



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

REPLY TO
ATTENTION OF:

CEMVD-DE

15 MAY 2018

MEMORANDUM FOR Commander, Vicksburg District

SUBJECT: Approval of Implementation Review Plan for stabilizing the Ouachita River bank below portions of the Monroe Floodwall and West-Monroe Floodwall

1. References:

a. Memorandum, CEMVK-DE, 27 December 2017, Subject: Implementation Review Plan for stabilizing the Ouachita River bank below portions of the Monroe Floodwall and West-Monroe Floodwall (encl 1).

b. Memorandum, CEMVD-RB-T, 12 April 2018, Subject: Implementation Review Plan for stabilizing the Ouachita River bank below portions of the Monroe Floodwall and West-Monroe Floodwall (encl 2).

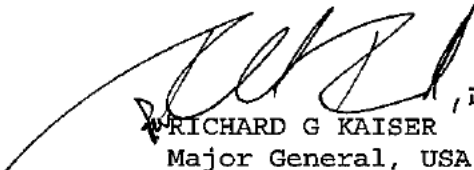
c. EC 1165-2-217, 20 February 2018, subject: Review Policy For Civil Works.

2. The enclosed Vicksburg District Implementation Review Plan (RP) for stabilizing the Ouachita River bank below portions of the Monroe Floodwall and West-Monroe Floodwall has been prepared in accordance with EC 1165-2-217. The RP has been endorsed by the USACE Risk Management Center (encl 1) and coordinated with the Lower District Support Team and the Business Technical Division who concurred with the plan in reference 1.a.

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

4. The MVD point of contact for this action is [REDACTED]
CEMVD-PDM, [REDACTED]

2 Encls


RICHARD G KAISER
Major General, USA
Command

DEP COR



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

DEC 27 2017

CEMVK-DE

MEMORANDUM FOR Commander, Mississippi Valley Division (CEMVD-PD-[REDACTED])

SUBJECT: Implementation Review Plan for stabilizing the Ouachita River bank below portions of the Monroe Floodwall and West-Monroe Floodwall.

1. Subject Implementation Review Plan is enclosed for your review and approval (*Encl 1*).
2. The Risk Management Organization (RMO) for this project is the USACE Risk Management Center (RMC). The letter of endorsement is attached (enclosure 2).
3. Agency Technical Review (ATR) for this project is managed within USACE and will be conducted by the USACE team identified in the Review Plan.
4. An Independent External Peer Review (IEPR) will be required for this project.
5. Questions should be directed to Mr. Larry Raborn, Project Manager (ext. 1-7474).

Encls


MICHAEL C. DEROSIER
COL, EN
Commanding

CF: (w/encls)
CEMVK-OD-M (Raborn)

**Review Plan
U.S. Army Corps of Engineers
Mississippi Valley Division
Vicksburg District**

**Ouachita River Levee Stabilization
RM167.3-167.1 and RM162.3-RM163.5**

MSC Approval Date: Pending

Last Revision Date: None



**US Army Corps
of Engineers®**

Encl 1

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1. Purpose and Requirements

a. Purpose

This Review plan for Ouachita River Levee Stabilization River Mile 162 to 167 will ensure a quality-engineering project is developed by the Corps of Engineers in accordance with EC 1165-2-214, "Civil Works Review Policy". The Review Plan shall layout a value added process that assures the correctness of the information shown. This Review Plan describes the scope of review addressing bank stabilization issues on completed projects. The District Chief of Engineering has assessed that risk of the project is significant; therefore a Safety Assurance Review (SAR) will be required.

