



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

REPLY TO
ATTENTION OF:

CEMVD-PD-KM

12 DEC 2012

MEMORANDUM FOR Commander, Vicksburg District

SUBJECT: Approval of Implementation Review Plan for J. Bennett Johnston Waterway,
Mississippi River to Shreveport, La.

1. References:

- a. EC 1165-2-209, Civil Works Review Policy, 31 January 2012.
- b. Memorandum, CEMVK-PP-D, 5 December 2012, subject as above (encl 1).
- c. Memorandum, CEMVD-RB-T, 11 December 2012, subject as above (encl 2).

2. The subject Review Plan (RP) as enclosed is approved, and MVD concurs in the conclusion that an independent external peer review of this project is not necessary. In accordance with reference 1.a., the RP complies with all applicable policy and provides an adequate independent technical review of the plan formulation, engineering and environmental analyses, and other aspects of the plan development. As the RP is a living document, it should be monitored and amended as appropriate. Non-substantive changes to this RP do not require further approval.

3. The District should post the RP to its website and provide a link to MVD for its use.

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

A handwritten signature in black ink, appearing to read "Edward E. Belk, Jr.", written in a cursive style.

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

2 Encls

CF (wo encls):
CEMVK-PP-D, Ms. Porter
CEMVD-PD-N, Ms. Creswell



DEPARTMENT OF THE ARMY

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

REPLY TO
ATTENTION OF:

05 DEC 2012

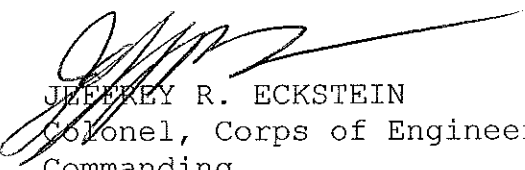
CEMVK-PP-D (1110-2-1150a1)

MEMORANDUM FOR Review Management Office, Mississippi Valley
Division (CEMVD-PD-KM/Triplett)

SUBJECT: Approval of Implementation Review Plan for J. Bennett
Johnston Waterway, Mississippi River to Shreveport, Louisiana

1. Subject Implementation Review Plan is enclosed for your review and approval (encl 1).
2. CEMVK is requesting an exclusion from Type I Independent External Peer Review. The justification for this exclusion is provided in the Review Plan.
3. An explanation of rationale for recommendation to NOT conduct a Type II IEPR (SAR) from CEMVK, Chief of Engineering and Construction, Mr. Henry Dulaney, is enclosed (encl 2).
4. Questions should be directed to Mrs. Holly Porter, Senior Project Manager (ext. 5043).

2 Encls


JEFFREY R. ECKSTEIN
Colonel, Corps of Engineers
Commanding

Encl 1



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

REPLY TO
ATTENTION OF:

CEMVD-RB-T

11 December 2012

MEMORANDUM FOR Commander, Mississippi Valley Division, ATTN:
CEMVD-PD-KM/Mr. Triplett

SUBJECT: Approval of Implementation Review Plan for J. Bennett
Johnston Waterway, Mississippi River to Shreveport, Louisiana

1. Reference memorandum, CEMVK-PP-D, 5 December 2012, subject as above.
2. This office concurs with subject Review Plan.
3. The POC for this action is Mr. Allen Perry, 601-634-5883.

Allen L Perry
for ROBERT H. FITZGERALD, P.E.
Chief, Business Technical
Division

IMPLEMENTATION REVIEW PLAN

J. BENNETT JOHNSTON WATERWAY MISSISSIPPI RIVER TO SHREVEPORT, LOUISIANA

Vicksburg District

MSC Approval Date: 12 December 2012

Last Revision Date: 10 December 2012



**US Army Corps
of Engineers®**

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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 project was authorized by the River and Harbors Act of 13 August 1968 in accordance with House Document 304, 90th Congress, 2nd Session. The authorized project includes four separate and distinct reaches: Mississippi River to Shreveport, Louisiana; Shreveport to Daingerfield, Texas; Shreveport to Index, Arkansas; and Index to Denison Dam, Texas. However, this Review Plan addresses only the Mississippi River to Shreveport, Louisiana, Reach, which is under the jurisdiction of the Vicksburg District and is presently under construction. Hereinafter, this reach will be referred to as the project.

b. Subsequent legislation which modified the original project authorization is presented below with brief explanation of the legislative requirements.

