US Army Corps
of Engineers ®
Memphis District

Review Plan
for
Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway

P2# 107061

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

12 MARCH, 2012

MEMORANDUM FOR Commander, Memphis District

SUBJECT: Review Plan (RP) for Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway (P2# 107061)

1. Reference EC 1165-2-209, Civil Works Review Policy, 31 January 2010.

2. The RP has been coordinated with the Business Technical Division of the Mississippi Valley Division, which is the lead office to execute this plan. Expedited Independent External Peer Review is requested for this project.

3. I hereby approve this RP (encl). This RP is subject to change as circumstances require, which is consistent with project development under the Project Management Business Process. Subsequent revisions to this RP or its execution will require new written approval from this office.

4. The point of contact for this action is Mr. Robert Fitzgerald, MVD Chief, Regional Business Technical, (601) 634-5922, or e-mail: Robert.H.Fitzgerald@usace.army.mil.

Encl

JOHN W. PEABODY
Major General, USA
Commanding

DEPARTMENT OF THE ARMY
RISK MANAGEMENT CENTER, CORPS OF ENGINEERS
13952 DENVER WEST PARKWAY SUITE 200
GOLDEN, CO 80401

REPLY TO
ATTENTION OF

CEIWR-RMC

02 March 2012

MEMORANDUM FOR: Commander, Mississippi Valley Division, ATTN: CEMVD-CE

SUBJECT: Risk Management Center Endorsement – Birds Point-New Madrid Floodway Review Plan

1. The Risk Management Center (RMC) has reviewed the Review Plan (RP) for the Birds Point-New Madrid Floodway Letter Report, dated March 2012, and concurs that this RP complies with the current peer review policy requirements outlined in EC 1165-2-209 "Civil Works Review Policy", dated 31 January, 2011.

2. This review plan was prepared by the Memphis District, reviewed by Mississippi Valley Division and the RMC, coordinated with the Flood Risk Management Planning Center of Expertise, and all review comments have been satisfactorily resolved.

The RMC concurs that a Type I IEPR is not required for this project. The RMC will be the RMO for the Type II IEPR.

3. The RMC clears this document to be approved by the MSC Commander. Upon approval of the RP, please provide a copy of the approved RP, a copy of the MSC Commander's approval memorandum, and a link to where the RP is posted on the District website to Colin Krumdieck, RMC Senior Review Manager (colin.w.krumdieck@usace.army.mil).

4. Thank you for the opportunity to assist in the preparation of this RP. Please coordinate all aspects of the Agency Technical Review, the Independent External Peer Review (as appropriate), and Model Certification efforts defined in the RP. For further information, please contact Mr. Colin Krumdieck at 303-963-4541.

Sincerely,

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

CF:
CEIWR-RMC-ZA (Mr. Snorteland)
CEMVD-CE (Division Quality Manager)

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, MEMPHIS DISTRICT
167 NORTH MAIN STREET
MEMPHIS, TENNESSEE 38103

REPLY TO
ATTENTION OF

CEMVM-DE

2 Mar 2012

MEMORANDUM FOR Commander, US Army Corps of Engineers, Mississippi Valley Division (CEMVD-RB-T/Mr. Robert Fitzgerald), P.O. Box 80, 1400 Walnut Street, Vicksburg, Mississippi 39181-0080

SUBJECT: Review Plan (RP) for Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway (P2# 107061) (Encl)

1. The RP for the Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway is attached for Mississippi Valley Division's review and approval. The RP was prepared in accordance with EC 1165-2-209.

2. The Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway is an Engineering Analysis and as such follows guidance as in the implementation phase. As required by EC 1165-2-209, request review and approval of the RP.

3. The point of contact for this action is Mr. David P. Berretta, P.E., Chief, Hydraulics and Hydrology Branch, (901) 544-0676, or e-mail: David.P.Berretta@usace.army.mil.