b. Guidance and Policy References

- EC 1165-2-214, Civil Works Review Policy, 15 December 2012
- ER 1110-1-12, Quality Management, 31 Mar 2011
- ER 1110-1-8155, CECW-CE Specifications, 10/30/2015
- ER 1110-1-8159, CECW-CE Engineering and Design – DRCHECKS 1/1/2015
- ER 1110-2-112 CECW-E Required Visits to the Construction 4/15/1992
CECW-O Sites by Design Personnel
- ER 1110-2-8154 CECW-E Water Quality and Environmental 5/31/1995
Management for Corps Civil Works
Projects (RCS: DAEN-CWH-4)
- ER 1110-345-700 CEMP-EA DESIGN ANALYSIS, DRAWINGS AND
5/30/1997
- EM 1110-1-1905, Bearing Capacity of Soils, 30 October 1992
- EM 1110-2-1913, Design and Construction of Levees, 30 April 2000
- ER 1105-2-101, Risk Analysis for Flood Damage Reduction Studies, 1/3/2006
- ER 1110-2-1806, Earthquake Design and Evaluation for Civil Works Projects, 31
July 1995



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: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance 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 Review Plan should be provided to PDT, DQC, ATR and IEPR Teams.

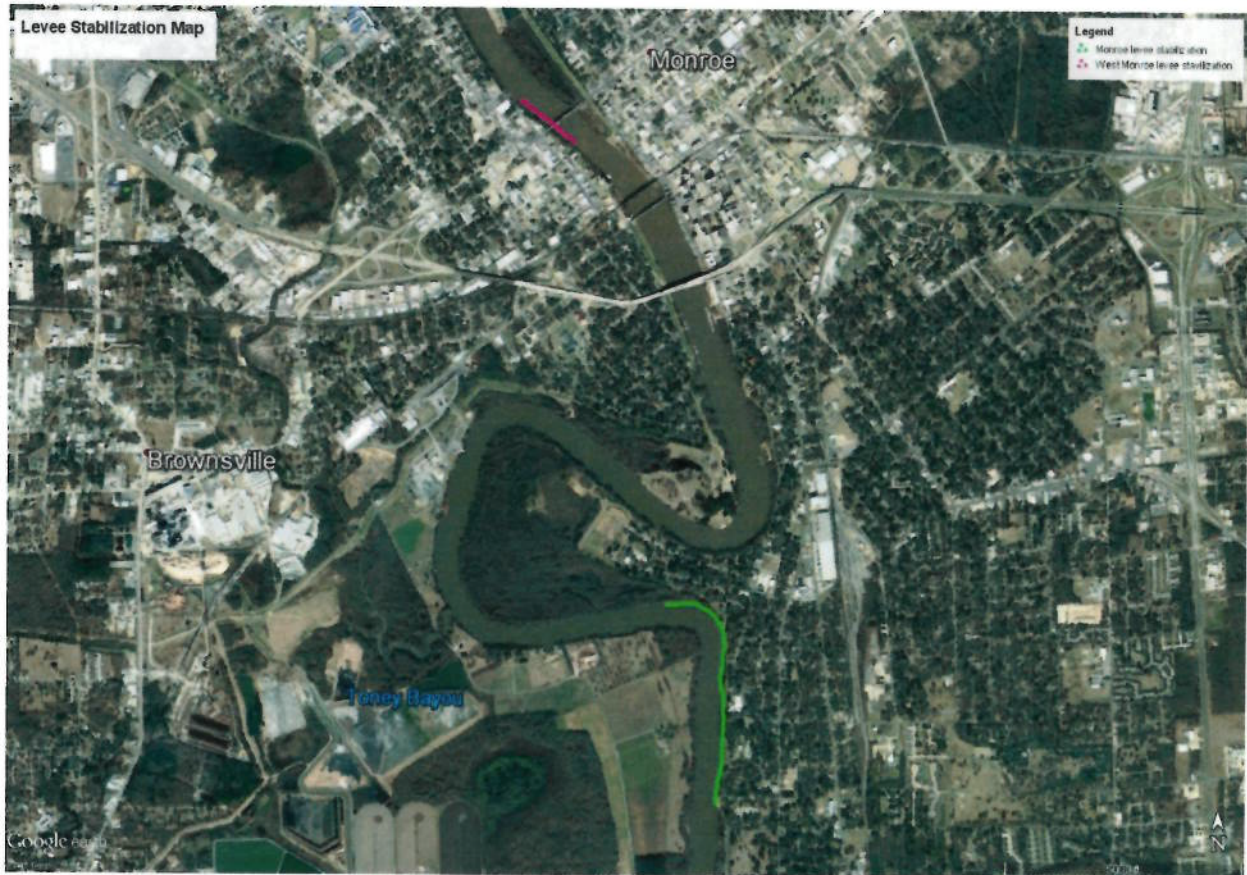
d. Review Management Organization

The USACE Risk Management Center (RMC) is the Review Management Organization (RMO) for this project. Contents of this review plan have been coordinated with the RMC and the Mississippi Valley Division, the Major Subordinate Command (MSC). In-Progress Review (IPR) team meetings with the RMC, MVD, and HQ will be scheduled on an "as needed" basis to discuss programmatic, policy, and technical matters. The MVD Levee Safety Program Manager will be the POC for vertical team coordination. Vicksburg District will assist the RMC with management of the ATR and IEPR reviews and development of the draft ATR and IEPR.

2. Project Description and Information

a. Project Description

The project will repair and stabilize sliding banks that support the Ouachita River levee and the West Monroe levee. These levees were constructed to reduce the risk of flooding from the Ouachita River. The work covered by this RP consists of furnishing all plant, labor, materials and equipment, and constructing levee stabilization at various locations on the banks of the Ouachita River between Miles 162 and 167. Principal features of the work include mobilization and demobilization, levee stabilization consisting of construction of longitudinal peaked stone toe dikes, stone tiebacks, backfill, slope dressing, and environmental protection.



