



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

REPLY TO
ATTENTION OF:

21 Mar 2014

CEMVD-PD-N

MEMORANDUM FOR Commander, Memphis District

SUBJECT: Review Plan Approval for the St. Francis Town Levee
Renovation (P2# 107071)

1. References:

a. Memorandum, CEMVM-OD, 6 March 2014, subject: Review Plan
for St. Francis Town Levee Renovation (P2# 107071) (encl 1).

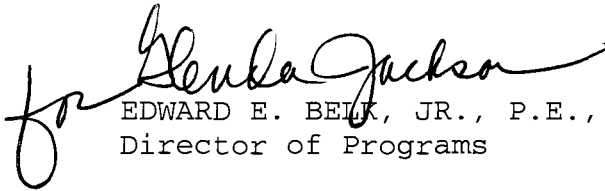
b. Memorandum, CEIWR-RMC, 4 March 2014, subject: Risk
Management Center Endorsement - St. Francis Town Levee Renovation
Review Plan (encl 2).

2. The enclosed Review Plan for the St. Francis Town Levee
Renovation has been prepared in accordance with EC 1165-2-214. The
Review Plan has been coordinated with the Lower District Support
Team and the Risk Management Center, which endorsed the plan in the
enclosed memorandum, reference b.

3. I hereby approve this Review Plan, which is subject to change
as circumstances require, consistent with study development under
the Project Management Business Process. Subsequent revisions to
this Review Plan or its execution will require new written approval
from this office. Non-substantive changes to this Review Plan do
not require further approval. The District should post the
approved Review Plan to its web site.

4. The MVD point of contact is Ms. Sarah Palmer, CEMVD-PD-N, at
(601) 634-5910.

2 Encls


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



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
RISK MANAGEMENT CENTER
12596 WEST BAYAUD AVE., SUITE 400
LAKEWOOD, CO 80228

CEIWR-RMC

04 March 2014

MEMORANDUM FOR: Commander, Mississippi Valley Division, ATTN: CEMVD-RB-T

SUBJECT: Risk Management Center Endorsement – St. Francis Town Levee
Renovation Review Plan

1. The Risk Management Center (RMC) has examined the Review Plan (RP) for St. Francis Town Levee Renovation, dated 08 January 2014, and concurs that this RP complies with the current peer review policy requirements outlined in EC 1165-2-214 "Civil Works Review Policy", dated 15 December, 2012.
2. This review plan was prepared by CEMVM-EC-G, reviewed by MVM, MVD, and the RMC, coordinated with the Flood Risk Management Planning Center of Expertise, and all review comments have been satisfactorily resolved.
3. The RMC endorses this document to be approved by the MSC Commander. Upon approval of the RP, please provide a copy of the approved RP, a copy of the MSC Commander's approval memorandum, and a link to where the RP is posted on the District website to the RMC Senior Review Manager (rmc.review@usace.army.mil).
4. Thank you for the opportunity to assist in the preparation of this RP. Please coordinate all aspects of the Agency Technical Review, the Independent External Peer Review (as appropriate), and Model Certification efforts defined in the RP. For further information, please contact me at 303-963-4573.

Sincerely,

NATHAN J. SNORTELAND, P.E.
Director
Risk Management Center

CF:
CEIWR-RMC-W (Mr. Boyer)
CEMVD-CE (Division Quality Manager)



Reply to
Attention of:

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT CORPS OF ENGINEERS
167 NORTH MAIN STREET B-202
MEMPHIS, TENNESSEE 38103-1894

06 MAR 2014

CEMVM-OD


MEMORANDUM FOR Commander, Mississippi Valley Division (CEMVD-RB-T/Mr. William Bradley, P.O. Box 80, Vicksburg, MS 39181-0080)

SUBJECT: Review Plan for St. Francis Town Levee Renovation (P2# 107071)

1. References:

- a. Memorandum, CEMVM-OD-O, 08 January 2014, subject: Review Plan for St. Francis Town Levee Renovation (Encl).
 - b. Memorandum, CEIWR-RMC, 04 March 2014, subject: Risk Management Center Endorsement – St. Francis Town Levee Renovation Review Plan (Encl).
 - c. EC 1165-2-214, Civil Works Review Policy, 15 December 2012.
 - d. 08502-MVD, QMS Process Review Plans for Technical Products, 6 May 2011.
2. Reference 1.a. above has been prepared in accordance with Reference 1.c. above. Reference 1.b. provides the Risk Management Center's endorsement to Reference 1.a. above.
3. Request approval of subject review plan in accordance with EC 1165-2-214 and QMS Process 08502-MVD.
4. The point of contact for this memorandum is the project manager, Ms. Vickie Watson, at 901-544-3986.