(1) Water Resources Development Act (WRDA) of 1976 (Public Law 94-587) - Provides that local interest contributed 25 percent of the construction costs of retaining dikes, bulkheads, and embankments in lieu of the previously authorized 100 percent for local interests.

(2) Supplemental Appropriations Bill 1984 (Public Law 98-181) - Provided for construction of a replacement bridge for the Louisiana and Arkansas Railway Company near Alexandria, Louisiana. Federal costs of the bridge replacement, including design and construction, shall be limited to \$24,270,000 (plus an allowance for inflation).

(3) WRDA 1986 (Public Law 99-662) – Provided for mitigation of wildlife habitat losses resulting from construction of the project between Alexandria and Shreveport, Louisiana.

(4) WRDA 1986 (Public Law 99-662) – Section 601(a) authorized the acquisition of 14,000 acres in accordance with the 28 December 1984 Chief of Engineers report at a total cost of \$9,420,000 and provided for all, or portions, to be acquired adjacent to the Loggy Bayou Wildlife Management Areas (WMA) in Bossier Parish.

structure in the Mississippi River Levee, then into an excavated channel, the Red River, and into the Atchafalaya River. A lock 75 feet wide with a usable length of 1,200 feet is located at the mouth of Old River and provides for navigation between the Mississippi and the Red-Atchafalaya River via Old River.

c. Project Plan.

(1) The Red River is characterized by a series of sinuous curves, wide variations in depth, shifting beds and banks, and unpredictable shoaling. In the bends of the river, the eroding action of the current attacks the banks, causing caving to endanger levees and the channel to seek new configurations. The river passes through lands comprised of alluvial soils rich in iron oxide, giving the water its rusty color and the river its name.

(2) The authorized project consists of providing for a minimum of 9 feet deep by 200 feet wide navigation channel extending some 283 miles (1967 mileage) from the Mississippi River through Old River and Red River to the vicinity of Shreveport. Five locks with dimensions of 84 feet by 685 feet by 14 feet and adjacent dams will provide the required lift of 141 feet.

(3) The project also provides for realigning the banks of the Red River from the Old River to Shreveport by means of dredging, cutoffs, and training works and for stabilizing its banks by means of revetments, dikes, and other methods.

(4) Facilities to provide recreational opportunities are an integral part of the project. Federally operated and maintained recreational facilities are planned at four of the lock and dam sites and non-Federal recreational facilities are planned throughout the project reach.

(5) The acquisition and management of approximately 26,000 acres to offset project induced losses of wildlife habitat above Alexandria, Louisiana, is authorized. Mitigation requirements associated with the project reach below Alexandria have been satisfied by establishment of the Tensas River National Wildlife Refuge in 1980.

d. Project Status. The project status as of the date of this Review Plan is approximately 90 percent complete. The percent completes shown here and in paragraphs 1 through 5 below represent the project scope to date. A brief description of the current project status, by separable project features, is presented below.

(1) Pool 1. Project features associated with Pool 1 are approximately 97 percent complete. Lock and Dam No. 1 was physically completed in 1984 and has been open to navigation since that time. A large portion of the channel realignment and bank stabilization work has been completed. Remaining work includes bank reinforcements, dikes and revetment, and recreation facilities.