Encl
as

Vernie L. Reichling
COL, EN
Commanding

Review Plan

Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway

1 March 2012

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Review Plan

Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway

1 March 2012

1 INTRODUCTION

1.1 Purpose and Authority

This Review Plan (RP) defines the scope and level of quality management activities for the phased restoration of three artificially crevassed reaches of the Frontline Levee for the Birds Point-New Madrid (BPNM) Floodway. The purpose of this RP is to define the scope and level of review for the implementation documents for this unique Project. This RP is a stand-alone document, and also serves as an appendix for the Project Management Plan. Legal authority for construction and operation of the Birds Point-New Madrid Floodway stems originally from the Flood Control Act of 15 May 1928, which adopted the report of the Chief of Engineers published in House Document No. 90, 70th Congress and authorized the MR&T Project. Modification to the Birds Point-New Madrid Floodway was authorized by the Flood Control Act of 27 October 1965, substantially as recommended by the report of the Chief of Engineers, published in House Document 308 and 319, 88th Congress. The 1965 FCA provided for more protection to the Floodway area by raising the Frontline Levee forming the east boundary of the Birds Point-New Madrid Floodway and modifying operation thereof to include breaching of the levee during floods which reach 58 feet and threaten to exceed 60 feet at Cairo.

The Birds Point-New Madrid Floodway was placed in operation in May, 2011 when the flood crested at 61.72 feet on the Cairo gage. The Floodway operation was assisted by using explosives to create one artificial Inflow Crevasse, approximately 9,000 feet long; a crevasse at Inflow/Outflow No. 2, approximately 4,500 feet long and a crevasse at Inflow/Outflow No. 1, approximately 800 feet long. At that time, the top of the Cairo floodwall was at 65.3 feet. At time of operation, NWS was forecasting a crest stage at Cairo of 63 feet. However, with intense rains continuing to fall in the unregulated areas of the Ohio River Basin, this crest forecast had the potential of being raised. Estimates following the flood indicated that the Floodway operation reduced stages adjacent to and upstream of the Floodway by a minimum of 3.5 feet. Without operation of the Floodway, it is estimated that the stage at Cairo would have overtopped the protection works at Cairo and induced flooding in other areas upstream of the Floodway. Further, if the Floodway had not been operated by artificial crevasses, most of the lands within the Floodway would have still been flooded as a result of Mississippi River flows overtopping the Frontline Levee, additional uncontrolled crevasses occurring and water backing through the opening at the lower end of the levee.

Following the operation of the Birds Point-New Madrid Floodway in May 2011, the Commander, Mississippi Valley Division, issued a memorandum directing the Memphis District to implement make safe and stability operations based on a target elevation (stage) of 51 feet on the Cairo gage to provide a stable base for flood fight operation and subsequent reset operation by 30 November 2011.

The Project is in the implementation phase. Engineering documents for implementation and construction are available.

1.2 Review Requirements

This RP was developed in accordance with EC 1165-2¬209, which establishes the procedures for ensuring the quality and credibility of US Army Corps of Engineers (USACE) decision and implementation documents through independent review. This RP describes the scope of review for the current phase of work. 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.

1.3 Primary Points of Contact

1.3.1 IEPR

MVD Review Management Office	Mr. Robert Fitzgerald	601-634-5922
RMC Review Management Office	Mr. Nate Snorteland	303-963-4573

1.4 References

a.	ER 1105-2-100	*Planning Guidance Notebook,* 20 November 2007
b.	ER 1110-1-12	*Engineering and Design - Quality Management*, 21 July 2006, incorporating Change 1, 30 September 2006
c.	ER 1110-2-1150	*Engineering and Design for Civil Works*, 31 August 1999
e.	EC 1105-2-408	*Peer Review of Decision Documents*, 31 May 2005
f.	EC 1105-2-410	*Review of Decision Documents*, 22 August 2008
g.	EC 1165-2-209	*Civil Works Review Policy* 31 January 2010, with Errata Sheet 1 dated 15 July 2010

h. Army Regulation 15–1, *Committee Management*, 27 November 1992 (Federal Advisory Committee Act Requirements)

i. National Academy of Sciences, *Background Information and Confidential Conflict Of Interest Disclosure, BI/COI FORM 3*, May 2003

