



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

REPLY TO
ATTENTION OF:

09 NOV 2007

CEMVD-PD-N

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: South West Coastal Louisiana Hurricane Protection
Study Peer Review Plan (PRP)

1. References:

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

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 PRP and concur with the
conclusion that the technical review of this feasibility study
consists of Independent Technical Review performed outside the
New Orleans District by another Corps district in coordination
with MVD and the Planning Center of Expertise (PCX). In
addition, I concur that an external peer review will be
warranted due to the risks and magnitude of the proposed
project. The proposed PRP has been coordinated with the
Coastal Storm Damage Reduction Planning Center of Expertise.
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.

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3. The District should take steps to post the PRP to its web site and to provide a link to the Coastal Storm Damage Reduction PCX for their use. Before posting to the web site, the names of the Corps/Army employees should be removed in accordance with reference 1.c above.

4. The MVD point of contact is Mr. [REDACTED]
[REDACTED], [REDACTED] [REDACTED].



ROBERT CREAR
Brigadier General, USA
Commanding



**US Army Corps
of Engineers®**
New Orleans District

Peer Review

South West Coastal LA

OCT 2007

1. PROJECT DESCRIPTION

A. Decision Document. This document outlines the peer review plan for the Southwest Coastal Louisiana Hurricane Protection Study. EC 1105-2-408 dated 31 May 2005 "Peer Review of Decision Documents" 1) establishes procedures to ensure the quality and credibility of Corps decision documents by adjusting and supplementing the review process and 2) requires that documents have a peer review plan. The Circular applies to all feasibility studies and reports and any other reports that lead to decision documents that require authorization by Congress. This Feasibility Report will lead to Congressional Authorization and is therefore covered by the Circular.

b. The Circular outlines the requirement of the two review approaches (independent technical review (ITR) and external peer review (EPR)) and provides guidance on Corps Planning Centers of Expertise (PCX) involvement in the approaches. This document addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate Center.

(1) ITR. Districts are responsible for reviewing the technical aspects of the decision documents through the ITR approach. ITR is a critical examination by a qualified person or team that was not involved in the day-to-day technical work that supports the decision document. ITR is intended to confirm that such work was done in accordance with clearly established professional principles, practices, codes, and criteria. In addition to technical review, documents should also be reviewed for their compliance with laws and policy. The Circular also requires that DrChecks (<https://www.projnet.org/projnet/>) be used to document all ITR comments, responses, and associated resolution accomplished.

(2) EPR. The Circular added external peer review to the existing Corps review process. This approach does not replace the standard ITR process. The external peer review approach applies in special cases where the magnitude and risk of the project are such that a critical examination by a qualified person outside the Corps is necessary. EPR can also be used where the information is based on novel methods, presents complex interpretation challenges, contains precedent-setting methods or models, or is likely to affect policy decisions that have a significant impact. The degree of independence required for technical review increases as the project magnitude and project risk increase.

(a) Projects with low magnitude and low risk may use a routine ITR.

(b) Projects with either high magnitude/low risk or low magnitude/high risk would require both Corps and outside reviewers on the ITR team to address the portions of the project that cause the project to rate high on the magnitude or risk scale.

(c) Projects with high magnitude and high risk require a routine ITR as well as an EPR.

(3) PCX Coordination. The Circular outlines PCX coordination in conjunction with preparation of the review plan. Districts should prepare the plans in coordination with the appropriate PCX. The Corps PCX are responsible for the accomplishment and quality of ITR and EPR for decision documents covered by the Circular. Centers may conduct the review or manage the review to be conducted by others. Reviews will be assigned to the appropriate Center based on business programs. The Circular outlines alternative procedures to apply to decision documents. Each Center is required to post review plans to its website every three months as well as links to any reports that have been made public. The Office of Water Policy Review (OWPR) will consolidate the lists of all review plans and establish a mechanism for soliciting public feedback on the review plans.

The Corps of Engineers, and ultimately, the U.S. Congress will use the outputs of this feasibility study to approve the construction of any recommended plan. The feasibility report will include a complete presentation of study analyses and results. It will document compliance of the recommended plan with all applicable statutes, executive orders, and policies.

B. General Site Description. The study area is located in Southwestern Louisiana (Calcasieu, Cameron, and Vermillion Parishes) and is located in the 7th Louisiana Congressional District. The largest population centers within the study area are Lake Charles and Abbeville in Calcasieu and Vermilion Parishes, respectively. Located in southern Cameron Parish, the City of Cameron was devastated from the storm surge produced during Hurricane Rita in September 2005.