Encls


JEFFERY A. ANDERSON
COL, EN
Commanding



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, MEMPHIS DISTRICT
167 N. MAIN ST.
MEMPHIS, TN 38103

CEMVM-OD

08 January 2014

MEMORANDUM FOR: Commander, Mississippi Valley Division (CEMVD-RB-T/Mr. William Bradley , P.O. Box 80, Vicksburg, MS 39181-0080)

SUBJECT: Review Plan for St. Francis Town Levee Renovation (P2# 107071)

1. The review plan for the St. Francis Town Levee Renovation, St. Francis, Arkansas is attached for Mississippi Valley Division's review and approval. The review plan was prepared in accordance with EC 11 65-2- 214.
2. The St. Francis Town Levee Renovation is currently in the implementation phase. A Type II IEPR review is required. As required by EC 11 65-2-214, request review and approval of the Review Plan.
3. The point of contact for this memorandum is the project manager, Mr. Marco Goodman, at 901-544-0727.

A handwritten signature in blue ink, reading "Thomas L. Minyard", is positioned above the printed name and title.

Thomas L. Minyard, P.E.
Chief, Engineering and Construction Division

Encl



**US Army Corps
of Engineers®
Memphis District**

Review Plan for St. Francis Town Levee Renovation

08 January 2014

P2# 107071

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Review Plan

St. Francis Town Levee Renovation

08 January 2014

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Review Plan

St. Francis Town Levee Renovation Clay County, St. Francis, Arkansas 08 January 2014

1 INTRODUCTION

1.1 Purpose and Authority

This Quality Control Review Plan defines the scope and level of quality management activities for the St. Francis Town Levee Renovation, Clay County, St Francis, Arkansas. The purpose of this Review Plan (RP) is to define the scope and level of review for implementation documents for the St. Francis Town Levee Renovation. This RP is a standalone document. The St. Francis Town Levee Renovation is authorized and funded as part of the St. Francis River and Tributaries Arkansas and Missouri, Mississippi River and Tributaries (MR&T) Project.

1.2 Documents for Review

The project is in the implementation phase. The implementation documents are the 100% plans, specifications, and updates (as required) to the St. Francis Town Levee Renovation operations and maintenance manual.

1.3 Review Requirements

This QC Review Plan (RP) was developed in accordance with EC 1165-2-214, which establishes the procedures for ensuring the quality and credibility of US Army Corps of Engineers (USACE) decision and implementation documents through independent review. This RP describes the scope of review for the current phase of work. All appropriate levels of review (DQC, ATR, IEPR and Policy and Legal Review) will be included in this RP and any levels not included will require documentation in the RP of the risk-informed decision not to undertake that level of review. The RP identifies the most important skill sets needed in the reviews and the objective of the review and the specific advice sought, thus setting the appropriate scale and scope of review for the individual project. This RP is a component of the Quality Management Plan (QMP) in the Project Management Program (PMP).

1.4 Primary Points of Contact

1.4.1 Memphis District Points of Contact

Project Operations	Mr. Marco Goodman	901-544-0727
Civil Design	Mr. Derrick Brasher	901-544-0889
Hydraulics	Mr. Robert Gambil	901-544-4091
MVM Chief of Engineering and Construction	Mr. Thomas L. Minyard	901-544-3227
MVM Quality and Review Manager	Ms. Elizabeth Burks	901-544-0761

1.4.2 Mississippi Valley Division Points of Contact

District Support Team	Ms. Sarah T Palmer	601-634-5910
Regional Business Technical	Mr. William Bradley	601-634-5644
Regional Business Technical	Ms. Melissa Mullen	901-544-0716

