CEMVD-RB-T, 28 May 2013, subject as above  
(encl 2).

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

2. MVD staff has reviewed the Review Plan (RP) and related documents for the subject project. The RP was also reviewed and endorsed by the Review Management Organization (encl 2). The RP was developed in accordance with reference 1.c., which establishes an accountable, comprehensive, life cycle review strategy for civil works projects from initial planning through design, construction, and Operation, Maintenance, Repair, Replacement and Rehabilitation.

3. The subject RP plan is approved. Please post the approved RP to your web page.

4. The MVD point of contact for this action is Mr. Jamie Triplett, CEMVD-PD-KM, (601) 634-5075.

2 Encls

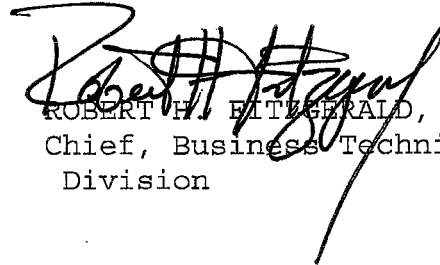
EDWARD E. BELK, JR., P.E., SES  
Director of Programs

28 May 2013

MEMORANDUM FOR CEMVD-PD-KM (Dennis Norris)

SUBJECT: Approval of Implementation Review Plan for Erosion Repair Lock 2, West Pearl River Navigation Canal, St. Tammany Parish, Louisiana

1. Reference memorandum, CEMVK-PP-D, 21 May 2013, subject as above.
2. This office concurs with subject Review Plan.
3. RB-T poc is Mr. Will Bradley, 601-634-5644.

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

# **IMPLEMENTATION REVIEW PLAN**

**EROSION REPAIR LOCK 2,  
WEST PEARL RIVER NAVIGATION CANAL,  
St. TAMMANY PARRISH, LOUISIANA**

***Vicksburg District***

**MSC Approval Date: 3 June 2013  
Last Revision Date:**



**US Army Corps  
of Engineers ®**

## IMPLEMENTATION REVIEW PLAN

### *EROSION REPAIR LOCK 2, WEST PEARL RIVER NAVIGATION CANAL, St. TAMMANY PARRISH, LOUISIANA*

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## **1. Purpose and Requirements**

**a. Purpose.** This Review Plan defines the scope and level of peer review for implementation documents developed for the Erosion Repair at Lock 2, West Pearl River Navigation Canal within the Vicksburg District (CEMVK). Quality Management activities consist of District Quality Control (DQC), Agency Technical Review (ATR) and Independent External Peer Review (IEPR). This project is in the Design Phase. The related documents are Implementation Documents that consist of Plans and Specifications (P&S).

### **b. References.**

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review, 15 December, 2012.
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011.
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 September 2006.
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007.
- (5) Regional Planning and Environment Division South Quality Management Plan, 10 May 2012.
- (6) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 August 1999.
- (7) 03501-MVD, MSC Review of Planning Products.
- (8) 08502 MVD Review Plans for Technical Products
- (9) 08502.1-MVD Review Plan Checklist for Implementation documents (Attachment 1)

**c. Requirements.** This review plan 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: The DQC/Quality Assurance; ATR; 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 1165-2-214) and engineering 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 Division Headquarters or the Risk Management Center (RMC), depending on the primary purpose of the implementation document. The Mississippi Valley Division (CEMVD) office is the RMO for all current implementation documents covered by this version of this plan. The DQC/Quality Assurance will be performed by the Vicksburg District.

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. The River and Harbors Act of 1935 authorized the West Pearl River Navigation Project. This project lies within Washington and St. Tammany parishes, Louisiana, and Pearl River County, Mississippi. The Project, which was begun in 1938 and completed in 1956, was designed to provide a minimum depth of seven feet for navigation from the mouth of the West Pearl River to the vicinity of Bogalusa, Louisiana. The Project's purpose was to provide navigation from Bogalusa, LA, south for fifty-eight miles to the mouth of the West Pearl River. A 20.2-mile lateral diversion canal and three locks were constructed on the upper end of the waterway. The canal was constructed to provide a seven-foot deep channel with the bottom width of 100 feet in the river sections and 80 feet in the canal section. The project status as of the date of this Review Plan is complete and has been in caretaker status since 1995.