Due to its low, flat terrain and proximity to the Gulf of Mexico, Southwestern Louisiana is highly susceptible to flooding from the tidal surges associated with hurricanes and tropical storms. The apparent subsidence that is taking place along the coast of Louisiana is expected to increase the potential for coastal flooding in the future as the level of the ground sinks relative to the water levels of the Gulf. The Southwest Coastal Louisiana Hurricane Protection Study will present the results of a feasibility study undertaken to protect these vulnerable areas from future storm impact.

C. Project Scope. The Southwest Coastal Louisiana Hurricane Protection Study will look at flood control in this area by further evaluating structural alternatives known as S-1, S-6, and S-7. Alternative S-1 provides for the construction of a 12-foot armored levee aligned along the south bank of the Gulf Intracoastal Waterway (GIWW) for approximately 120 miles. The 12-foot levee is estimated to provide approximately 25- to 50-year storm event level of protection. Alternatives S-6 and S-7 are aligned along sections of the north bank of the GIWW and only provide protection to the areas of Lake

Chares and Abbeville, respectively. Both are also 12-foot levees that provide 25 to 50 year protection, but do not include the cost of armoring.

Also, additional levee and non-levee structural and non-structural alternatives developed with project stakeholders and Project Development Team members shall be evaluated further in the feasibility phase along with the levee plans. Given that levees and restored wetlands cannot eliminate all damage from flooding and storms, non-structural solutions provide opportunities to further reduce residual damages. This work will be conducted in coordination and collaboration with the State of Louisiana's CPRA and the Army Corps of Engineers LA CPR efforts. Additional levee alternatives include:

- Alternative S-2: Same armored levee alignment as Alternative 1, but designed for no overtopping at 100-yr level protection elevation; control structures constructed across waterways
- Alternative S-3: Alignment along Highway 82, cheniers combined with other lines of defense, i.e., levees and breakwaters
- Alternative S-4: Alignment along 10-foot contour alignment north of GIWW

The coastal restoration plans include:

- Alternative CR-1: Restoration of cheniers
- Alternative CR-2: Barrier island creation
- Alternative CR-3: Large-scale marsh creation
- Alternative CR-4: Use of marsh/wetlands between levees to gain secondary benefit

Non-structural alternatives plans to be considered are:

- Alternative NS-1: Ring Levees
- Alternative NS-2: Structure raising
- Alternative NS-3: Property buyouts
- Alternative NS-4: Relocation of residents and communities
- Alternative NS-5 Flood-proofing and hardening of intra-structure

D. Problems and Opportunities. The current scope of work defines the tasks required to complete The Southwest Coastal Louisiana Hurricane Protection Study as currently understood. The required tasks use Federal criteria to evaluate the plan developed in the reconnaissance phase into the tentatively selected plan for development. The required tasks and related costs are subject to modification during the course of the study if plans are changed. Amendments to the scope of work will be developed through consultations between the Federal and non-Federal cost-sharing partners. Amendments to the scope of work must be agreed upon by all cost-sharing partners prior to initiating any new task. If changes in the scope of work are required, the total study cost will be adjusted to reflect such changes. The cost sharing for any changes shall be 50/50 between The Federal and Non-Federal sponsor.

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.

First	Last	Discipline	Phone Number	Office Symbol	Org. Code
		Project Management			
		Environmental			
		Environmental			
		Environmental			
		Economics			
		Project Engineering			
		Engineering Control			
		H&H			
		Civil Engineering			
		Structures			
		Operations			
		Real Estate			

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 Southwest Coastal Louisiana Hurricane Protection 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 Independent Technical Review by a Corps' district outside MVN and External Peer Review. An additional level of policy review for the 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 and External Peer 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.

3. PEER REVIEW

Based upon cost, technical expertise, and current and projected workload, the on-going technical review process for the Southwest Coastal Louisiana feasibility study will be conducted by the New Orleans District in conjunction with another District with coastal storm damage reduction 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 Southwest Coastal Louisiana feasibility study given the similarity to numerous other storm damage related projects constructed throughout the New Orleans District. Peer Review will consist of Internal Technical Review and External Peer Review. 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. Independent Technical Review. ITR will consist of a single level study review performed outside the New Orleans District by another Corps district in coordination with MVD and the Planning Center of Expertise..

i. Planning Center of Expertise (PCX). A Corps of Engineers PCX, other than the New Orleans District, will be responsible for verifying that the MVN's products meet the needs and expectations of the sponsor and that competent technical resources are utilized throughout the design and review process. Six PCX's exist throughout the Corps, each with their own primary business program. Review is assigned to the appropriate Corps PCX based on these business programs.