2 PROJECT INFORMATION

2.1 Project Description

The Birds Point-New Madrid Floodway is about 33 miles long and 10 miles wide. Its area comprises about 205 square miles of alluvial valley land and is enclosed by Mississippi River project levees, except for a 1,500-foot authorized but not constructed closure at the lower end. This opening provides a drainage outlet and allows flood backwaters to enter. The Mississippi River project levees enclosing the Floodway are the lower portion of the Upper St. Francis Levee (hereinafter called the Floodway

Frontline Levee) which forms the eastern boundary, and the Birds Point-New Madrid Levee (hereinafter called the Floodway Setback Levee) which forms the western boundary. The Frontline Levee consists of three parts: the upper fuseplug section, 11 miles in length; the lower fuseplug section, 5 miles in length; and the section between the two fuseplugs. The fuseplug sections are about 2 feet lower in grade than the remainder of the Frontline Levee except for 12,500 feet in the upper fuseplug for the Inflow Crevasse and 7,500 feet in the lower fuseplug for Inflow/Outflow No. 2. The Setback Levee extends from its junction with the Frontline Levee at Birds Point, Missouri, directly across the Mississippi River from Cairo, Illinois, southwesterly for a distance of about 36 miles and ties in with the St. Johns Bayou Levee near New Madrid, Missouri.

Presently the 1965 Flood Control Act controls the features of the Floodway. The Frontline Levee provides protection to a grade equivalent to 62.5 feet on the Cairo gage, except for the fuseplug sections which provide protection equivalent to 60.5 feet on the Cairo gage. The 1,500-foot opening, which has been authorized for closure, remains open allowing backwater to enter the lower end of the Floodway.