## **4. Description of Project.**

a. **Project Purpose.** The major purposes of the project are to provide navigation, stabilize the riverbanks, and provide recreational opportunities. Flood control, area redevelopment, fish and wildlife, and water supply benefits are also attributable to the project, and measures for mitigating project induced losses of wildlife habitat are included as project feature.

b. **Project Location.** The project location is located on the east side of Lock 2 on the West Pearl River Navigation Canal in St. Tammany Parish, Louisiana.

c. **Project Plan.** The implementation document being developed by the Vicksburg District, Design Branch, River Stabilization Section with the purpose of providing a set of plans and specifications for construction. A construction contract for the proposed erosion repair work is scheduled to be awarded on 24 Sep 13. The project information includes plans and specifications for erosion repair along the east side of Lock 2 to return the area to pre-Hurricane Isaac conditions.

## **5. Factors Affecting the Scope and Level of Review.**

Although the engineering document covered by this Review Plan is based on routine repair activities it has been reviewed and screened against the criteria of EC 1165-2-214 to assure the proper levels of review are planned and accomplished. In alignment with guidance all documentation will undergo standard DQC procedures with an additional ATR for the plans and specification. Additionally:

a. No impacts to threatened or endangered species or any adverse impacts on fish and wildlife species or their habitats are expected. The presence of listed species are constantly monitored by USACE and U.S. Fish and Wildlife Service (FWS) biologists, and addressed as necessary in all P&S packages prepared. Additionally, CEMVD Districts hold annual environmental meetings to obtain FWS clearance on proposed work.

## **6. District Quality Control (DQC).**

All implementation documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. The DQC will be performed at 65, 90, and 95 percent P&S. The 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 Major Subordinate Command (MSC).

**Documentation of DQC.** The DQC is the review of basic science and engineering work products focused on fulfilling the review of project quality requirements. It will be managed by the Vicksburg District in accordance with the Major Subordinate Command (MSC) and district Quality Management Plan (QMP). The DQC may be conducted by the Vicksburg District as long as the reviewers are not involved in the study. Basic quality control tools provided will include quality checks and reviews, supervisory reviews, PDT reviews, etc. Additionally, the PDT will be responsible for a complete review of the P&S to assure overall integrity of the report, technical appendices, and the recommendations before approval by the District Commander. Signed DQC Certification will be provided to the Agency Technical Review (ATR) team members.

**Required DQC Review Expertise.** The quality control/technical reviewers will be chosen from a pool of reviewers submitted by appropriate technical elements. The team will be made up of individuals who are familiar with the project and documents being produced. A copy of QCPs for each product will be distributed to each member of the Quality Assurance/Technical Review Team. The team will be comprised of the selected disciplines that have experience in the type of analysis in which they are responsible for reviewing. The makeup of the review team may be modified as the work progresses to meet review requirements.



## **7. Agency Technical Review (ATR).**

The ATR is mandatory for all implementation. The ATR will be combined with the 90 and 95 percent P&S. The ATR will assess whether the analyses presented are technically correct and comply with published Corps guidance, and 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.** All implementation documents are required to undergo ATR, regardless of the originating organization (Planning Engineering, Construction, or Operations). Products to undergo ATR for this project are the plans and specification developed for the erosion repair efforts.