1.4.3 Risk Management Center is the Review Management Office

Risk Management Center- Risk Management Office	Nathan J Snorteland	303-963-4573
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1.5 References

a.	ER 1105-2-100	<i>Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1</i> 20 November 2007
b.	ER 1110-2-1150	<i>Engineering and Design for Civil Works,</i> 31 August 1999
c.	EC 1165-2-214	<i>Civil Works Review Policy</i> 15 December 2013
d.	EC 1105-5-412	<i>Assuring Quality of Planning Models</i> 31 March 2011
e.	MDR-1130-2-4	<i>St. Francis Basin Project</i> July 1978
f.	QMS 8502-MVD	<i>Review Plans for "Implementation" and "Other" Technical Products</i> August 2, 2012

2 PROJECT INFORMATION

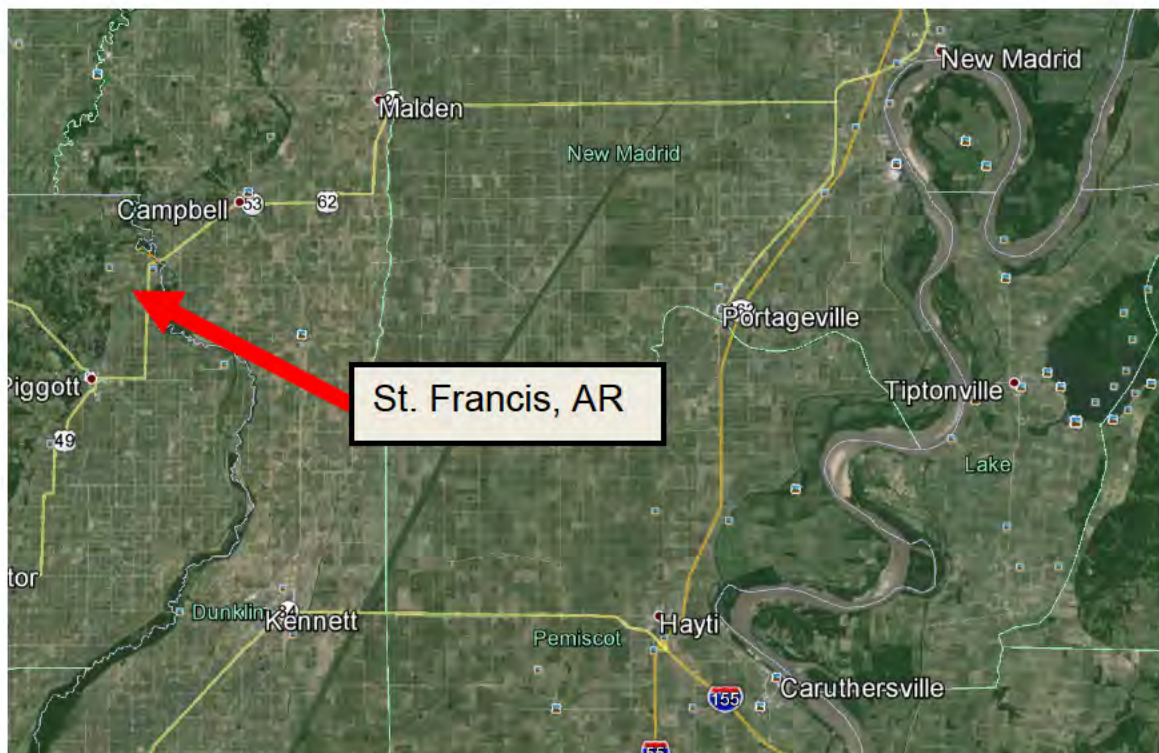
2.1 Project Description

The existing levee at St. Francis, Arkansas provides protection on the upper levee section of the West Bank of the St. Francis River. During the 2011 Flood event the levee experienced significant damage due to culvert failures as well as bank scours and levee slides. Damages to the levee included culvert collapses with flow through the levee, degraded/scoured embankment, and severe levee slides. The levee crown has settled in multiple locations due to the levee slides and has caused a decrease in the levee freeboard. An inspection following the 2011 flood revealed a weakened levee section extending ~6,300 feet from U.S. Highway 62 northward. The project design will:

1. Re-establish the levee centerline.
2. Provide an embankment section with 1V:3.5H slopes, 15 foot vegetation free zone on the riverside and landside.
3. Eliminate 4 redundant culverts.
4. Replace 7 culverts with reinforced concrete pipe, headwalls on riverside and landside, and flap gates on riverside.