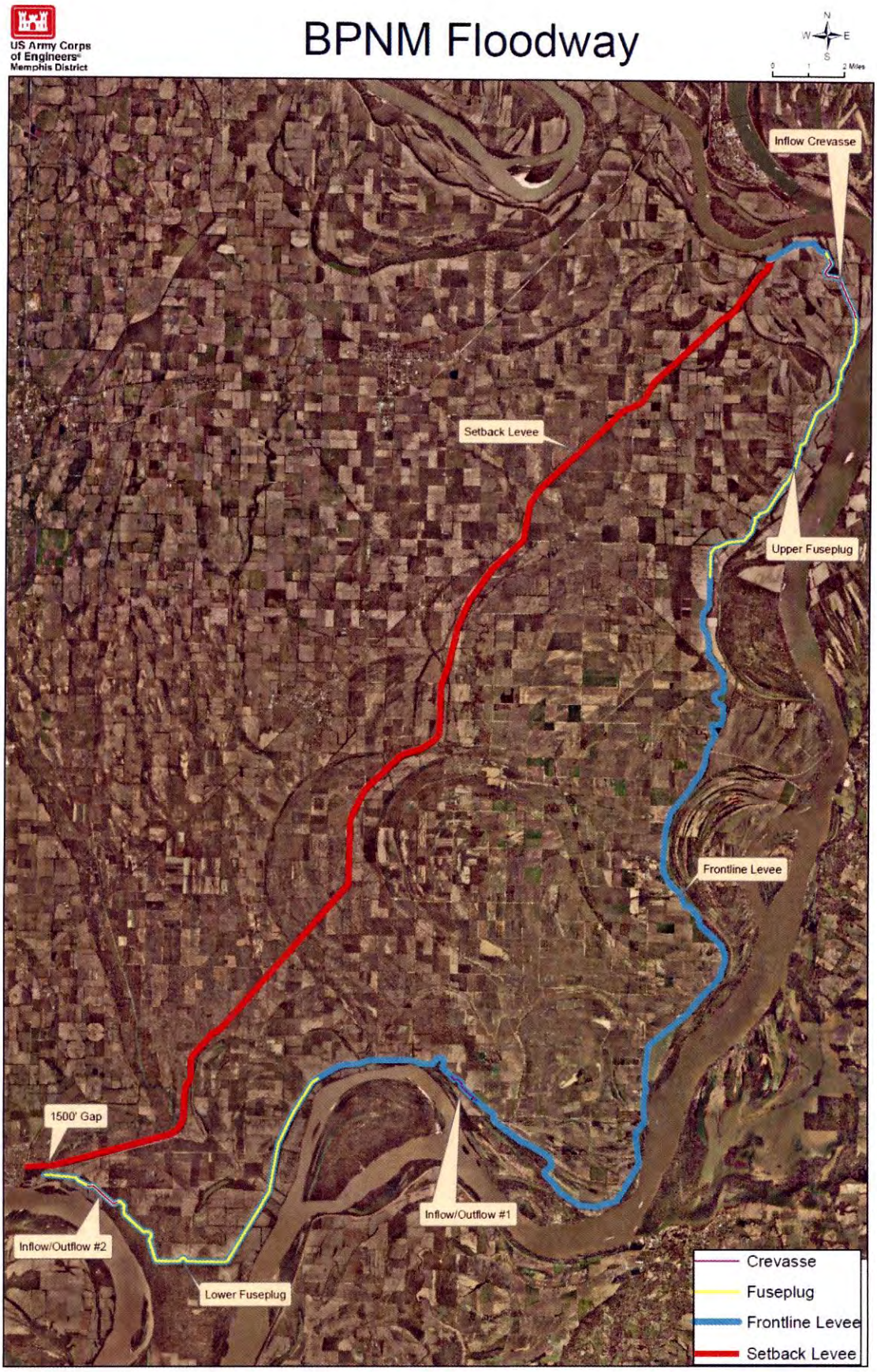
The Floodway was placed in operation in May, 2011 when the flood crested at 61.72 feet on the Cairo gage. The Floodway operation was assisted by using explosives to create one artificial Inflow Crevasse, approximately 9,000 feet long; a crevasse at Inflow/Outflow No. 2, approximately 4,500 feet long and a crevasse at Inflow/Outflow No. 1, approximately 800 feet long. At that time the top of the Cairo floodwall was at 65.3 feet. At time of operation, NWS was forecasting a crest stage at Cairo of 63 feet. However, with intense rains continuing to fall in the unregulated areas of the Ohio River Basin, this crest forecast had the potential of being raised. Estimates following the flood indicated that the Floodway operation reduced stages adjacent to and upstream of the Floodway by a minimum of 3.5 feet. Without operation of the Floodway, it is estimated that the stage at Cairo would have overtopped the protection works at Cairo and induced flooding in other areas upstream of the Floodway. Further, if the Floodway had not been operated by artificial crevasses, most of the lands within the Floodway would have still been flooded as a result of Mississippi River flows overtopping the Frontline Levee, additional uncontrolled crevasses occurring and water backing through the opening at the lower end of the levee.

Following the operation of the Birds Point-New Madrid Floodway in May 2011, the Commander, Mississippi Valley Division, issued a memorandum directing the Memphis District to implement make safe and stability operations based on a target elevation (stage) of 51 feet on the Cairo gage to provide a stable base for flood fight operation and subsequent reset operation by 30 November 2011. Based on previous physical model studies and the design of the operation plan, a stage of 51 feet is required to safely pass 550,000 cfs of the total Mississippi River Project Design Flood (PDF) discharge of 2,360,000 cfs. However, at that stage the level of protection for the Floodway is minimal as compared to the pre-operation level of protection.

At the MVM Commander's request, the levee elevation was evaluated to determine the maximum elevation feasible so as to provide interim protection to the Floodway without placing undue risk on the remaining MR&T system components.

2.2 Project Location

The Birds Point-New Madrid Floodway is a component of the Mississippi River and Tributaries (MR&T) Project and is located on the right descending bank of the Mississippi River in Mississippi and New Madrid Counties, Missouri, just below the confluence of the Ohio and Mississippi Rivers. The Floodway is located in southeastern Missouri, approximately 15 miles east of Sikeston, Missouri and about 145 miles north of Memphis, Tennessee. The drainage area of the Mississippi River Basin at the confluence is about 917,340 square miles.