**b.** As this project progresses and new implementation documents and other work products are developed to meet the needs of the projects, each new document will be reviewed to assure all necessary reviews are planned for and conducted in accordance with EC 1165-2-214 and this plan will be updated accordingly to include any new implementation document. Any implementation products that involve one or more of the factors established by EC 1165-2-214 will be screened by the Chief, Engineering Division, to assure a risk informed analysis and decision is accomplished in accordance with EC 1165-2-214 as to whether or not an ATR will be required and the project file will be documented accordingly and this review plan will be updated. When an ATR is deemed appropriate for any new implementation document for these projects, the RMO will be requested to establish and manage an ATR team to accomplish appropriate reviews scaled to the complexity and scope of the new work.

**c. Required ATR Team Expertise.** Table 1 depicts the ATR team members and the expertise required for their position.

TABLE 1  
ATR TEAM MEMBERS AND EXPERTISE

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing implementation 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 may also serve as a reviewer for a specific discipline (such as planning, design, economics, environmental resources, etc).
Environmental Resources/ National Environmental Policy Act (NEPA) Compliance	The Environmental reviewer should have strong experience involving projects involving fish habitat, threatened and endangered species, invasive species, and water quality and water quantity/flow issues. The reviewer should be a senior biologist with experience involving all aspects of aquatic restoration regarding policy, regulation, and compliance.
Engineering/Hydrology	Team member will be an expert in the field of urban hydrology and hydraulics, have a thorough understanding of the dynamics of both open channel flow systems, enclosed systems, application of detention/retention basins; effects of Best Management Practices (BMP) and low impact development on hydrology; approaches that can benefit water quality, application of levees and flood walls in an urban environment with space constraints, nonstructural measures especially as related to multipurpose alternatives including ecosystem restoration; nonstructural solutions involving flood warning systems; and nonstructural alternatives related to floodproofing. The team member will have an understanding of computer modeling techniques that will be used for this project (HEC-HMS and HEC-RAS). A certified flood plain manager is recommended, but not required.
Cost Engineering	The reviewer should have significant experience in estimating costs for work on construction projects in CEMVK.
Real Estate	The reviewer should have a strong background in Real Estate issues involving multipurpose projects in CEMVK.
Design Engineer	Team member will have a thorough understanding of channel improvement design. Team member should also be experienced in River Engineering work, such as channel realignment and bank stabilization design. A certified professional engineer is recommended, but not required. The reviewer should have extensive experience applying construction design standards and qualifications.
Geotechnical Engineer	Team member will be experienced in levee and floodwall design, postconstruction evaluation, and rehabilitation. A certified professional engineer is recommended.

**d. 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.

The 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.

## **8. Independent External Peer Review (IEPR).**

A Type I or II IEPR may be required for implementation documents under certain circumstances. The 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 the Corps is warranted. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. The IEPR panels will consist of independent, recognized experts from outside the Corps in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted.

**a. Decision on IEPR.** For those projects where the PDT is unsure whether IEPR would be required, based primarily on the criteria of significant threats to human life/safety, the following checklist of items developed from EC-1165-2-209, Appendix D has been covered to assist the Vertical Team in the decision making for the need of an IEPR. Based on the items below, it has been determined that a Type I or II IEPR is not needed for this project.

(1) Should failure or project design exceedance occur, no major life safety related issues or consequences have been identified. Safety assurance factors are described in Engineer Circular 1165-2-214.

(2) Total project cost is not >\$45 million.

(3) No requests have been made by the State Governors from Louisiana or Mississippi that is economically or environmentally affected as a consequence of the project.

(4) No requests have been made by the head of any Federal or state agency regarding impacts on the environment, cultural, or other resources.

(5) There have been no significant public disputes as to the size, nature, or effects of the project.

(6) Project improvements include basic channel improvements and flood risk management. No significant public disputes as to the economic or environmental cost or benefit of the project have been received.

(7) The project is not based on novel methods, or does it present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices.