(2) Pool 2. Project features associated with Pool 2 are approximately 95 percent complete. Lock and Dam No. 2 (John H. Overton) was physically completed in 1988 and has been open to navigation since late 1987. Most of the channel realignment and bank stabilization work has been completed. Remaining work includes bank reinforcements, dikes and revetment, and recreation facilities. Minimum 9-foot channel depth is being maintained to Alexandria, Louisiana.

- (1) Locks and Dams**
 - (a)** Lock wall repair and replacement
 - (b)** Lock building repair and replacement
 - (c)** Lock dolphin repair and replacement
- (2) Channel realignment and bank stabilization**
 - (a)** Stone contraction dikes
 - (b)** Revetment extensions
 - (c)** Revetment capouts
 - (d)** Tie-back dikes
 - (e)** Levee construction
 - (f)** Channel dredging
 - (g)** Reinforcements
- (3) Recreational facilities**
 - (a)** Recreation site plans
 - (b)** Boat ramps
- (4) Railroad and highway bridge relocation or modification**
 - (a)** Bridge design
- (5) Central maintenance facilities, floating plant, and equipment**
 - (a)** Building
 - (b)** Floating plant
 - (c)** Mooring facilities

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.

8. Agency Technical Review (ATR).

The ATR is mandatory for all implementation. The ATR will be performed at 65, 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). In deciding whether to undertake ATR for other work products not considered implementation documents, each work product will have a risk analysis conducted including answering the criteria questions as outlined in EC 1165-2-209 documenting the reasoned thought and judgment applied in determining the necessity of the ATR.

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 1165-2-209 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 1165-2-209 will be screened by the Chief, Engineering Division, to assure a risk informed analysis and decision is accomplished in accordance with EC 1165-2-209 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.

(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.

(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 1165-2-209.

(2) Total project cost is not >\$45 million. Total authorized project cost as described in WRDA 2007 is \$33,912,000.

(3) No requests have been made by the State Governors from Arkansas or Louisiana 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 1165-2-209 and document such decisions in the project files, updating this plan appropriately to include any required IEPRs

Should any project develop an implementation document for an engineering work product, the PDT will perform a risk based analysis in accordance with EC 1165-2-209 and document such decisions in the project files, updating this plan appropriately to include any required IEPRs.

10. 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.

13. Review Schedules and Costs.

Because this review plan is written for a multitude of routine construction items, explicitly defining tasks, timing, sequencing and cost, etc., is not applicable. The DQC Reviews will be appropriately planned during Preconstruction and Engineering (PED). When ATRs and/or IEPRs are determined to be required for any new project feature added to these projects, reviews will be appropriately tasked, timed, and sequenced by the project PDTs.

14. 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.

15. 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 reapproved 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.mvk.usace.army.mil/index.php?pID=4>. The latest Review Plan should also be provided to the RMO and home MSC.

16. Review Plan Points of Contact.

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

- a. Senior Project Manager, Holly Porter, Project Management Division, (601) 631-5043

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

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

VERTICAL TEAM ROSTER

<u>NAME</u>	<u>FUNCTION</u>	<u>OFFICE</u>	<u>TELEPHONE</u>
Jamie Triplett	District Support Team	CEMVD	(601) 634-5075
Brian Chewning	RIT	CEMVD	(601) 634-5836
Robert Fitzgerald	RMO	CEMVD	(601) 634-5922
TBD	Cost Engineering	TBD	TBD

J. Bennett Johnston Waterway, Mississippi River to Shreveport, 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 1165-2-209, 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 was justified by life safety?	Mandate	NO The authorized project is primarily for navigation. The project also provides for realigning the banks of the Red River from the Old River to Shreveport, Louisiana, by means of dredging, cutoffs, and training works and for stabilizing its banks by means of revetments, dikes, and other methods. Facilities to provide recreational opportunities are an integral part of the project.
2) Would the project's failure pose a significant threat to human life?	Mandate	NO These projects are routine non complex in nature. Remaining work includes bank reinforcements, dikes, and revetment, and recreation facilities. 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. In fact, various projects routinely experience lack of project design due to fiscal funding restraints.
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 type of construction involved in the project includes routine type work such as bank reinforcements, dikes, and revetment.
4) Does the project design require redundancy, resiliency, or robustness?	Consider	NO The type of construction involved in the project includes routine type work such as bank reinforcements, dikes, and revetment.