US Army Corps of Engineers
Memphis District
BPNM Floodway
N
W
E
S
0
1
2 Miles
Inflow Crevasse
Setback Levee
Upper Fuseplug
Frontline Levee
1500' Gap
Inflow/Outflow #1
Inflow/Outflow #2
Lower Fuseplug
Crevasse
Fuseplug
Frontline Levee
Setback Levee

2.3 Project Primary Risk Factors

The Letter Report's primary risk factors include underseepage and high water events on the Mississippi River. The assumptions in the Letter Report took were developed in order to minimize risks to:

- The service life of the interim repair until a permanent levee structure is installed;
- The risk of the Mississippi River highwater events threatening the levee.
- The risk to property in the Floodway.

2.3.1 Underseepage:

The need for underseepage control is determined from a study of the thickness and characteristics of the natural blanket material, the thickness and permeability of the foundation sands, the effective seepage entrance and exit, and the maximum differential head on the earthen levee created by the design water surface. The pressures that develop landward of the levee during sustained high water events may result in the formation of sand boils and potential levee failure.

Although no exact relationship can be devised between flowline elevation and the likelihood of levee failure due to sand boils, experience indicates that flowlines higher than that corresponding to a stage of 55 feet on the Cairo gage cause sand boils of sufficient number and severity to threaten the levee.

2.3.2 High Water Events:

During the 2011 flood, approximately 9,000 feet of the available 11,099 feet of the Birds Point-New Madrid Floodway Inflow Crevasse followed by the Inflow/Outflow Crevasses were activated by explosive assist. As the flood waters flowed into the Floodway, the crevasses eroded to natural ground elevation, leaving the land in the Floodway with minimal protection against another Mississippi River flood. Currently, the crevasse areas are being partially restored by placement of compacted earth fill to a level corresponding to 55 feet on the Cairo gage. While the partially constructed crevasse sections are not to full section and grade, the project integrity will depend on resistance of these sections withstanding stages of 53-55 feet on the Cairo gage (location dependent).

Without flood fighting, the risk of flow through the Inflow Crevasse during a 5 year service life would be approximately 91 percent for a crest elevation corresponding to a Cairo stage of 51 feet and approximately 46 percent for a crest elevation corresponding to a Cairo stage of 55 feet.

2.4 Project Authority

Construction and operation of the Birds Point-New Madrid Floodway was authorized by the Flood Control Act of 15 May 1928, which adopted the report of the Chief of Engineers published in House Document No. 90, 70th Congress and authorized the MR&T Project. Modification to the Birds Point-New Madrid Floodway was authorized by the Flood Control Act of 27 October 1965, substantially as recommended by the report of the Chief of Engineers, published in the House Document 308 and 319, 88th Congress.

3 PRODUCT INFORMATION

The result of the Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway was a recommendation to adopt an interim Crevasse crest corresponding to a stage 55.0 feet on the Cairo gage as the interim level of protection, based on the expectation the crevasse will erode to natural ground after activation. Primary considerations of the Letter Report were the hydraulic performance of the Floodway and uncontrolled underseepage concerns in Cairo, Illinois and Fulton County, Kentucky.

4 SCOPE OF REVIEWS

The expectation is to use information developed by the IEPR team to assess MVDs current position on the risks to the confluence area associated with high water events exceeding 55 feet on the Cairo gage. In particular, the two most critical questions that need to be answered are as follows:

1) Is the risk to system performance in the confluence area for raising the interim level of the BPNM floodway frontline levee above 55 feet on the Cairo gage appropriate?

2) Is the risk associated with the establishment of the interim level of the front line levee of the BPNM Floodway at an elevation corresponding to 55 feet on the Cairo gage appropriate? Is this supported by sound engineering analysis and judgment that appropriately balances risk to system performance in the confluence area?

The Mississippi Valley Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for the Review Plan. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander. The Review Plan, along with the Commanders' approval memorandum, should be posted on the Home District's webpage.