b. Project Sponsor

The non-Federal sponsor for the project is the Tensas-Basin Levee District. The project sponsor will not be providing in kind contributions to this project.

3. District Quality Control

a. Requirements

All implementation documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. The project plans, specifications, and design documentation will go through milestone reviews at the 65%, 90%, and 95% levels of completion. Between milestone reviews, the District will perform “over-the-shoulder” reviews and “red-dot” calculation checks in addition to the milestone reviews. ATR will be held concurrently with the 90% milestone review, and the Independent External Peer Review (IEPR) and the Bidability, Constructability, Operability, Environmental, and Sustainability Review (BCOES, will be held concurrently with the 95% review. All computations, drawings or sketches shall undergo a rigorous independent check as part of the standard Quality Control (QC) process. 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. However, they should not be



performed by the same people who performed the original work, including managing/reviewing the work in the case of contracted efforts. Quality checks include a review of the alternatives considered, schedules, budgets, means and methods of construction, and have lessons learned been considered. DQC is assuring the math and assumptions are correct by having a checker initial each sheet of the computations. Checking is accompanied by a red check mark or similar annotation next to the item that has been checked. For drawings the checker shall place a red check mark or similar annotation on each dimension/elevation, note or reference showing concurrence with the correctness of the information shown. Additionally, the PDT is responsible to ensure consistency and effective coordination across all project disciplines during project design and construction management. See Attachment 2 for PDT and DQC members and disciplines.

b. Documentation

DrChecks shall be utilized for all reviews in compliance with ER 110-1-8159. At the submittal of the design documents the review team shall conduct a thorough review as described above and enter comments into DrChecks. The design team will evaluate the comments at the conclusion of the review period. Upon completion of evaluations, the Lead Engineer will initiate back-checking and comment closeout.