2.2 Project Location

The project is in Clay County Arkansas just north of the Town of St. Francis. The levee begins on the south side of Highway 338 and continues along the west bank of the St. Francis River until it reaches Highway 62 in St. Francis, Clay County, Arkansas.





2.3 Project Authority

The St. Francis Town Levee Renovation is part of the St. Francis River and Tributaries Arkansas and Missouri Project authorized by the Flood Control Act of 15 May 1928 as amended. P.L. 112.-77 Disaster Relief Appropriations Act (FY 2012) provided funding to complete the levee renovation. This section of the levee is covered in the MDR-1130-24 St Francis Basin Project, July 1978.

3 PRODUCT INFORMATION

Design plans and specification will be developed in-house. The purpose of implementation documents is to provide a detailed plan for construction. The plans and specifications will be developed by a USACE Project Delivery Team (PDT). A construction contractor will complete the construction.

4 SCOPE OF REVIEWS

All work products will undergo District Quality Control (DQC), Agency Technical Review (ATR) and a Type II Independent External Peer Review (IEPR) Safety Assurance Review (SAR). A Type I IEPR will not be performed. Each level of review and how it applies to the project is explained below.

4.1 District Quality Control (DQC)

DQC is the internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the PMP. It is managed in the Memphis District and may be conducted by staff in the home district. The design products for the St. Francis Town Levee Restoration were developed and reviewed internal to the Corps of Engineers by the project delivery team. Levels of review include basic quality control and review of bid and construction documents. DQC efforts include the necessary expertise to address compliance with published Corps policy. Documentation of the DQC activities is required and is in accordance with the Quality Manual of the Memphis District. Issues identified via the DQC are resolved prior to the ATR and IEPR.

Basic quality control tools include supervisory review and project delivery team (PDT) reviews. Quality checks may be performed by staff responsible for the work, such as supervisors, work leaders, team leaders, designated individuals from the senior staff, or other qualified personnel. DQC also includes certification of the plans and specifications by a Biddability Constructability, Operability and Environmental Review (BCOE) signoff certification, which includes the chiefs of construction, engineering, and operations divisions and the chiefs of the civil construction and geotechnical functional elements.

4.1.1 Peer Reviews

Prior to ATR, all implementation documents will receive a peer review. The peer review is conducted by a peer in the same discipline and double checks calculations, assumptions, and other design details used in the design and specifications. A certification will be prepared once issues raised by the reviewers have been addressed to the review team's satisfaction. Indication of this concurrence will be documented by the signing of a quality assurance certification statement by the Technical Project Leader which states that the PDT team concurs with the project design and that it is ready for advertising. Peer review disciplines are listed in Paragraph 7.1.2.

4.1.2 Biddability, Constructability, Operability, Environmental Review (BCOE)

The BCOE will be completed concurrently with the ATR. The Biddability, Constructability, Operability, and Environmental (BCOE) review reexamines all aspects of the documents used to bid for a construction contract to ensure they will result in a biddable and constructible project. BCOE occurs prior to advertising the contract for bids. A certification will be prepared once issues raised by the reviewers have been addressed to the review team satisfaction. The BCOE review disciplines are listed in Paragraph 7.1.3.

4.2 Agency Technical Review (ATR)

ATR is an in-depth review undertaken to ensure the quality and credibility of the government's scientific information, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of the project/product. ATR is mandatory for all decision and implementation documents. For other work products, a case specific risk-informed decision is made as to whether ATR is appropriate. The purpose of ATR is to ensure proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams are comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team is selected from outside the Mississippi Valley Division.

4.2.1 Required ATR Team Expertise

The ATR team consists of 4 members including the ATR team leader, Mr. Marc Masnor. The following paragraphs describe the list of required disciplines as well as the experience required by each of the ATR team members. Other disciplines/functions may be added to the ATR team as necessary, in which case the added team member(s) will have the appropriate experience and educational requirements. See Paragraph 7.1.4 for a list of the assigned ATR team members.

4.2.1.1 *Hydraulics*

Team member should be familiar with through levee drainage, culvert design and erosion control methods and requirements.