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

(Cont.)

Factor		Relevancy to this Project
5) Does the project have unique construction sequencing or a reduced or overlapping design construction schedule?	Consider	NO The type of construction involved in the project includes routine type work such as bank reinforcements, dikes, and revetment.

Background Information about Project:

The authorized project consists of providing for a minimum 9-foot deep by 200-foot wide navigation channel extending some 283 miles (1967 mileage) from the Mississippi River through Old River and Red River to the vicinity of Shreveport. Five locks with dimensions of 84 feet by 685 feet by 14 feet and adjacent dams will provide the required lift of 141 feet. The project also provides for realigning the banks of the Red River from the Old River to Shreveport, Louisiana, by means of dredging, cutoffs, and training works and for stabilizing its banks by means of revetments, dikes, and other methods. Facilities to provide recreational opportunities are an integral part of the project. Federally operated and maintained recreational facilities are planned at four of the lock and dam sites and non-Federal recreational facilities are planned throughout the project reach. The acquisition and management of approximately 26,000 acres to offset project induced losses of wildlife habitat above Alexandria, Louisiana, is authorized. Mitigation requirements associated with the project reach below Alexandria have been satisfied by establishment of the Tensas River National Wildlife Refuge in 1980.

The project status as of the date of this Review Plan is approximately 90 percent complete.


Discussion on analyses and failure modes considered:

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

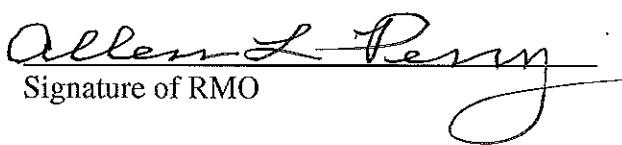
RECOMMENDATION REGARDING TYPE II IEPR (SAR)

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:


HENRY A. DULANEY, P.E. _____ Date 11/30/12
Chief, Engineering and Construction
Division

The above recommendation is Approved Disapproved by


Signature of RMO _____ Date 12/11/12

IMPLEMENTATION REVIEW PLAN

J. BENNETT JOHNSTON WATERWAY MISSISSIPPI RIVER TO SHREVEPORT, LOUISIANA

Vicksburg District

MSC Approval Date: *Pending*

Last Revision Date: *10 December 2012*



**US Army Corps
of Engineers®**

IMPLEMENTATION REVIEW PLAN

*Mississippi River and Tributaries Construction
J. Bennett Johnston Waterway,
Mississippi River to Shreveport, Louisiana*

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Attachment 3: Sample Statement of Technical Review for Decision Documents

Attachment 4: Review Plan Revisions

Attachment 5: Acronyms and Abbreviations

1. Purpose and Requirements

a. Purpose. This Review Plan defines the scope and level of peer review for implementation documents developed for the J. Bennett Johnston Waterway (JBJWW), Mississippi River to Shreveport Construction projects within the Vicksburg District (CEMVK). Quality Management activities consist of District Quality Control (DQC), Agency Technical Review (ATR) and Type II Independent External Peer Review (IEPR). The project is in the Construction Phase. The related documents are Implementation Documents that consist of Plans and Specifications (P&S).

b. References.