4. Agency Technical Review

a. Requirements

ATR is mandatory for all implementation documents (including supporting data, analyses, environmental compliance documents, etc.). The ATR will be held concurrently with the 95% milestone review. It will consist of reviewing the plans, specifications, and design documentation report (DDR). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct, went through robust DQC, comply with published USACE guidance, and whether the document explains the analyses and results in a reasonably clear manner for the public and decision makers. The PDT should obtain ATR agreement on key data such as hydraulic and geotechnical parameters early in design process. The goal is to have early involvement of the ATR team, especially when key decisions are made. The ATR Lead should be invited to all PDT meetings, in order to understand the design efforts and to know when to engage other ATR members for concurrence on key decisions. Value-added lessons learned from the ATR team should be shared early on to have the best chance of being adopted by the PDT. This is consistent with the requirement that the ATR members shall not be involved in the day-to-day production of the project/product. A site visit will be scheduled for the ATR Team.

b. Documentation of ATR

DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments will 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 been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
- (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

c. Comment Resolution

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 includes 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.

d. Products to Undergo ATR

Documents to undergo the ATR include the project plans, specifications, and DDR. In addition to the standard product information and design decision documentation, the DDR will include appendices for all calculations, the soils report, and documentation of completed DQC.

e. Required ATR Team Expertise and Requirements

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. The ATR team will be chosen based on each individual's qualifications and experience with similar projects. All reviewers will be certified in CERCAP:

<https://maps.crrel.usace.army.mil/apex/f?p=105:53:14975649327116::NO::..> See Attachment 2 for ATR members.

ATR Lead: The ATR Lead is a senior professional outside the home MSC with extensive experience in preparing Civil Works documents and conducting ATRs. The Lead has 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, in this case, Geotechnical Engineering, Construction Engineering, or Civil Engineering.

Geotechnical Engineer - Geotechnical Engineer reviewer shall be a registered professional geotechnical engineer with 10 years of demonstrated experience in the specific field of levee engineering in evaluating, designing, and constructing large levees embankments, flood walls, and river bank stabilization; and with a minimum MS degree or higher in engineering is preferred. Geotechnical reviewer experience shall be in soil compaction and earthwork construction; soil mechanics; seepage and piping; landslide and slope stability evaluations; bearing capacity and settlement; and foundation inspection and assessment. The Geotechnical reviewer shall also have knowledge of best practices regarding levee design and construction procedures and policies.

Civil Engineer - The team member should be a registered professional engineer and have 5 or more years of experience in civil engineering. Experience needs to include the engineering and design of flood risk management project features.

Construction Engineer – Reviewer should be a senior level, professionally registered engineer with extensive experience in the engineering construction field with particular emphasis on levee safety projects. The Construction reviewer should have a minimum of 10 years of experience.

Hydraulic Engineer - The team member shall have experience in the analysis and design of hydraulic structures related to dams including the design of hydraulic structures (e.g., spillways, outlet works, and stilling basins). The hydraulic engineer shall be knowledgeable and experienced with the routing of inflow hydrographs through multipurpose flood control reservoirs utilizing multiple discharge devices, Corps application of risk and uncertainty analyses in flood damage reduction studies, and standard Corps hydrologic and hydraulic computer models used in drawdown studies, dam break inundation studies, hydrologic modeling and analysis for dam safety investigations.

f. Completion and Certification of the ATR

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:

- (1) Identify the document(s) reviewed and the purpose of the review;
- (2) Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- (3) Include the charge to the reviewers;
- (4) Describe the nature of their review and their findings and conclusions;

- (5) Identify and summarize each unresolved issue (if any); and
- (6) Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR lead will prepare a completion of ATR and Certification of ATR. It will certify that the issues raised by the ATR team have been resolved (or elevated to the vertical team). The completion and certification should be completed based on the work reviewed to date for the project. A Sample Completion of ATR and Certification of ATR are included in Attachment 1.

5. Independent External Peer Review (IEPR)/Safety Assurance Review (SAR)

a. Decision on Type II IEPR

A Type II IEPR, also referred to as a Safety Assurance Review (SAR) will be performed during the Implementation Phase on the design and construction activities associated with the following features: plans and specifications, and the Design Documentation Report (DDR). A risk-informed decision was made as to whether IEPR is appropriate based on the factors to consider for conducting a Type II IEPR review that are outlined in EC 1165-2-214, Appendix E, Section 2 (a) thru (c).