4.1 Independent External Peer Review (IEPR)

IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed Project are such that a critical examination by a qualified team is warranted. MVD will evaluate the panel's position on the risks to the Confluence Area associated with high water events exceeding 55 feet on the Cairo gage. A Type I IEPR is not required for this review.

4.1.1 Type II IEPR (Safety Assurance Review or SAR)

A Type II IEPR is conducted to insure public health, safety, and welfare. The circumstances requiring a Type II IEPR are described in Appendix E of EC 1165-2-209. Each of those circumstances is explicitly considered in developing a risk-informed rationale for determining the appropriate level of review, including the need for a safety assurance review. Typically, Type II IEPR panels would conduct reviews of plans and specifications, design documentation, and construction activities prior to initiation of

physical construction and, until construction activities are completed, periodically thereafter on a regular schedule to include review of the OMRR&R Manual. In this review, the SAR panel will review the Corps' interim plan to re-construct and operate the Bird's Point New Madrid floodway. The review shall consider the adequacy, appropriateness, and acceptability of the technical evaluation in assuring public health, safety, and welfare.

This Project is requested to undergo Type II IEPR.

4.1.2 Products for Review

The Review panel will conduct a review of the "Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway", dated 6 October 2011.

Following the operation of the Birds Point-New Madrid Floodway in May 2011, the Commander, Mississippi Valley Division, issued a memorandum directing the Memphis District to implement make safe and stability operations based on a target elevation (stage) of 51 feet on the Cairo gage to provide a stable base for flood fight operation and subsequent reset operation by 30 November 2011. Based on previous physical model studies and the design of the operation plan, a stage of 51 feet is required to safely pass 550,000 cfs of the total Mississippi River Project Design Flood (PDF) discharge of 2,360,000 cfs. However, at that stage the level of protection for the Floodway is minimal as compared to the pre-operation level of protection. The "Letter Report: Interim Level of Protection for the Birds Point-New Madrid Floodway" evaluates the risk to system performance associated with an interim or higher level of protection and recommends the interim level of protection be raised to an elevation corresponding stage of 55 feet on the Cairo gage.

4.1.3 Required IEPR Team Expertise

The IEPR team will be composed of HH&C and Geotechnical engineering experts. See Paragraph 7.1 for a list of the IEPR team members.

The review shall consider the adequacy, appropriateness, and acceptability of the technical evaluation in assuring public health, safety, and welfare. The Review Management Office for Type II IEPR reviews is the Risk Management Center (RMC). Panel members will be selected using the National Academies of Science (NAS) policy for selecting reviewers. Type II IEPR is not exempted by statute from the Federal Advisory Committee Act (FACA).

Expert reviewers shall have extensive relevant experience in hydraulic and geotechnical aspects of levee design and construction. Ancillary experience in flood fighting, clay levee construction and performance, underseepage analysis, and a thorough knowledge of the USACE Levee Safety Program shall be required. Expert reviewers shall be registered professional engineers in the United States. The expert reviewers must have an engineering degree. A master's degree in engineering is preferable, but not required, as hands-on relevant engineering experience in the listed disciplines is also important. Expert reviewers shall have a minimum of 15 years experience and responsible charge of engineering work in the following disciplines (at a minimum): Hydraulics and Geotechnical Engineering.

The Type II IEPR panel members will be comprised of individuals that have not been involved in the development of the decision document and meet the National Academy of Sciences guidelines for independence. The following types of expertise may be represented on the Type II IEPR team:

4.1.3.1 IEPR Team Leader

The IEPR team leader shall hold a professional license in civil engineering with a preferred MS degree or higher civil engineering. The IEPR leader shall have a minimum of 15 years of design experience and experience with multi-million dollar, flood risk management projects. The team leader shall be a recognized leader with good communication skills to lead a review team comprised of individuals from within the Corps of Engineers.