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010.
- (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)
- (10) Red River Waterway, Louisiana, Texas, Arkansas and Oklahoma, Project Management Plan (PMP) for Mississippi River to Shreveport, Louisiana, Reach.

c. Requirements. This review plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: 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 1165-2-209) 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 project was authorized by the River and Harbors Act of 13 August 1968 in accordance with House Document 304, 90th Congress, 2nd Session. The authorized project includes four separate and distinct reaches: Mississippi River to Shreveport, Louisiana; Shreveport to Daingerfield, Texas; Shreveport to Index, Arkansas; and Index to Denison Dam, Texas. However, this Review Plan addresses only the Mississippi River to Shreveport, Louisiana, Reach, which is under the jurisdiction of the Vicksburg District and is presently under construction. Hereinafter, this reach will be referred to as the project.

b. Subsequent legislation which modified the original project authorization is presented below with brief explanation of the legislative requirements.

(1) Water Resources Development Act (WRDA) of 1976 (Public Law 94-587) - Provides that local interest contributed 25 percent of the construction costs of retaining dikes, bulkheads, and embankments in lieu of the previously authorized 100 percent for local interests.

(2) Supplemental Appropriations Bill 1984 (Public Law 98-181) - Provided for construction of a replacement bridge for the Louisiana and Arkansas Railway Company near Alexandria, Louisiana. Federal costs of the bridge replacement, including design and construction, shall be limited to \$24,270,000 (plus an allowance for inflation).

(3) WRDA 1986 (Public Law 99-662) – Provided for mitigation of wildlife habitat losses resulting from construction of the project between Alexandria and Shreveport, Louisiana.

(4) WRDA 1986 (Public Law 99-662) – Section 601(a) authorized the acquisition of 14,000 acres in accordance with the 28 December 1984 Chief of Engineers report at a total cost of \$9,420,000 and provided for all, or portions, to be acquired adjacent to the Loggy Bayou Wildlife Management Areas (WMA) in Bossier Parish.

(5) WRDA 1988 (Public Law 100-676) – Modified Section 601(a) of WRDA 1986 to authorize the acquisition of up to 300 acres on a priority basis in the area of Stumpy Lake.

(6) Energy and Water Development Appropriations Act (EWDAA) 1990 (Public Law 101-101) – Appropriated funds and directed acquisition of up to 5,000 acres of land in the vicinity of the Stumpy Lake/Swan Lake/Loggy Bayou WMA.

(7) WRDA 1990 (Public Law 101-640) – Section 102(p) modified Section 601(a) further to authorize the acquisition of an additional 12,000 acres in the vicinity of the Bayou Bodcau WMA.

(8) EWDAA (Public Law 103-126) – Directed the Secretary of the Army to provide annual reimbursement to the project’s local sponsor for the Federal share of management cost for the Bayou Bodcau mitigation area as authorized by Public Law 101-640.

(9) WRDA 1996 (Public Law 104-303) - Section 301(b)(7) authorized the acquisition of mitigation lands adjacent to the Loggy Bayou WMA in Caddo and Red River Parishes, subject to completion of a favorable report finding the work technically sound, environmentally acceptable, and economically feasible, as applicable, and increased the project cost to \$10,500,000.

(10) WRDA 2000 (Public Law 106-541) – Section 316 authorized the acquisition of mitigation lands from willing sellers in any of the parishes that comprise the Red River Waterway District, consisting of Avoyelles, Bossier, Caddo, Grant, Natchitoches, Rapides, and Red River Parishes.

(11) WRDA 2007 (Public Law 110-114) – Section 3080 authorized the Secretary of the Army to carry out the project at a total project cost of \$33,912,000 and authorized the purchase and reforestation of lands that have been cleared or converted to agricultural uses (in addition to the purchase of the originally authorized bottom-land hardwoods).

4. Description of Projects.

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. Downstream from Shreveport, Louisiana, the river follows a southeasterly course for some 270 (1967) river miles (RM) to the junction with the Atchafalaya and Old River. This point is approximately 7 miles west, via Old River, from the confluence of the Old and Mississippi Rivers at Red River Landing, which is the starting point for the 1967 river mileage. Since 1963, flows from the Mississippi River have passed through a control

structure in the Mississippi River Levee, then into an excavated channel, the Red River, and into the Atchafalaya River. A lock 75 feet wide with a usable length of 1,200 feet is located at the mouth of Old River and provides for navigation between the Mississippi and the Red-Atchafalaya River via Old River.

c. Project Plan.