(8) All procedures were based on approved Corps methods based on ER 1105-2-100 and supporting regulations. Should any project develop an implementation document for an engineering work product, the PDT will perform a risk based analysis in accordance with EC 1165-2-214 and document such decisions in the project files, updating this plan appropriately to include any required IEPRs

## **9. Policy and Legal Compliance Review.**

All implementation documents will be reviewed throughout the 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 home MSC Commander. The 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 decision documents.

## **10. Cost Engineering Directory of Expertise (DX) Review and Certification.**

All implementation documents shall be coordinated with the Cost Engineering DX, located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and in the development of the review charge(s). The DX will also provide the Cost Engineering DX certification. The RMO is responsible for coordination with the Cost Engineering DX.

## **11. Model Certification and Approval.**

Engineering Circular 1105-2-412 mandates the use of certified or approved models for all engineering activities to ensure the models are technically and theoretically sound, compliant with Corps policy, computationally accurate, and based on reasonable assumptions.

Engineering Circular 1105-2-412 does not cover engineering models used in implementation. The responsible use of well-known and proven Corps 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 Corps 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).

**Engineering Models.** Table 2 depicts the engineering models that may be used during Plans and Specifications.

**TABLE 2  
ENGINEERING MODELS**

Non-Planning Model	Version	Certified	Approval Date/Status	Description	Use
<b>H&amp;H Models</b>					
HEC-RAS	4.0	X		The HEC's River Analysis System program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations.	Used for steady and unsteady flow analyses for the existing channel and channel alternatives.
<b>Cost Engineering</b>					
MCACES		X		Microcomputer-Aided Cost Estimation System	Used to generate detailed cost estimates for each alternative.

## 12. Review Schedules and Costs.

**TABLE 3  
REVIEW SCHEDULES**

Item	Schedule
95% District Office Review Start	May 20, 2013
Plans and Specifications Complete	June 21, 2013
MVD approves ATR Team	TBD
Charge approved by PDT and ATR Team	Date of funding from CEMVK-OD-MP
Review documents and charge sent to ATR Team	Date of funding from CEMVK-OD-MP
ATR DrChecks comments complete	+14 days
PDT DrChecks evaluations complete	+7 days
ATR back checks complete; DrChecks closed	+14 days
ATR certification form signed	+7 days
ATR final report complete	" "
Report sent to MVD for approval	+2 days
Report approved by MVD	+7 days

**TABLE 4  
REVIEW COST**

Discipline	Estimated Labor Cost
ATR Team Lead	\$5,000
Supporting Disciplines	6 @ \$5,000 ea. = \$30,000
<b>TOTAL</b>	<b>\$35,000</b>

### **13. Public Participation.**

A Public Involvement Plan will be formulated to ensure the public is provided adequate opportunities to provide input. Relevant public comments will be incorporated and provided to the reviewers before they conduct their review. Public participation will be encouraged throughout the study, but will be promoted during Public Scoping Meetings and public reviews of draft documents.

Proceedings from all public meetings and comments received during public review will be included in the draft documents with responses included. Comments and corresponding responses will be summarized and provided to the ATR team.

### **14. Review Plan Approval and Updates.**

The CEMVD 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. Any minor changes to the review plan since the last MSC Commander approval will be 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 at <http://www.myk.usace.army.mil/Missions/CivilWorks/PeerReviewPlans.aspx>. The latest Review Plan should also be provided to the RMO and home MSC.

### **15. Review Plan Points of Contact.**

Public questions and/or comments on this review plan can be directed to Project Manager, Major

**ATTACHMENT 1: REVIEW PLAN CHECKLIST FOR IMPLEMENTATION  
DOCUMENTS**



## ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

### COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. 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 DrChecks<sup>sm</sup>.

