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

REPLY TO
ATTENTION OF:

CEMVD-PD-N

31 JAN 2008

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: St. Bernard Parish Urban Flood Control (PRP)

1. References:

a. EC 1105-2-408, Peer Review of Decision documents, 31 May 2005.

b. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.

c. Memorandum, March 2007, subject: Supplemental information for the "Peer Review Process."

2. I hereby approve subject Peer Review Plan and concur in the conclusion that external peer review of this project is not necessary for the following reasons: (1) no influential scientific information will be produced by the study, and (2) the risk was assessed as low. The proposed PRP has been coordinated with the Flood Damage Reduction Center of Expertise and concurred in by the FDR-PCX. The PRP 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. Non-substantive changes to this PRP do not require further approval.

3. The District should post the PRP to its web site and provide a link to the FDR-PCX for posting on their web page, as well as providing a copy of the final approved PRP to the FDR-PCX for their use. Before posting to the web site, the names of Corps/Army employees should be removed in accordance with reference 1.d. above.

4. The MVD point of contact is Ms. [redacted], 601-634-5982

ROBERT CREAR
Brigadier General, USA
Commanding

Encl

CF:
CECW-CP

US Army Corps
of Engineers®
New Orleans District

Peer Review Plan
for
St. Bernard Parish Urban Flood Control

September 2007
Revised February 2008

1) **Project Description**

a) **Decision Document.** The St. Bernard Parish Urban Flood Control feasibility study addresses flooding and interior drainage issues associated with St. Bernard Parish. The feasibility phase of this project is cost shared 50/50 with the project sponsors, St Bernard Parish and the Lake Borgne Levee District. This study will develop alternative plans for addressing flood risk management in St. Bernard Parish, the evaluation and screening of those plans, and for the development of a plan to be recommended for implementation as a Federal project.

b) **General Site Description.** St. Bernard Parish is located on the east bank of the Mississippi River south of and contiguous to the city of New Orleans, LA. The area is protected from Mississippi River and hurricane flooding by a levee loop formed by the Mississippi River west bank levee and the Chalmette Area feature of the Lake Pontchartrain, LA, and Vicinity hurricane protection project. Most of the parish's population lives within a smaller levee loop adjacent to the Mississippi River formed by the Mississippi River levee and a local levee located inside the Chalmette Area loop. Flood control improvements are needed to reduce repetitive damages to structures.

c) **Project Scope.** . The study will focus on providing flood risk management for the St. Bernard area. Possible alternatives will include drainage canal improvements such as concrete lining, concrete U-frames, removal of canal obstructions, enlarging the earthen channels, increasing existing pump station capacities, and detention ponds.

d) **Problems and Opportunities.** Major floods caused by heavy rainfall occurred in St. Bernard during 1978, 1980, 1982, and 1995. The damages resulting from these rainfall events total $30,200,000. The purpose of the study is to investigate the drainage system related problems in St. Bernard Parish. The investigation will concentrate on finding improvement alternatives that will manage the risk associated with flooding damages resulting from rainfall and other related water resources problems.

Supplemental funds in the Department of Defense Appropriations Act of 2006 provided $1,200,000 to advance the completion of the study. The study has been temporarily postponed due to the impacts of Hurricane Katrina. Both local sponsors, the Lake Borgne Levee District and the St. Bernard Parish Government, were financially impacted by Hurricane Katrina. The project is currently on hold until the local sponsor is able to resume cost sharing.

e) **Project Delivery Team.** The project delivery team (PDT) is comprised of those individuals directly involved in the development of the decision document.

Contact information and disciplines are listed below.

Last	First	Discipline	Phone Number	Office Symbol	Org. Code
[redacted]	[redacted]	Project Management	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	Project Management	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	Economics	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	Environmental	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	Project Engineering	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	Real Estate	[redacted]	[redacted]	[redacted]

2) **Quality Control.** This quality plan was developed to insure that high quality products are produced within the New Orleans District. This plan establishes the policies, procedures, and organizational responsibilities for providing quality control of planning products for this project.

The quality control plan (QCP) for the St. Bernard Parish feasibility study provides a technical review mechanism insuring that quality products are developed during the course of the study by the New Orleans District (MVN). The technical review of the feasibility study will consist of an Independent Technical Review. An additional level of policy review for the St Bernard Parish study will be performed at the Headquarters of the United States Army Corps of Engineers (HQUSACE) and will insure that all applicable statutes have been applied with respect to cost sharing, project purpose, and budget criteria. All processes, quality control, quality assurance, and policy review, will complement each other producing a seamless review process that identifies and resolves technical and policy issues during the course of the study.