The Southwest Coastal Louisiana feasibility study primarily falls under the PCX business program "Coastal Storm Damage Reduction"(PCX-CSDR). ITR for studies grouped in this program are performed by PCX-CSDR located at The North Atlantic Division under the supervision of Joe Vietri (718-765-7070). The Center may conduct the ITR utilizing Corps specialists from across the country or manage the review conducted by experts external to the Corps.. If the PCX decides to manage the review from an outside source, these potential reviewers may include nominations from scientific or professional societies, if the Center so chooses.

ii. Independent Technical Review Team (ITRT). The ITRT will be comprised of the same disciplines on 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 Walla Walla District Directorate of Expertise for Civil Works Cost Engineering

(WW DX) will also participate in the ITR. There should be a minimum of 15 reviewers participating in the ITR including members with expertise in the following disciplines:

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

iii. 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.

iv. Planning Models: The study will be using certified HMS, MIKE 11 and MIKE 21 models, therefore ITR certification will not be needed.

B. External Peer Review (EPR). EPR will be added to the Southwest Coastal Louisiana Hurricane Protection feasibility study because the risks and magnitude of the proposed project are such that a critical examination by a qualified person or team outside of the Corps and not involved in the day-to-day production of the technical product is necessary. Costs of the project are expected to surpass \$40 million dollars which also facilitates the use of EPR. EPR will be performed outside the New Orleans District and managed by PCX-CSDR. It will be the decision of the PCX whether to use a panel, individual letter, or alternative procedure to complete this peer review, based upon an analysis of the level of EPR required for this study and vertical team discussions, as necessary.

i. Planning Center of Expertise (PCX). The Southwest Coastal Louisiana feasibility study primarily falls under the PCX business program “Coastal Storm Damage Reduction,” but is also considered relevant to the “Flood Risk Management” and “Ecosystem Restoration” programs. Because the study has multiple purposes, the Planning Advisory Board, comprised of the Leaders of the

Planning Community of Practice at the Headquarters and Division offices, will assign a PCX to manage the review. This PCX will coordinate with other PCX and offices to ensure that a review team with appropriate expertise is assembled.

ii. External Peer Review Team (EPRT). As with the ITRT, the EPRT will be comprised of the same disciplines on the PDT, and will have experience in the type of analyses in which they are responsible for reviewing. Each EPRT member will be senior or equal in experience to the analyst or production person. There should be a minimum of 15 reviewers participating in the EPR including members with expertise in the same disciplines as ITR.

iii. DrChecks. The use of DrChecks for EPR will remain optional, at the discretion of the respective review team.

C. ITR and EPR Milestones and Schedule: The amount of time it will take to conduct the ITR and EPR will depend on the PCX-CSDR current workload and schedule. The tentative study schedule is as follows:

Milestone	Date
Develop draft PMP	Sep 2007
Develop Final PMP	Oct 2007
FCSA Execution	Mar 2008
Feasibility Initiation	April 2008
ITR Initiation	Jan 2009
EPR Initiation	Jan 2009
AFB	Jan 2010
Draft Report	Apr 2010
Draft Submittal	June 2010
Technical review conference	If needed July 2010
NEPA Public Review	Sep 2010
ITR Certification	Oct 2010
EPR Certification	Oct 2010
Final Submittal	Nov 2010
CWRB	March 2011
MSC Commanders Public Notice	June 2011

D. Public Involvement. The public will have several opportunities to comment on the feasibility study and through a public involvement plan which will be developed and 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.

A mailing list developed during the reconnaissance phase will serve as a notice of study initiation. Next, various public meetings and workshops will be conducted to gather and provide feedback from the public, formulate a consensus, and generally keep interested parties informed. One public meeting will be scheduled subsequent to the public release of the draft feasibility report and Environmental Impact Statement 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 be provided prior to ITR certification. Any major changes in the study resulting from these comments will be made available to the PCX.

3. Technical Review Meetings and Critical Checkpoints.

The quality control process recognizes that the appropriate place to perform one-on-one verification for Planning, Programs, Project Management Division and Engineering Division, Economics Branch, Environmental Branch, 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 both divisions will occur numerous times throughout the current 36-month schedule. The one-on-one technical review verifications for both divisions are shown as a hammock on the Open Plan diagram. 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: scoping and plan formulation, defining of existing conditions, alternative screening, plan selection, report review, and the preparation of the project management plan.

4. 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 Southwest Coastal Louisiana 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. PCX-CSDR will provide a quality control report documenting the ITR and EPR performed for this study.