A risk informed decision was made that this project poses a significant threat to human life (public safety) since it involves the potential loss of life. For a Type II IEPR the selection of the Type II 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. 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. A site visit will be scheduled for the IEPR Team.

b. Scope of Safety Assurance Reviews

Type II IEPRs are managed outside USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. The Type II IEPR panel will conduct review of the design and construction activities prior to initiation of physical construction and once construction activities are completed. The review shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

c. Products to Undergo Type II IEPR

Documents to undergo the Type II IEPR include the project plans, specifications, and DDR. In addition to the standard product information and design decision documentation, the DDR will include appendices for all calculations, the soils report, and documentation of completed DQC and ATR.

d. Required Type II IEPR Panel Expertise

The following provides an estimate of the Type II IEPR panel members and the types of expertise that should be represented on the review panel. All panel members shall be recognized experts in their field and have specialized experience pertaining to the work being performed in this project. In addition all panel members should have an advanced degree and be professionally registered.

Geotechnical Engineer - Geotechnical Engineer reviewer shall be a registered professional geotechnical engineer with 10 years of demonstrated experience in the specific field of levee engineering in evaluating, designing, and constructing large levees embankments, flood walls, and river bank stabilization; and with a minimum MS degree or higher in engineering is preferred. Geotechnical reviewer experience shall be in soil compaction and earthwork construction; soil mechanics; seepage and piping; landslide and slope stability evaluations; bearing capacity and settlement; and foundation inspection and assessment. The Geotechnical reviewer shall also have knowledge of best practices regarding levee design and construction procedures and policies.

e. Documentation of Type II IEPR

The Type II IEPR will be managed by an AE firm or Government entity which meets the criteria set forth in EC 1165-2-214. DrChecks review software will be used to document the Type II IEPR comments and aid in the preparation of the Review Report but is not required.

Comments should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. Type II IEPR comments should generally include the same four key parts as described for ATR comments in Section 4. An A/E contractor or Government Entity will be responsible for compiling and entering comments into DrChecks.

No later than 60 days following each milestone, the Type II IEPR panel will prepare a Review Report that will accompany the publication of the final report for the project and shall:

- 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; 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.

This review report, including reviewer comments and a recommendation letter will be provided to the RMC as soon as they become available. Written responses to the IEPR Review Report will be prepared to explain the agreement or disagreement with the views expressed in the report, the actions undertaken or to be undertaken in response to the report, and the reasons those actions are believed to satisfy the key concerns stated in the report (if applicable). These comment responses will be provided to the RMC for concurrence. The revised submittal will be provided to the RMC with the USACE response and all other materials related to the review.

The Vicksburg District's responses shall be submitted to MVD for final Division Commander Approval. After the Division Commander's approval, the District will make the report and responses available to the public on the District's website located at the following:
<http://www.mvk.usace.army.mil/Missions/Civil-Works/Peer-Review-Plans/>

6. Policy and Legal Compliance Review

To the extent practicable, reviews should not extend the design schedule but should be embedded in the design process. Reviewers should be involved at key decision points and are encouraged to provide timely, over-the-shoulder comments.

7. Review Schedule and Costs

a. Schedule of Reviews

To the extent practical, reviews should not extend the design schedule but should be embedded in the design process. Reviewers should be involved at key decision points and are encouraged to provide timely over the shoulder comments. Provide an overall review schedule that shows timing and sequence of all reviews.

PROJECT PHASE/SUBMITTAL	REVIEW START DATE	REVIEW END DATE
ATR Coordination Meeting	11/28/17	11/28/17
90% Milestone Review	12/4/17	12/15/17
Agency Technical Review	12/4/17	12/15/17
IEPR Coordination Meeting	1/3/18	1/3/18
95% Milestone Review	1/5/18	1/19/18
BCOES Review	1/5/18	1/19/18
Type II IEPR (SAR)	1/5/18	1/19/18

b. ATR Schedule and Cost

The preliminary review schedule is listed in the provided table in paragraph "a." of this section. The cost for the ATR is approximately \$15,000.

c. IEPR Schedule and Costs

A Type II IEPR will be required for this project. Initial indications are that the estimated cost for the Type II IEPR is in the range of \$20,000 to \$30,000. This estimate will be refined when the Scope of Work for the IEPR Type II contract is completed. The IEPR Type II contractor will be involved with the project through the construction phase and into the OMRRR phase. More specific milestone dates will be added in the future during the construction phase, but it can be assumed to occur near the mid-point of construction and near the end of construction.