The review process will insure that a cost-effective solution, that meets the sponsor's requirements, is developed. Technical review will assure accountability for the technical quality of the product. Each technical review objective in the QCP will be satisfied through a seamless review process performed outside MVN (Independent Technical Review), MVD (quality assurance of technical products), and HQUSACE (policy review). The quality control plan is based upon applicable guidance from higher authority including the Engineering Circular 1105-2-408 titled: Peer Review of Decision Documents dated May 31, 2005, Report of the Task Force on Technical Review, dated December 1994, and CELMV-ET memorandum of 23 September 1995, subject: Lower Mississippi Valley Division, Directorate of Engineering and Technical Services, Quality Control and Quality Assurance Guidance.

Peer Review. Based upon cost, technical expertise, and current and projected workload, the on-going technical review process for study will be conducted by the New Orleans District in conjunction with another District with flood risk management experience. The local sponsor will also be involved in the review process by participating in Project

Delivery Team (PDT) meetings. In terms of technical expertise, the New Orleans District has a vast amount of experience and capability in order to produce a quality product for the St. Bernard Urban Flood Control feasibility study given the similarity to numerous other flood reduction projects constructed throughout the New Orleans District. Peer Review will consist of, Independent Technical Review and External Peer Review where applicable. Peer Review Teams (PRT) will be responsible for verifying; 1) assumptions, 2) methods, procedures, and material used in analyses based on the level of analyses, 3) alternative evaluated is reasonable, 4) appropriateness of data used, and level of data obtained, 5) reasonableness of results, and 6) products meet sponsor needs and are consistent with law and existing policy.

a) **Planning, Programs, and Project Management Division Peer Review Members.** Peer Review Members will be from the functional areas within Planning, Programs, and Project Management Division, which includes Project Management, Economics and Social Analysis Branch, and Environmental Planning and Compliance Branch. Each functional area will be represented by one or more reviewers on the PRT from the various disciplines. Thus, a minimum of three members from Planning, Programs, and Project Management Division will reside on the Peer Review Team for the St Bernard Parish feasibility study and will perform the In-House Review

b) **Engineering Division Peer Review Members**. Peer Review Members will be selected from the various design offices. The members may change as the project progresses and specific project features are better defined. The PRT will consist of a Technical Review Manager (TRM) and representatives from the various design offices. The design offices include Civil Branch, Cost Engineering Branch, Design Services Branch, General Engineering Branch, Geotechnical Branch, Hydraulics & Hydrologic Branch, and Structures Branch. One or more reviewers on the TRT will represent each branch from the various disciplines. There will be a minimum of seven Engineering Division members on the PRT for the St. Bernard Parish feasibility study and will perform the In-House Review

c) **Independent Technical Review (ITR).** ITR will consist of a single level study review performed outside the New Orleans District by the Planning Center of Expertise of another District.

   i) *Planning Center of Expertise (PCX)*. The St. Bernard Parish feasibility study primarily falls under the PCX business program "Flood Risk Management." ITR for studies grouped in this program are performed under the supervision of South Pacific Division FRM PCX Manager, (415) 503-6852. The technical point of contact for the FRM PCX can be reached at (916) 557-7440. The ITR will be performed by another Corps district in coordination with the PCX and MVD. These potential reviewers may include nominations from scientific or professional societies, if the Center so chooses.

   ii) *Independent Technical Review Team (ITRT)*. Because the FRM PCX will be responsible for managing the ITR, they will select potential reviewers. These

reviewers will be comprised of the same disciplines as the PDT, and will have experience in the type of analyses in which they are responsible for reviewing. Each ITRT member will be senior or equal in experience to the analyst or production person. The ITR Team leader will also come from the FRM PCX and the ideal candidate will have experience with previous ITR's and have at least 15 years experience in one of the major disciplines. If these criteria cannot be met the team leader will go to the member with the most experience. Consistent with recent Corps guidance, the ITR team member for cost engineering will be obtained through the Walla Walla District. The number of reviewers participating in the ITR should include members with expertise in the following disciplines:

iii)

DISCIPLINE
Economics
Environmental
Cultural Resources
Recreational Resources
Project Management
Hydraulic Engineering
Civil Engineering - cost
Geotechnical Engineering
Civil Engineering
Mechanical Engineering
Civil Engineering - Projects
Civil Engineering - Operations
Real Estate – Acquisition and Leasing
Real Estate - Appraisal
Office of Counsel

iv) *DrChecks.* ITR of this decision document will be conducted using the online DrChecks system (www.projnet.org). Use of DrChecks will document all ITR comments, responses, and associated resolution accomplished throughout the study delivery process.