(1) The Red River is characterized by a series of sinuous curves, wide variations in depth, shifting beds and banks, and unpredictable shoaling. In the bends of the river, the eroding action of the current attacks the banks, causing caving to endanger levees and the channel to seek new configurations. The river passes through lands comprised of alluvial soils rich in iron oxide, giving the water its rusty color and the river its name.

(2) The authorized project consists of providing for a minimum of 9 feet deep by 200 feet wide navigation channel extending some 283 miles (1967 mileage) from the Mississippi River through Old River and Red River to the vicinity of Shreveport. Five locks with dimensions of 84 feet by 685 feet by 14 feet and adjacent dams will provide the required lift of 141 feet.

(3) The project also provides for realigning the banks of the Red River from the Old River to Shreveport by means of dredging, cutoffs, and training works and for stabilizing its banks by means of revetments, dikes, and other methods.

(4) Facilities to provide recreational opportunities are an integral part of the project. Federally operated and maintained recreational facilities are planned at four of the lock and dam sites and non-Federal recreational facilities are planned throughout the project reach.

(5) The acquisition and management of approximately 26,000 acres to offset project induced losses of wildlife habitat above Alexandria, Louisiana, is authorized. Mitigation requirements associated with the project reach below Alexandria have been satisfied by establishment of the Tensas River National Wildlife Refuge in 1980.

d. Project Status. The project status as of the date of this Review Plan is approximately 90 percent complete. The percent completes shown here and in paragraphs 1 through 5 below represent the project scope to date. A brief description of the current project status, by separable project features, is presented below.

(1) Pool 1. Project features associated with Pool 1 are approximately 97 percent complete. Lock and Dam No. 1 was physically completed in 1984 and has been open to navigation since that time. A large portion of the channel realignment and bank stabilization work has been completed. Remaining work includes bank reinforcements, dikes and revetment, and recreation facilities.

(2) Pool 2. Project features associated with Pool 2 are approximately 95 percent complete. Lock and Dam No. 2 (John H. Overton) was physically completed in 1988 and has been open to navigation since late 1987. Most of the channel realignment and bank stabilization work has been completed. Remaining work includes bank reinforcements, dikes and revetment, and recreation facilities. Minimum 9-foot channel depth is being maintained to Alexandria, Louisiana.

(3) Pool 3. Pool 3 features are approximately 90 percent complete. Lock and Dam No. 3 was placed into operation in December 1991. Most of the major channel improvement work is complete with the exception of some minor revetment capout work and other minor channel improvement, reinforcement, and development measures. Other remaining work includes completion of recreation facilities.

(4) Pool 4. Pool 4 features are approximately 86 percent complete. Construction of Lock and Dam No. 4 was initiated in 1990, and the Phase I contract, consisting of initial excavation, dewatering system, cofferdam, construction access road, and Resident Engineer's office, was completed in January 1992. The Phase II contract for Lock and Dam No. 4, consisting of the lock and dam components and the approach channels, was awarded in December 1991 and completed in February 1995. Most of the channel improvement work in Pool 4 is completed. Remaining work includes bank reinforcements, dikes and revetment, and recreation facilities.

(5) Pool 5. Pool 5 features are approximately 83 percent complete. Construction of Lock and Dam No. 5 was initiated in 1990, and the Phase I contract, consisting of initial excavation, dewatering system, cofferdam, construction access road, and Resident Engineer's office, was completed in October 1991. The Phase II contract for Lock and Dam No. 5, consisting of the lock and dam components and the approach channels, was awarded in December 1991 and completed in February 1995. Most channel improvement work in Pool 5 has been completed, with the exception of some revetment capouts, bank stabilization and other channel improvement and development measures. Other remaining work is recreational facilities.