4.1.3.2 Hydraulics

The reviewer for hydraulics shall be a registered professional engineer with a minimum of a preferred MS degree or higher in civil engineering. The reviewer shall have a minimum of 15 years experience in hydrologic and hydraulic analysis as it relates to riverine flood risk management projects. Reviewer should be knowledgeable of the MR&T Project or similar flood risk management systems. This member should also be knowledgeable in coincidence of frequency and the application of USACE risk and uncertainty analyses on flood risk management projects.

4.1.3.3 Geotechnical

The reviewer for geotechnical features shall be a registered professional engineer with a minimum MS degree or higher in civil or geotechnical engineering. Reviewer shall have a minimum of 15 years experience in subsurface investigations, levee design, underseepage and slope stability evaluations, erosion protection design, and unconsolidated earthwork construction. The reviewer must be familiar with USACE regulations and standards.

4.1.4 IEPR Panel Approval, Charge, and Documentation Requirements

USACE will approve the panel members selected. USACE may only disapprove a selected panel member if the member does not meet the objective criteria established in this SOW.

4.1.4.1 Panel Selection

When selecting panel members, the National Academy of Sciences' policy for committee selection with respect to evaluating the potential for conflicts shall be adopted. Peer reviewers shall not have participated in development of the submittal to be reviewed. Reviewers will be paid labor and any necessary travel and per diem expenses.

Peer reviewers will be advised whether information about them (name, credentials, and affiliation) will be disclosed. The MSC shall notify reviewers in advance regarding the extent of disclosure and attribution planned by USACE. The MSC shall comply with the requirements of the Privacy Act. Review shall be conducted in a manner that respects confidential business information and intellectual property.

4.1.4.2 Charge

The RMO will prepare the charge to the reviewers, containing the instructions regarding the objective of the peer review and the specific advice sought. Reviewers shall be charged with reviewing scientific and technical matters, leaving policy determinations for USACE and the Army. The charge should specify the structure of the review comments to fully communicate the reviewer's intent by including: the comment, why it is important, any potential consequences of failure to address, and suggestions on how to address the comment. It should include specific technical questions while also directing reviewers to offer a broad evaluation of the overall document. The charge should be determined in advance of the selection of the reviewers.

MVM shall provide reviewers with sufficient information, including background information about the project, to enable them to understand the data, analytic procedures, and assumptions. Reviewers shall be informed of applicable access, objectivity, reproducibility and other quality standards under the federal laws governing information access and quality. Information distributed for review must include the following disclaimer: "This information is distributed solely for the purpose of pre-dissemination review under applicable information quality guidelines. It has not been formally disseminated by USACE. It does not represent and should not be construed to represent any agency determination or policy."

The panel of experts established for a review for a project shall:

- Conduct the review for the subject project in a timely manner in accordance with the study and RP schedule;
- Follow the "Charge", but when deemed appropriate by the team lead, request other products relevant to the project and the purpose of the review.
- Receive from USACE any public written and oral comments provided on the project;
- Provide timely written and oral comments throughout the development of the project, as requested;
- Assure the review avoids replicating an ATR and focuses on the questions in the "Charge", but the panel can recommend additional questions for consideration. The IEPR panel may recommend to the RMO additional or alternate questions.
- Offer any lessons learned to improve the review process.
- Submit reports in accordance with the review plan milestones.
- The team panel lead shall be responsible for insuring that comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the non-concurrence and why.
- Record of Review. The review team will prepare a review report. All review panel comments shall be entered as team comments that represent the group and be non-attributable to individuals. The team lead is to seek consensus, but where there is a lack of consensus, note the non-concurrence and why. A suggested report outline is an introduction, the composition of the review team, a summary of the review during design, a summary of the review during construction, any lessons learned in both the process and/or design and construction, and appendices for conflict of disclosure forms, for comments to include any appendices for supporting analyses and assessments of the adequacy and acceptability of the methods, models, and analyses used. All comments in the report will be finalized by the panel prior to their release to USACE for each review plan milestone.

4.1.4.3 *IEPR Review Report*

The IEPR leader shall prepare a Review Report that 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.
- 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.