8. Public Participation of Review Plan

As required by EC 1165-2-214, the approved RP will be posted on the District public website (<http://www.mvk.usace.army.mil/Missions/Civil-Works/Peer-Review-Plans>). The public will have 30 days to provide comments on the documents; after all comments have been submitted, the comments will be provided to the technical reviewers. This engagement will ensure that the peer review approach is responsive to the wide array of stakeholders and customers, both within and outside the federal government.

9. Review Plan Approval and Updates

The MSC for this is the Mississippi Valley Division. The MSC Commander is responsible for approving this RP. The Commander's approval reflects vertical team input (involving the Vicksburg District, MSC, and RMC) as to the appropriate scope and level of review for the study and endorsement by the RMC. The RP is a living document and may change as the study progresses; the District is responsible for keeping the RP up to date. Commander approval will be documented as a memorandum. Significant changes to the RP (such as changes to the scope and/or level of review) should be re-endorsed by the RMC and re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the RP, along with the Commanders' approval memorandum, will be posted on the District's webpage <http://www.mvk.usace.army.mil/Missions/Civil-Works/Peer-Review-Plans>. The latest RP should also be provided to the RMC and home MSC.

10. Engineering Model Certification and Approval

The use of certified or approved engineering models is required for all activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. The responsible use of well-known and proven USACE-developed and commercial engineering software will continue, and the professional practice of documenting the application of the software and modeling results will be followed. 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). The following engineering models are anticipated to be used:

MODEL	STATUS
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Geo-Slope GeoStudio 2012	Approved
Bentley MicroStation and Inroads Civil Design Software	Approved

11. Review Plan Points of Contact

NAME/TITLE	ORGANIZATION	EMAIL/PHONE
Larry Raborn Project Coordinator	CEMVK-OD-MP	Larry.E.Raborn@usace.army.mil 601-631-7464
[REDACTED] Chief of River Stabilization	CEMVK-EC-DR	[REDACTED] 601-631-5773
[REDACTED] Lead Engineer	CEMVK-EC-DR	[REDACTED] 601-631-7253
[REDACTED] MVD DST	CEMVD-PD-L	[REDACTED] 601-634-5032
[REDACTED] MVD Levee Safety Program Manager	CEMVD-RB-T	[REDACTED] 901-544-0716
[REDACTED] Senior Reviewer	CEIWR-RMC	[REDACTED] 304-399-5217

ATTACHMENT 1: COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the Ouachita River Levee Stabilization. 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

Name

ATR Lead

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager (home district)

Office Symbol

Date

SIGNATURE

Name

Architect Engineer Project Manager¹

Company, location

Date

SIGNATURE

Director

CEIWR-RMC

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.

Chief, Engineering Division (Vicksburg District)

Office Symbol

Date

Levee Safety Officer (Vicksburg District)

Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted



For Official Use Only -To be Removed Prior to Posting on District Web Site

ATTACHMENT 2: TEAM ROSTERS

PDT Members

NAME/TITLE	ORGANIZATION	EMAIL/PHONE
Larry Raborn Project Coordinator	CEMVK-OD-MP	Larry.E.Raborn@usace.army.mil 601-631-7464
[REDACTED] River Stabilization	CEMVK-EC-DR	[REDACTED]
[REDACTED] River Stabilization	CEMVK-EC-DR	[REDACTED]
[REDACTED] Geotechnical	CEMVK-EC-GA	[REDACTED]
[REDACTED] Geotechnical	CEMVK-EC-GA	[REDACTED]
[REDACTED] Cost Engineering	CEMVK-EC-TC	[REDACTED]
[REDACTED] Real Estate	CEMVK-RE-M	[REDACTED]
[REDACTED] HTRW	CEMVK-EC-H	[REDACTED]
[REDACTED] Engineering Support	CEMVK-EC-TC	[REDACTED]