(6) Mitigation. Total acquisitions to date for mitigation of the JBJWW project above RM 104 include 24 tracts totaling 8,172 acres. A total of 4,518.44 acres have been acquired under the Loggy Bayou Local Cooperation Agreement (LCA), which includes the 2,138.05 acres in the Loggy Bayou area, the 1,271.39 acres in the Soda Lake area, and the 1,109 acres in the Little River area. A total of 3,654.50 acres have been acquired under the Bayou Bodcau LCA. The mitigation requirement for the project above RM 104 will be satisfied when a total of 14,000 acres of suitable lands have been acquired from the designated areas and developed, as necessary.

5. Remaining Project Works.

a. The scope of this Review Plan is confined to those project features which remain to be accomplished. Since project construction was initiated in the early 1970s and is currently over 90 percent, previously completed design and construction efforts are not included or addressed in the plan. The project can logically be subdivided into six elements consisting of the five separable pools and mitigation requirements.

b. The remaining project works to be covered under this Review Plan are associated with Plans and Specification (P&S) and Design Memorandums from work on the following categories:

- (1) Locks and Dams**
 - (a)** Lock wall repair and replacement
 - (b)** Lock building repair and replacement
 - (c)** Lock dolphin repair and replacement
- (2) Channel realignment and bank stabilization**
 - (a)** Stone contraction dikes
 - (b)** Revetment extensions
 - (c)** Revetment capouts
 - (d)** Tie-back dikes
 - (e)** Levee construction
 - (f)** Channel dredging
 - (g)** Reinforcements
- (3) Recreational facilities**
 - (a)** Recreation site plans
 - (b)** Boat ramps
- (4) Railroad and highway bridge relocation or modification**
 - (a)** Bridge design
- (5) Central maintenance facilities, floating plant, and equipment**
 - (a)** Building
 - (b)** Floating plant
 - (c)** Mooring facilities

(6) Mitigation

(a) Mitigation Plans

(b) Environmental Assessments

6. Factors Affecting the Scope and Level of Review.

Because the vast majority of the engineering documents covered by this Review Plan are routine in nature, most engineering products will undergo DQC reviews only. However, each decision and implementation document included, or to be included, in this plan will be reviewed and screened against the criteria of EC 1165-2-209 to assure the proper levels of review are planned and accomplished based on the following guidance.

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.

b. Due to the nature of work, work items are constantly added and deleted due to factors such as funding availability, changing priorities, etc. This Review Plan may not be all-inclusive of work within the project, but is a current snapshot to date. Additional decision and implementation documents will be added to this plan as work requirements for the projects develop over time.

7. 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.

8. Agency Technical Review (ATR).

The ATR is mandatory for all implementation. The ATR will be performed at 65, 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). In deciding whether to undertake ATR for other work products not considered implementation documents, each work product will have a risk analysis conducted including answering the criteria questions as outlined in EC 1165-2-209 documenting the reasoned thought and judgment applied in determining the necessity of the ATR.

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 1165-2-209 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 1165-2-209 will be screened by the Chief, Engineering Division, to assure a risk informed analysis and decision is accomplished in accordance with EC 1165-2-209 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.

9. Independent External Peer Review (IEPR).

A Type 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 1165-2-209, 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 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 1165-2-209.

(2) Total project cost is not >\$45 million. Total authorized project cost as described in WRDA 2007 is \$33,912,000.

(3) No requests have been made by the State Governors from Arkansas or Louisiana 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 1165-2-209 and document such decisions in the project files, updating this plan appropriately to include any required IEPRs

Should any project develop an implementation document for an engineering work product, the PDT will perform a risk based analysis in accordance with EC 1165-2-209 and document such decisions in the project files, updating this plan appropriately to include any required IEPRs.

10. 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.

11. 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.

12. 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
H&H Models					
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.
Cost Engineering					
MCACES		X		Microcomputer-Aided Cost Estimation System	Used to generate detailed cost estimates for each alternative.