v) *Planning Models:* The Study will be using HEC-HMS and HEC-RAS models to determine with and without conditions. These, along with any other models being used are not currently certified and will be reviewed by the PCX for certification.

vi) *Milestones and Schedule:* The amount of time it will take to conduct the ITR will depend on the Flood Risk Management PCX workload and schedule. The tentative schedule is as follows:

Milestone	Date
Develop draft PMP	Completed
Develop Final PMP	Completed

FCSA Execution	Completed
Feasibility Initiation	Completed
ITR Initiation	3rd Qtr FY08
AFB	3rd Qtr FY08
Draft Report	4th Qtr FY08
Draft Submittal	1st Qtr FY09
Technical review conference	1st Qtr FY09 if needed
NEPA Public Review	1st Qtr FY09
ITR Certification	1st Qtr FY09
Final Submittal	2nd Qtr FY09
CWRB	2nd Qtr Fy09
MSC Commanders Public Notice	2nd Qtr FY09

d) External Peer Review (EPR). This feasibility study does not meet the EPR criteria of EC 1105-2-408. The cost of this project is not expected to exceed $40 million and therefore its magnitude is determined as low. The study will not contain precedent-setting methods or models, present conclusions that are likely to change prevailing practices, or contain a potential for failure or controversy. . Because of the anticipated cost and low magnitude there is a consensus at the District that EPR will not be necessary. The PCX and MSC with the vertical team shall review and approve this decision.

e) Public Involvement. The public will have several opportunities to comment on the feasibility study through a public involvement plan implemented through a notice of study initiation, public meetings, and workshops. This will give the Corps the opportunity to exchange information with the public and insure that individuals with an inherent interest in the study are identified and contacted allowing them to voice their views and concerns relative to the study process.

Public meetings and workshops will be conducted to gather and provide feedback from the public, formulate a consensus, and generally keep interested parties informed. A public meeting will be scheduled subsequent to the public release of the draft feasibility report and environmental assessment to present the study conclusions. Throughout the study other public meetings and workshops will be held as necessary.

Although all comments will not be provided to the ITR team, significant and relevant public comments will prior to ITR submittal. Any major changes in the study resulting from these comments, and all pertinent comments, will be made available to the PCX.

Technical Review Meetings and Critical Checkpoints. The quality control process recognizes that the appropriate place to perform one-on-one verification and IHR for

Planning, Programs, and Project Management Division, Engineering Division, and Real Estate Division products will vary among the functional areas. However, the verifications will occur before the release of data and/or final products to another office/division, and may include reviewers and PDT members from other functional areas. The one-on-one verifications for technical divisions will occur numerous times throughout the schedule. The one-on-one technical review verifications for divisions are shown as a hammock on the project schedule. Each one-on-one verification meeting will be documented and become part of the quality control records used in the quality assurance process by MVD.

In addition to the one-on-one verification process, there are also points within the study process where it is appropriate for the TRT and PDT to perform the verification process as a team. This feature of the quality control process allows the flexibility to optimize the one-on-one verification process within the functional area while maintaining the team concept during the Technical Review Meetings. Each meeting will be documented and become part of the quality control records used in the quality assurance process by MVD. These points in the study process would typically occur during: alternative screening, plan selection, and report review.

Quality Control Records. Quality control records for Planning, Programs, and Project Management Division and Engineering Division products will be maintained in a technical review package prepared by the PDT leader and included in the St. Bernard Parish feasibility report. The package will consist of review comments, and a certification checklist. The review comments will summarize the major issues/comments from the independent technical review along with the response or resolution to each comment. The Planning, Programs, and Project Management Division technical review checklist will also be included within the report as a means of documenting the independent technical review. The Planning, Programs, and Project Management Division and Engineering Division checklists will assure that the major elements of the quality control plan have been followed. Planning, Programs, and Project Management Division reviewers will sign the checklist, certifying that, for their particular subject area, the document conforms to pertinent regulations, guidance, and sound professional practices. Prior to the submittal of the draft report to HQUSACE the checklist will be completed by the Planning, Programs, and Project Management Division functional chief, reviewed by the Chief of Planning, Programs, and Project Management Division, and signed by the District Commander as part of the required report documentation. Engineering Division's quality control records, comments and resolutions, will accompany the design document. The design checklists will serve as a tool for the PRT and will become part of the district's files.