4.2.1.2 *Structural*

Team member should have experience in concrete headwall design.

4.2.1.3 *Construction Management*

Team member will be familiar with earthen embankment and culvert installation construction methods, risks, limitations, and standard requirements. It is anticipated that the Construction Management team member will be the Team Lead.

4.2.1.4 *Geotechnical*

Team member should have experience in assessing slope stability, settlement potential, and compaction requirements.

4.2.2 Documentation of ATR

EC 1165-2-214 requires the use of DrChecks (<https://www.projnet.org/projnet/>) to document all ATR comments, responses, and associated resolution accomplished. ATR team members must register with the DrChecks website and they will receive access to DrChecks through the project manager. A PDT member is assigned to take the lead in resolving comments for each of the primary project disciplines. It is the PDT member's responsibility to coordinate resolution of the comment with other team members as required, evaluate the DrChecks comment, enter the PDT's response into DrChecks, and ensure the

ATR team member conducts a comment back check. It is the PDT member's responsibility to ensure all DrChecks ATR comments in their discipline are properly addressed, resolved, and closed.

4.2.3 ATR Issues

In some situations, especially addressing incomplete or unclear information, comments may seek clarification or try to 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 coordination, and lastly the agreed upon resolution. The ATR team will prepare a Review Report which includes a summary of each unresolved issue; each unresolved issue will be raised to the vertical team for resolution. Review Reports are considered an integral part of the ATR documentation and will:

- Include the charge to the reviewers;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Describe the nature of their review and their findings and conclusions; 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.

4.2.4 ATR Issue Resolution

ATR efforts include the necessary expertise to address compliance with applicable published policy. When policy and/or legal concerns arise during ATR that are not readily and mutually resolved by the PDT and the reviewers, the District will seek issue resolution support from the Mississippi Valley Division and HQUSACE in accordance with the procedures outlined in appropriate guidance.

4.2.5 ATR Completion

ATR is considered complete and certified when all ATR concerns are either resolved or referred to HQUSACE for resolution and the ATR documentation is complete. A sample ATR certification is included as Attachment 1.

4.3 Independent External Peer Review (IEPR)

IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. Any work product that undergoes ATR may also undergo Type I and/or Type II IEPR. In general, decision documents undergo Type I IEPR and implementation documents undergo Type II IEPR (or Safety Assurance Review). Meeting the specific conditions identified for possible exclusions is not, in and of itself, sufficient grounds for recommending exclusion.

4.3.1 Type I IEPR

This project does not require a Type I IEPR.

4.3.2 Type II IEPR

A Type II IEPR is conducted to insure public health, safety, and welfare. The circumstances requiring a Type II IEPR are described in Appendix E of EC 1165-2-214. Each of those circumstances is explicitly considered in developing a risk-informed rationale for determining the appropriate level of review, including the need for a safety assurance review. This project requires a Type II IEPR due to the fact that failure of the project would pose a significant threat to human life.

The Type II IEPR or SAR panel will be selected and managed by the RMC per EC 1165-2-214, Appendix E. A Charge will be developed according to EC 1165-2-214, Appendix E paragraph 5. Draft charge questions will be developed and provided to the RMC for review. The final charge document will instruct the panel to focus on evaluating whether the interpretations of analysis and conclusion based on analysis are reasonable. Panels should be given the flexibility to bring important issues to the attention of decision makers. Panels should be instructed to not make a recommendation on whether a particular alternative should be implemented. The team lead is to seek consensus, but where there is a lack of consensus, note the non-concurrence and why. The panel will prepare a Review Report and provide it to the MVM Chief of Engineering and Construction and a copy to the RMC. After receiving the report the MVM Chief of Engineering and Construction with full coordination with the RMO considers all comments contained in the report and prepares a written response for all comments and notes concurrence and subsequent action or non-concurrence with an explanation. The MVM Chief of Engineering and Construction will submit the panel's report and the Districts responses to the MSC Chief of Business Technical Division for final review and concurrence. The final report is then presented to the MSC Commander for approval. After receiving the MSC commander approval, the report and response shall be made available on MVM website.