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). The revised submittal will be provided to the RMO with the USACE response and all other materials related to the review.

The Memphis District's responses shall be submitted to the MSC for final MSC Commander Approval. After the MSC Commander's approval, the District will make the report and responses available to the public on the District's website.

4.2 Policy Compliance and Legal Review

The Memphis District Office of Counsel is responsible for legal review of decision and implementation documents and signs a certification of legal sufficiency.

5 POSTING of REVIEW PLANS and PUBLIC COMMENT

To ensure that the peer review approach is responsive to the wide array of stakeholders and customers, both within and outside the Federal Government, this RP will be published on the district's public internet site following approval by MVD. A link to the RP is available at the District's "Review Plan" hyperlink.

5.1 District Posting of Review Plans on Internet

The Memphis District maintains a web site that hosts electronic versions of review plans for its studies/projects as well as a list of the current and active Review Plans with links to the documents. In posted documents, lists of the names of USACE reviewers may be displayed. The MVD and HQUSACE postings also link to the District's site. The district will establish a mechanism on their web site for allowing the public to comment on the adequacy of the RP, and will consider public comments on RPs. The RP is published on the Memphis District's public internet site following approval by MVD. The Memphis website is located at http://www.mvm.usace.army.mil.

5.2 Division Posting of Review Plans on Internet

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

5.3 Comment Period and Handling of Comments

The public comment period is 15 days.

If and when comments are received, the PDT will consider them and decide if revisions to the Review Plan are necessary. Public comments on the Review Plan may be made by writing or emailing the following contact:

Memphis District, Corps of Engineers
ATTN: EC-H (David P. Berretta)
167 North Main St.
Memphis, TN 38103
Email: david.p.berretta@usace.army.mil

Due to the expedited nature of this Safety Assurance Plan, the Memphis District will consider public comments during IEPR.

6 REVIEW SCHEDULE AND COSTS

The recommended schedule should show the timing and sequence of all reviews. All costs for reviews should be provided.

6.1 Review Plan Schedule

IEPR should be completed expeditiously as noted in the preceding paragraphs.

Review Plan receives District approval	March 1, 2012
Review Plan sent to MSC (MVD)	March 1, 2012
Review Plan sent to RMO (RMC)	March 2, 2012
RMC reviews and endorse Review Plan	March 8, 2012
MVD approves Review Plan	March 9, 2012
Review Plan sent to RIT	March 9, 2012
Director of Civil Works approves IEPR decision	March 23, 2012

6.2 IEPR Schedule and Cost

The IEPR costs are paid from Project funds. The IEPR schedule is established by the RMO in conjunction with the District (PM & PDT).

7 REVIEW TEAMS

7.1.1 Project Delivery Team

NAME [1]	ORGANIZATION	YEARS OF EXPERIENCE	QUALIFICATIONS
Robert Fitzgerald	CEMVD-RBT	n/a	MSC Point of Contact
Thomas Minyard	CEMVM-EC		Chief, Engineering & Construction
David Berretta	CEMVM-EC-H		Chief, Hydraulics & Hydrology
Cory Williams	CEMVM-EC-G		Chief, Geotechnical Engineering
Barry Bruchman	CEMVM-EC-H		Hydraulic Engineer
Dr. Robert Hunt	CEMVM-EC-H		Hydraulic Engineer

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

7.2 Independent External Peer Review

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.

NAME [1]	ORGANIZATION	YEARS OF EXPERIENCE	QUALIFICATIONS
Robert Fitzgerald	CEMVD	n/a	MSC Point of Contact
Nate Snorteland	RMC	n/a	RMO Point of Contact
Xxxxx Xxxxxxxx	?????		
Xxxxx Xxxxxxxx	?????		
Xxxxx Xxxxxxxx	?????		
Xxxxx Xxxxxxxx	?????		

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

CERTIFICATION OF LEGAL REVIEW

This product including has been fully reviewed by the Office of Counsel, Memphis District and is approved as legally sufficient.

David E. Sirmans, District Counsel

3/2/12
Date