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

\_\_\_\_\_  
Date

SIGNATURE

Name

Project Manager

Office Symbol

\_\_\_\_\_  
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

<sup>1</sup> Only needed if some portion of the ATR was contracted

**ATTACHMENT 3: REVIEW PLAN REVISIONS**

<b>Revision Date</b>	<b>Description of Change</b>	<b>Page / Paragraph Number</b>

## ATTACHMENT 4: TEAM ROSTERS

**PDT/DQC ROSTER**

[illegible]

## ATR TEAM ROSTER

<u>NAME</u>	<u>FUNCTION</u>	<u>OFFICE</u>	<u>TELEPHONE</u>
TBD	ATR Manager	TBD	TBD
TBD	Engineering Design	TBD	TBD
TBD	Biologist/Archeologist	TBD	TBD
TBD	Real Estate	TBD	TBD
TBD	H&H	TBD	TBD
TBD	Cost Engineering	TBD	TBD
TBD	Geotechnical Design	TBD	TBD

**VERTICAL TEAM ROSTER**

<u>NAME</u>	<u>FUNCTION</u>	<u>OFFICE</u>	<u>TELEPHONE</u>
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

## ATTACHMENT 5: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
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 and 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/MSD	The District or MSD responsible for the preparation of the decision 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
MR&T	Mississippi River & Tributaries	WRDA	Water Resources Development Act
MSD	Major Subordinate Command	YMDJWQD	Yazoo Mississippi Delta Joint Water Control District

# ATTACHEMENT 1: REVIEW PLAN CHECKLIST FOR IMPLEMENTATION DOCUMENTS

**Date:** April 9, 2013

**Originating District:** CEMVK

**Project/Study Title:** Erosion Repair Lock 2, West Pearl River Navigation Canal, St. Tammany Parish, Louisiana

**PWI #:** 4J827C

**District POC:** Major Robert Wolfenden (601) 631-7854

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, CEMVD 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
<b>1. Is the Review Plan (RP) a standalone document?</b>	EC 1165-2-214, 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 1165-2-214 referenced?	EC 1165-2-214 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 1165-2-214 Para 7a (2)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Project was placed in caretaker status in 1995 and a PMP was never created

**Current Approved Version: May 6, 2011. Printed copies are for "Information Only." The controlled version resides on the MVD Regional QMS SharePoint Portal.**

REQUIREMENT	REFERENCE	EVALUATION
<p>e. Does it include a paragraph stating the title, subject, and purpose of the work product to be reviewed?</p> <p>f. Does it list the names and disciplines in the home district, MSC and RMO to whom inquiries about the plan may be directed?*</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>	<p>EC 1165-2-214 Appendix B, Para 4a</p> <p>EC 1165-2-214, Appendix B, Para 4a</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><b>2. Documentation of risk-informed decisions on which levels of review are appropriate.</b></p> <p>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)?</p> <p>b. Does it contain a summary of the CW implementation products required?</p> <p>c. DQC is always required. The RP will need to address the following questions:</p> <p>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?</p> <p>ii. Does it list the DQC activities (for example, 35, 65, 95, BCOE reviews, etc)</p> <p>iii. Does it list the review teams who will perform the DQC activities?</p> <p>iv. Does it provide tasks and related resource funding and schedule showing when the DQC activities will be performed?</p> <p>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:</p>	<p>EC 1165-2-214, Appendix B, Para 4b</p> <p>EC 1165-2-214 Para 7a</p> <p>EC1165-2-214 Para 15</p> <p>EC1165-2-214 Para 15a</p> <p>EC1165-2-214 Para 8a</p> <p>EC 1165-2-214 Appendix B (1)</p> <p>EC 1165-2-214 Appendix B, Para 4g</p> <p>EC 1165-2-214 Appendix B, Para 4c</p> <p>EC1165-2-214 Para 15<sup>a</sup></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