4.3.3 Required IEPR Team Expertise

The IEPR team will be made up of independent recognized experts from outside the USACE and consists of 3 members including the IEPR team leader. The IEPR team will be selected using the National Academy of Science (NAS) Policy to ensure the panel members have no conflict of interest with the project being reviewed. Since the Type II IEPR panel will be established by USACE local counsel will be consulted to ensure the Federal Advisory Committee Act (FACA) requirements are being met. The following paragraphs describe the list of required disciplines as well as the experience required by each of the IEPR team members. Other disciplines/functions may be added to team as necessary, in which case the added team member(s) will have the appropriate experience and educational requirements. See Paragraph 7.1.4 for a list of the assigned IEPR team members.

4.3.3.1 Structural

Team member should have experience in concrete headwall design.

4.3.3.2 Construction Management

Team member will be familiar with earthen embankment and culvert installation construction methods, risks, limitations, and standard requirements. It is anticipated that the Construction Management team member will be the Team Lead.

4.3.3.3 Geotechnical

Team member should have experience in assessing slope stability, settlement potential, and compaction requirements.

4.4 Model Certification and Approval

This project is not in the planning phase, no models or certifications are required.

4.5 Policy Compliance and Legal Review

The Memphis District Office of Counsel is responsible for legal review of decision and implementation documents and signs a certification of legal sufficiency prior to construction of the project. See attachment 2.

5 POSTING of REVIEW PLANS and PUBLIC COMMENT

To ensure that the peer review approach is responsive to the wide array of stakeholders and customers, both within and outside the Federal Government, this RP will be published on the Headquarters' public internet site following approval by MVD. A link to the RP is available at <http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/ReviewPlans.aspx>.

5.1 District Posting of Review Plans on Internet

The Memphis District maintains a web site that hosts electronic versions of RPs for its studies/projects as well as a list of the current and active RPs with links to the documents. In posted documents, lists of the names of USACE reviewers may be displayed. Mississippi Valley Division and HQUSACE postings also link to the district's site. The RP is published on the Memphis District's public internet site following approval by Mississippi Valley Division. The Memphis District website is located at <http://www.mvm.usace.army.mil/About/Offices/ProgramsandProjectManagement/PeerReviewPlans.aspx>.

5.2 Division Posting of Review Plans on Internet

Mississippi Valley Division will post on its website, and update at least every three months, an agenda of RPs. The agenda describes all decision and implementation documents, the RP for each entry on the agenda, and provides a link from the agenda to each document made public. The Mississippi Valley Division's website is located at <http://www.mvd.usace.army.mil>.

5.3 Public Comment Period and Handling of Comments

This project is for maintenance of a levee therefore the plans and specifications will not be available for public review. The RP will be posted as outlined in Section 5.1 and 5.2. Local counsel will be consulted to ensure compliance with FACA regulations.

6 REVIEW SCHEDULE and COSTS

The recommended project schedule should show the timing and sequence of all reviews to include a milestone schedule with the critical features of the project design and construction. All costs for reviews should be provided to include expected in-kind contributions provided by the sponsor.

6.1 Review Plan Schedule

Review plan receives District approval	D*+0
Draft Review Plan sent to MVD	D+5
ATR begins on implementation documents (start point for ATR schedule below)	D+14
MVD approves review plan	D+24
Review plan sent to RIT	D+34
*"D" is the date MVM approves the review plan, which is currently unknown	

6.2 Milestone Schedule

DQC Review milestone	13 December 2013
BCOE Review milestone	6 February 2014
ATR milestone	30 April 2014
Contract Award Date	31 July 2014
Construction Complete	31 December 2015

6.3 DQC Schedule and Cost

The DQC, which includes peer reviews performed before the ATR and a biddability, constructability, operability, and environmental (BCOE) review performed in conjunction with the ATR. The DQC costs are paid from project funds. The schedule for completing major products for this project is as follows:

Plans Complete	30 December 2013
Specifications Complete	30 December 2013
DQC Review Start	27 November 2013
DQC Review Finish	13 December 2013

6.3.1 DQC Cost

Discipline	Estimated Labor Cost
Supporting Disciplines	\$3000 ea. @ 6 ea. =\$18,000
TOTAL	\$18,000