DQC Reviewers

NAME/TITLE	ORGANIZATION	EMAIL/PHONE
██████████ Quality Management – BCOES Section	CEMVK-EC-CQ	████████████████████
TBD Geotechnical Engineer TBD/Office of Counsel		
██████████ Chief, Hydraulics and Hydrology Section	CEMVK-OC CEMVK-EC-HH	████████████████████
██████████ Chief, Cost and Estimating Section	CEMVK-EC-T	████████████████████
██████████ River Stabilization	CEMVK-EC-DR	████████████████████
██████████ QC Manager	CEMVK-EC-D	████████████████████

Agency Technical Review (ATR) Team

DISCIPLINE	NAME	DESCRIPTION OF CREDENTIALS
ATR Lead & Geotechnical Engineering	██████████	Geotechnical Engineer reviewer shall be a registered professional geotechnical engineer with 10 years of demonstrated experience in the specific field of levee engineering in evaluating, designing, and constructing large levees embankments, flood walls, and river bank stabilization; and with a minimum MS degree or higher in engineering is preferred. Geotechnical reviewer experience shall be in soil compaction and earthwork construction; soil mechanics; seepage and piping; landslide and slope stability evaluations; bearing capacity and settlement; and foundation inspection and assessment. The Geotechnical reviewer shall also have knowledge of best practices regarding levee design and construction procedures and policies.
Civil Engineering	██████████	The team member should be a registered professional engineer and have 5 or more years of experience in civil engineering. Experience needs to include the engineering and design of flood risk management project features.



Construction Engineering		Reviewer should be a senior level, professionally registered engineer with extensive experience in the engineering construction field with particular emphasis on levee safety projects. The Construction reviewer should have a minimum of 10 years of experience.
H&H Engineering		The team member shall have experience in the analysis and design of hydraulic structures related to dams including the design of hydraulic structures (e.g., spillways, outlet works, and stilling basins). The hydraulic engineer shall be knowledgeable and experienced with the routing of inflow hydrographs through multipurpose flood control reservoirs utilizing multiple discharge devices, Corps application of risk and uncertainty analyses in flood damage reduction studies, and standard Corps hydrologic and hydraulic computer models used in drawdown studies, dam break inundation studies, hydrologic modeling and analysis for dam safety investigations.



US Army Corps
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Vicksburg District

Type II Independent External Peer Review (IEPR) Panel

DISCIPLINE	NAME	DESCRIPTION OF CREDENTIALS
IEPR Lead	TBD	TBD
Geotechnical Engineering	TBD	TBD

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number



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

REPLY TO
ATTENTION OF

CEIWR-RMC

6 July 2017

MEMORANDUM FOR: Commander, Vicksburg District, ATTN: CEMVK-OD-MP

SUBJECT: Risk Management Center Endorsement – Ouachita River Levee
Stabilization RM167.3-167.1 and RM162.3-RM163.5, Review Plan

1. The Risk Management Center (RMC) has reviewed the Review Plan (RP) for – Ouachita River Levee Stabilization RM167.3-167.1 and RM162.3-RM163.5, dated 29 June 2017, 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 Vicksburg District, reviewed by the RMC, and all RMC review comments have been satisfactorily resolved. For this project a Type II IEPR will be performed.
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 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 and the Independent External Peer Review (as appropriate) efforts defined in the RP. For further information, please contact me at 601-631-5896

Sincerely,

Review Manager
Risk Management Center

CF:
CEIWR-RMC
CEMVD-DQM (Division Quality Manager)

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