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REQUIREMENT	REFERENCE	EVALUATION
i. Does it identify the ATR District, MSC, and RMO points of contact?	EC 1165-2-214 Para 7 <sup>a</sup>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A RMO will assign ATR lead and then Review Plan will be updated with that information.
ii. Does it identify the ATR lead from outside the home MSC?	EC 1165-2-214 Para 9c	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No RMO will assign ATR lead and then Review Plan will be updated with that information.
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?*	EC 1165-2-214 Appendix B, Para 4g	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<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>		
iv. Does it provide tasks and related resource, funding and schedule showing when the ATR activities will be performed?	EC 1165-2-214 Appendix C, Para 3e	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
v. Does the RP address the requirement to document ATR comments using Dr Checks?	EC 1165-2-214 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:	EC1165-2-214 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 1165-2-214 Para 7a	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
ii. Does it identify the Type II IEPR District, MSC, and RMO points of contact?	EC 1165-2-214 Appendix B, Para 4a	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

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REQUIREMENT	REFERENCE	EVALUATION
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 1165-2-214 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 1165-2-214 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
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 1165-2-214 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?	EC1165-2-214 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?	EC1165-2-214 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.	EC1165-2-214 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

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REQUIREMENT	REFERENCE	EVALUATION
<p>ix. Does the RP address Type II IEPR factors?</p> <p>Factors to be considered include:</p> <ul style="list-style-type: none"> <li>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?</li> <li>Does the project design require redundancy, resiliency and robustness</li> <li>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.</li> </ul> <p>f. Does it address policy compliance and legal review? If no, does it provide a risk based decision of why it is not required?</p>	<p>EC 1165-2-214 Para 14</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>
<p><b>3. Does the RP present the tasks, timing, and sequence of the reviews (including deferrals)?</b></p> <p>a. Does it provide an overall review schedule that shows timing and sequence of all reviews?</p> <p>b. Does the review plan establish a milestone schedule aligned with the critical features of the project design and construction?</p>	<p>EC 1165-2-214, Appendix B, Para 4c</p> <p>EC 1165-2-214, Appendix C, Para 3g</p> <p>EC 1165-2-214, Appendix E, Para 6c</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><b>4. Does the RP address engineering model certification requirements?</b></p> <p>a. Does it list the models and data anticipated to be used in developing recommendations?</p> <p>b. Does it indicate the certification /approval status of those models and if certification or approval of any model(s) will be needed?</p> <p>c. If needed, does the RP propose the appropriate level of certification/approval for the model(s) and how it will be accomplished?</p>	<p>EC 1165-2-214, Appendix B, Para 4i</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>
<p><b>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?</b></p>	<p>EC 1165-2-214, Appendix B, Para 4d</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>

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REQUIREMENT	REFERENCE	EVALUATION
a. Does it discuss posting the RP on the District website?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
b. Does it indicate the web address, and schedule and duration of the posting?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<b>6. Does the RP explain when significant and relevant public comments will be provided to the reviewers before they conduct their review?</b>	EC 1165-2-214, Appendix B, Para 4e	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
a. Does it discuss the schedule of receiving public comments?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
b. Does it discuss the schedule of when significant comments will be provided to the reviewers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<b>7. Does the RP address whether the public, including scientific or professional societies, will be asked to nominate professional reviewers?*</b>	EC 1165-2-214, Appendix B, Para 4h	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
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>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<b>8. Does the RP address expected in-kind contributions to be provided by the sponsor?</b>	EC 1165-2-214, Appendix B, Para 4j	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
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?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<b>9. Does the RP explain how the reviews will be documented?</b>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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?	EC 1165-2-214, Para 7d	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
b. Does the RP explain how the Type II IEPR will be documented in a Review Report?	EC 1165-2-214 Appendix B , Para 4k (14)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

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REQUIREMENT	REFERENCE	EVALUATION
c. Does the RP document how written responses to the Type II IEPR Review Report will be prepared?	EC 1165-2-214 Appendix B, Para 4k (14)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
d. Does the RP detail how the district/PCX/MSD 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 1165-2-214 Appendix B, Para 5	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<b>10. Has the approval memorandum been prepared and does it accompany the RP?</b>	EC 1165-2-214, Appendix B, Para 7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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**Erosion Repair Lock 2, West Pearl River Navigation Canal, St. Tammany Parrish, Louisiana**