6.3.2 BCOE Cost

Discipline	Estimated Labor Cost
Supporting Disciplines	\$3000 ea. @ 6 ea. =\$18,000
TOTAL	\$18,000

6.4 ATR Schedule and Cost

Following is the schedule for the ATR review:

6.4.1 ATR Schedule

MVD approves ATR Team	14 March 2014
Review documents and charge sent to ATR Team	17 March 2014
Charge approved by PDT and ATR Team	21 March 2014
ATR DrChecks comments complete	02 April 2014
ATR back checks complete; DrChecks closed	11 April 2014
ATR certification form signed	16 April 2014
ATR final report complete	18 April 2014
Report sent to MVD for approval	23 April 2014
Report approved by MVD	29 April 2014

6.4.2 ATR Cost

Discipline	Estimated Labor Cost
ATR Team Lead	\$10,000
Supporting Disciplines	\$5000 ea. @ 4 ea. =\$20,000
TOTAL	\$30,000

6.5 Type II IEPR Schedule and Cost

Following is the schedule for the IEPR review:

6.5.1 Type II IEPR Schedule

MVD approves IEPR Team	31 March 2014
Review documents, charge and contract sent to IEPR Team	18 April 2014
IEPR Team completes review and prepares final report	30 May 2014
District prepares comments and provides to Division commander	13 June 2014

6.5.2 Type II IEPR Cost

Discipline	Estimated Labor Cost
IEPR Team	\$50,000
Supporting Disciplines	2,000
TOTAL	\$52,000

6.6 Model Certification/Approval Schedule and Cost

Not Applicable.

7 REVIEW TEAMS

7.1 District Quality Control Activities

The following are list of the review teams who will perform the DQC, and BCOE activities. It should be stated that the DQC will be managed by the home district in accordance with Major Subordinate Command (MSC) and District Quality Management Plans.

7.1.1 Project Delivery Team

NAME	DISTRICT / ORGANIZATION	DISCIPLINE
Marco Goodman, P.E.	CEMVM-OD-O	Operations
Mark Smith	CEMVN-PDC-UDC	Environmental
Charles(Randy) Lord, P.E.	CEMVM-EC-G	Geotechnical
Derrick Brasher	CEMVM-EC-D	Civil-Design
Robert Gambill	CEMVM-EC-H	Hydraulics
Michael E. Sheridan, P.E.	CEMVM-EC-D	Structural
Douglas B. Young	CEMVM-RE-E	Real Estate

7.1.2 Peer Reviewers

NAME	DISTRICT / ORGANIZATION	DISCIPLINE
[REDACTED]	CEMVM-EC-G	Geotechnical
[REDACTED]	CEMVM-EC-D	Civil-Design
[REDACTED]	CEMVM-EC-H	Hydraulics
[REDACTED]	CEMVM-EC-D	Construction Branch
[REDACTED]	CEMVM-EC-G	Geospatial
[REDACTED]	CEMVM-EC-CV	Wynne Area Office

7.1.3 BCOE Reviewers

NAME	DISTRICT / SECTION	DISCIPLINE
[REDACTED]	CEMVM-OD-O	Project Operations Branch Chief
[REDACTED]	CEMVM-EC-C	Construction Branch Chief
[REDACTED]	CEMVM-PD-E	Environmental Branch Chief
[REDACTED]	CEMVM-EC-D	Design Branch Chief
[REDACTED]	CEMVM-EC--G	Geotechnical Chief
[REDACTED]	CEMVM-OD-O	Project Operations

7.1.4 Agency Technical Review Team

NAME ¹	DISTRICT / ORGANIZATION	DISCIPLINE
[REDACTED]	MVD-RB-T	MSC Point of Contact
[REDACTED]	CEIWR-RMC	RMO Point of Contact
[REDACTED]	CESWF-PEC-PF	ATR Team Lead
Xxxxx XXXXXXXX	?????	Structural
Xxxxx XXXXXXXX	?????	Geotechnical
Xxxxx XXXXXXXX	?????	Hydraulics
Xxxxx XXXXXXXX	?????	Construction management

¹ Names will be removed in version posted for public review to protect privacy.