13. Review Schedules and Costs.

Because this review plan is written for a multitude of routine construction items, explicitly defining tasks, timing, sequencing and cost, etc., is not applicable. The DQC Reviews will be appropriately planned during Preconstruction and Engineering (PED). When ATRs and/or IEPRs are determined to be required for any new project feature added to these projects, reviews will be appropriately tasked, timed, and sequenced by the project PDTs.

14. 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.

15. 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

reapproved 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.mvk.usace.army.mil/index.php?pID=4>. The latest Review Plan should also be provided to the RMO and home MSC.

16. Review Plan Points of Contact.

Public questions and/or comments on this review plan can be directed to Senior Project Manager, Holly Porter, Project Management Division, (601) 631-5043.

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

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

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

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

SIGNATURE

Name

Chief, Engineering Division

Office Symbol

Date

SIGNATURE

Name

Chief, Planning Division

Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: TEAM ROSTERS

PDT ROSTER

<u>NAME</u>	<u>FUNCTION</u>	<u>OFFICE</u>	<u>TELEPHONE</u>
Holly Porter	Project Manager	CEMVK-PP-D	(601) 631-5043
Lee Robinson	Economist	CEMVN-PDE-FRR	(601) 631-5435
Matt Mallard	Plan Formulator	CEMVN-PD-PWS	(601)631-5960
Jennifer Ryan	Archeologist	CEMVN-PDN-UDP	(601) 631-5920
Marneshia Richard	Structure Design	CEMVK-EC-DS	(601) 631-7055
Richard Pearce	Cost Engineering	CEMVK-EC-TC	(601) 631-7139
Joelle Handy	Channel Design	CEMVK-EC-DL	(601) 631-5667
Brian Jordan	Geotechnical	CEMVK-EC-GA	(601) 631-5898
Shannon Wells	Hydraulics	CEMVK-EC-HH	(601) 631-7031
Dave Johnson	Water Quality	CEMVK-EC-HW	(601) 631-7221
Richard Miller	Real Estate Planning	CEMVK-RE-EP	(601) 631-5224
Sanford Holliday	Relocations	CEMVK-ED-CE	(601) 631-5674
Greg Williams	Bank Stabilization	CEMVK-EC-DR	(601) 631-5282
Randy McAlpin	Civil	CEMVK-EC-DC	(601) 631-5288

DQC ROSTER

<u>NAME</u>	<u>FUNCTION</u>	<u>OFFICE</u>	<u>TELEPHONE</u>
Daniel Sumerall	Biologist/ Archeologist	CEMVN-PDN-UDP	(601)631-5428
Jonathan Bennett	Structure Design	CEMVK-EC-DS	(601) 631-5599
Danny McPhearson	Cost Engineering	CEMVK-EC-TC	(601) 631-5602
Ben Caldwell	Channel Design	CEMVK-EC-DL	(601) 631-5593
Andy Hardy	Geotechnical	CEMVK-EC-GA	(601) 631-7182
Mike Alexander	Hydraulics	CEMVK-EC-HH	(601) 631-5044
Brian Johnson	Water Quality	CEMVK-EC-HW	(601) 631-7519
Tim Riggs	Real Estate Planning	CEMVK-RE-R	(601) 631-7385
Sanford Holliday	Relocations	CEMVK-ED-CE	(601) 631-5674
Anna Prestwood	River Stabilization	CEMVK-EC-DR	(601)631-5531

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>
Jamie Triplett	District Support Team	CEMVD	(601) 634-5075
Brian Chewning	RIT	CEMVD	(601) 634-5836
Robert Fitzgerald	RMO	CEMVD	(601) 634-5922
TBD	Cost Engineering	TBD	TBD

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 MSC 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
MSC	Major Subordinate Command	YMDJWQD	Yazoo Mississippi Delta Joint Water Control District