**EXPLANATION OF RATIONALE FOR RECOMMENDATION TO NOT CONDUCT  
A TYPE II IEPR SAFETY ASSURANCE REVIEW (SAR)**

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

Per EC 1165-2-214, two factors mandate an SAR and three additional factors should be considered in determination whether or not an 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 justified by life safety?	Mandate	NO  The authorized project is solely for navigation. .
2) Would the project's failure pose a significant threat to human life?	Mandate	NO  These projects are routine non complex in nature. While economic impacts of non-maintenance on the respective authorized projects are evident, failure to perform required actions does not pose a direct significant threat to human life, public health, safety or welfare.
3) Does the project involves 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 types of repairs involved are routine such as fill placement and compaction.
4) Does the project design require redundancy, resiliency, or robustness?	Consider	NO  The types of repairs involved are routine such as fill placement and compaction.

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(Cont.)

Factor		Relevancy to this Project
5) Does the project have unique construction sequencing or a reduced or overlapping design construction schedule?	Consider	NO

**Background Information about Project:**

The River and Harbors Act of 1935 authorized the West Pearl River Navigation Project. This project lies within Washington and St. Tammany parishes, Louisiana, and Pearl River County, Mississippi. The Project, which was begun in 1938 and completed in 1956, was designed to provide a minimum depth of seven feet for navigation from the mouth of the West Pearl River to the vicinity of Bogalusa, Louisiana. The Project's purpose was to provide navigation from Bogalusa, LA, south for fifty-eight miles to the mouth of the West Pearl River. A 20.2-mile lateral diversion canal and three locks were constructed on the upper end of the waterway. The canal was constructed to provide a seven-foot deep channel with the bottom width of 100 feet in the river sections and 80 feet in the canal section.

The project (West Pearl Navigation Canal) status as of the date of this Review Plan is complete and has been in caretaker status since 1995.

The purpose of the Erosion Repair at Lock 2 on the West Pearl River Navigation Canal is to restore the site to conditions prior to Hurricane Isaac in September 2012. The east side of Lock 2 was damaged due to overflow conditions from excessive rainfall during the hurricane that permitted the lock chamber to overflow and cause significant erosion. The overflow condition was caused by improper valve settings on the lock chamber valves. The water levels returned to normal after the hurricane was over. Currently, there is no immediate threat to life or property as the valve settings have been adjusted to the correct settings and water can no longer fill the lock chamber. In addition, monitoring systems have been installed in order to monitor water levels in the lock chamber. The monitoring systems will provide ample time to send personnel to respond to rising water levels in the chamber. If the erosion is not repaired then there is a potential for the lock chamber to fail if as natural erosion continues due to rainfall.

**Discussion on analyses and failure modes considered:**

Due to the routine nature of the type of repair work to be done on this project, there was no failure mode analysis done for this Review Plan.

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## 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 Engineering and Construction that Type II IEPR (SAR) is NOT required for this project.

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

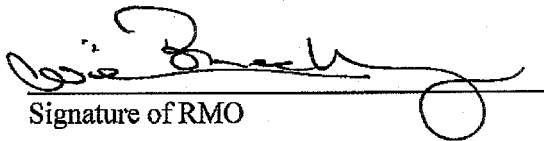
DULANEY,HENRY,A.12  
30764693

Digitally signed by DULANEY,HENRY,A.1230764693  
DN: c=US, o=U.S. Government, ou=DoD, ou=PII,  
ou=USA, cn=DULANEY,HENRY,A.1230764693  
Date: 2013.04.18 14:13:38 -0500

HENRY A. DULANEY, P.E.  
Chief, Engineering and Construction  
Division

\_\_\_\_\_  
Date

The above recommendation is ☒ Approved ☐ Disapproved by

  
\_\_\_\_\_  
Signature of RMO

6/18/13  
\_\_\_\_\_  
Date

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