7.2 Independent External Peer Review

7.2.1 IEPR Reviewers

NAME ¹	ORGANIZATION	YEARS OF EXPERIENCE	QUALIFICATIONS
██████████	MVD-RB-T	n/a	MSC Point of Contact
██████████	CEIWR-RMC	n/a	RMO Point of Contact
Xxxxx XXXXXXXX	?????		
Xxxxx XXXXXXXX	?????		
Xxxxx XXXXXXXX	?????		
Xxxxx XXXXXXXX	?????		
Xxxxx XXXXXXXX	?????		
¹ Names will be removed in version posted for public review to protect privacy.			

8 SUMMARY OF REVIEW PLAN UPDATES

Revision No.	Date	Description of major change(s)

9 APPENDICES (Listing/History of Completed Review Packages)

Review Date	Type of Review	Review Title / Description)

COMPLETION OF AGENCY TECHNICAL REVIEW ¹

The Agency Technical Review (ATR) has been completed for the plans and specifications for the levee renovation and culvert replacement for St. Francis Town Levee Renovation, Clay County, St. Francis, Arkansas. 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 DrCheckssm.

SIGNATURE

Mr. Marc Masnor
ATR Team Leader
CESWF-PEC-PF

Date

SIGNATURE

Marco Goodman, P.E.
Project Manager
CEMVM-OD-O

Date

SIGNATURE

Nathan Snorteland
Review Management Office Representative
CEIWR-RMC

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW ¹

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

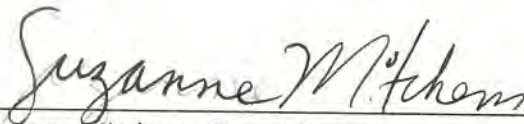
Thomas L. Minyard, P.E.
Chief, Engineering and Construction Division
CEMVM-EC

Date

STATEMENT OF LEGAL REVIEW

CERTIFICATION OF LEGAL REVIEW:

This product including all associated documents required by the National Environmental Policy Act, has been fully reviewed by the Office of Counsel, Memphis District and is approved as legally sufficient.



Suzanne Mitchem, District Counsel



Date

Review Plan Checklist for Implementation Documents

Date: 08 January 2014
Originating District: Memphis
Project/Study Title: St. Francis Town Levee Renovation
PWI #:
District POC: Vickie L. Watson, P.E. or Marco Goodman, P.E.

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
*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.		

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Review Plan Checklist
for Implementation Documents

REQUIREMENT	REFERENCE	EVALUATION
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 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 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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Review Plan Checklist for Implementation Documents

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 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

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REQUIREMENT	REFERENCE	EVALUATION
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input 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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REQUIREMENT	REFERENCE	EVALUATION
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 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 <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
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 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

**Review Plan Checklist
for Implementation Documents**

REQUIREMENT	REFERENCE	EVALUATION
<p>7. Does the RP address whether the public, including scientific or professional societies, will be asked to nominate professional reviewers?*</p> <p>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?</p> <p><i>* Typically the public will not be asked to nominate potential reviewer</i></p>	EC 1165-2-209, Appendix B, Para 4h	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>8. Does the RP address expected in-kind contributions to be provided by the sponsor?</p> <p>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?</p>	EC 1165-2-209, Appendix B, Para 4j	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>9. Does the RP explain how the reviews will be documented?</p> <p>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?</p> <p>b. Does the RP explain how the Type II IEPR will be documented in a Review Report?</p> <p>c. Does the RP document how written responses to the Type II IEPR Review Report will be prepared?</p> <p>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?</p>	<p>EC 1165-2-209, Para 7d</p> <p>EC 1165-2-209 Appendix B , Para 4k (14)</p> <p>EC 1165-2-209 Appendix B, Para 4k (14)</p> <p>EC 1165-2-209 Appendix B, Para 5</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</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>10. Has the approval memorandum been prepared and does it accompany the RP?</p>	EC 1165-2-209, Appendix B, Para 7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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11 Mar 14

MEMORANDUM FOR CEMVD-PD-L (Rayford Wilbanks)

SUBJECT: Review Plan (RP) for St. Francis Town Levee Renovation

1. Reference memorandum, CEMVD-PD-KM, subject as above.
2. This office concurs with subject review plan.
3. RB-T point of contact is Melissa Mullen, 901-544-0716.



MICHAEL A. TURNER, P.E.
Chief, Business Technical
Division