DEPARTMENT OF THE ARMY
US ARMY ENGINEER DIVISION, SOUTHWESTERN
1100 COMMERCE STREET, SUITE 831
DALLAS TX 75242-1317

REPLY TO
ATTENTION OF

CESWD-PDS-P (1105)

DCW 29JAN2010

26 JAN 2010

~~DRAFT~~ to Bill

MEMORANDUM FOR Commander, Galveston District

SUBJECT: Review Plan for Brazos Island Harbor Channel Improvement Feasibility Study

1. References:

a. EC 1105-2-410, 22 August 2008, Review of Decision Documents.

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

c. Addendum to Reference 1.b., CECW-CP, September 2008, subject: Supplemental Information for the Peer Review Process.

2. The review plan for the subject study, enclosed, has been reviewed and cleared for approval by the Deep Draft Navigation Planning Center of Expertise. It has been prepared in accordance with the referenced guidance, and public comments received will be incorporated into the plan as the study progresses. Independent External Peer Review is required for this study.

3. I hereby approve this review plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent substantial revisions to this plan or its execution will require new written approval from this office.

4. If you have questions or need further information, please contact Jo Ann M. Duman, CESWD-PDS-P, at (469) 487-7065.

FOR

Encl

ANTHONY C. FUNKHOUSER
Colonel, EN
Commanding

CF:
CESWG-PE-PL (Laird)

PROJECT REVIEW PLAN

BRAZOS ISLAND HARBOR, TEXAS
CHANNEL IMPROVEMENT PROJECT
FEASIBILITY STUDY

U.S. Army Corps of Engineers
Galveston District

June 2009

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BRAZOS ISLAND HARBOR, TEXAS
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1. PURPOSE

Pursuant to Engineering Circular (EC) 1105-2-410, "Review of Decision Documents, EC 1105-2-408, "Peer Review of Decision Documents," Office of Management and Budget's "Final Information Quality Bulletin for Peer Review," and the 30 May 2007 memorandum from Major General Don Riley, USACE Director of Civil Works, a Project Review Plan (PRP) has been updated from the originally approved PRP dated April 2007.

This PRP presents the process for District Quality Control (DQC), Agency Technical Review (ATR) and Independent External Peer Review (IEPR) that will be implemented as part of the Brazos Island Harbor (BIH) feasibility study. These processes are essential to improving the quality of the products that we produce. The Project Management Plan (PMP) for the BIH Channel Improvement Project Feasibility Study will be amended to include this PRP since the PRP is considered a component of the PMP.

2. APPLICABILITY

The document provides the PRP for the BIH Channel Improvement Feasibility Study. It identifies the ATR and IEPR process for all work conducted as part of the study, including in-house, non-Federal sponsor, and contract work efforts.

3. REFERENCES

EC 1105-2-410 "Review of Decisions Documents" dated 22 August 2008
EC 1105-2-408 "Peer Review of Decision Documents" dated 31 May 2005
EC 1105-2-407 "Planning Models Improvement Program: Model Certification" dated 31 May 2005
ER 1105-2-100 "Planning Guidance Notebook," dated April 2000
Major General Riley Memorandum on Peer Review Process, dated 30 May 2007

4. GENERAL

A. Project Description

The Port of Brownsville is located on the south Texas coast near the US-Mexican border. The study area encompasses the entire Brazos Island Harbor and surrounding region. The entrance channel is located offshore of Cameron County, Texas, in the Gulf of Mexico and ends at the Port of Brownsville Main Harbor in the City of Brownsville. The most recent

deepening was authorized by the Water Resources Development Act of 1986. The existing channel is 42-feet deep.

The BIH study will result in a decision document that is a Feasibility Report and Environmental Impact Statement (EIS) requiring Congressional authorization. The proposed study will address the feasibility of making channel improvements to the existing BIH project. The feasibility study will also investigate potential restoration opportunities of over 6,500 acres of tidal marsh habitats, as well as brush habitat with the Bahia Grande in collaboration with Federal and state agencies. Marsh restoration associated would provide feeding, breeding, and wintering habitat for colonial and migratory water birds and provide connective habitat to the Atascosa National Wildlife Refuge. This feasibility study will include an Environmental Impact Statement (EIS).

The Port of Brownsville is the only deep draft port available to the industry along the U.S. – Mexico border. Brownsville is primarily a bulk commodity port covering both liquid and dry cargo handling. Current vessel sizes associated with the increased use of container vessels has resulted in inefficient utilization of the Port of Brownsville. The increased traffic is a direct result of NAFTA (North American Free Trade Agreement) in that a majority of the increased commodity traffic is to meet industrial needs in Mexico.

In 2002, Brownsville was the nation's second largest in-transit harbor by volume. Total tonnage on the Brazos Island Harbor increased from 1,829,000 tons in 1992 to 4,741,000 tons in 2002; a difference of 2,912,000 tons. In addition to traditional vessel traffic, there is a need for increased channel dimensions in order to serve offshore rigs presently operating in the U.S. Gulf Coast. The operational draft of the newer rigs ranges from 45 to 63 feet.

B. Project Delivery Team

The Project Delivery Team (PDT) is comprised of those individuals directly involved in the development of the decision document. The individual contact information and disciplines of the District PDT are included in Appendix A of this document. It is planned that the non-Federal sponsor will contribute in-kind services for project management; public involvement, coordination and outreach; environmental studies; hydraulics and hydrology studies; data collection; geotechnical studies; engineering; and participate in reviews. Specifically, the non-Federal sponsor has prepared a general sediment evaluation and is overseeing a channel boring contract as part of their work-in-kind efforts. All work-in-kind products will undergo review by the PDT for adequacy and undergo DQC. All products will undergo ATR and IEPR.

C. Model Certification

EC 1105-2-407, Planning Models Improvement Program: Model Certification establishes the process and requirements for certification of planning models. This circular is specifically directed to software used in Corps' planning studies, to ensure that only high quality software is being used for key planning decisions. Planning models are defined as any models and

analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision-making. It includes all models used for planning, regardless of their scope or source. This Circular does not cover engineering models used in planning studies, which will be certified under a separate process to be established in the future.

The computational models to be used in the BIH, Texas Feasibility Study have been developed by or for the USACE. Model certification and approval for all identified planning models will be coordinated through the PCX as needed. Additionally, spreadsheet models developed for economic and environmental use may need approval for use. Project schedules and resources will be adjusted to address this process for certification and PCX coordination. The planning models used are:

1) Hydrodynamic and Salinity Modeling – A three dimensional model which provides input to ship simulation, estimate storm surge, and predict potential changes with a deeper and/or wider channel. Helps to predict potential salinity changes to the Laguna Madre hyper-saline bay system.
2) Ship Simulation – This model will simulate ship movement through various alternative scenarios. A two dimensional hydrodynamic model will be applied to the vicinity of the ship channel to generate currents for the ship simulator. The results will be used for determining a final design channel plan which will be applied to the salinity models.
3) Vessel Effects – A two dimensional model to determine maximum vessel drawdown and return velocity at the shoreline for traffic in both the existing channel and in the proposed channel.
4) Gulf Shoreline Erosion – A model to assess the effect of channel modifications on local coastal wave conditions in the vicinity of the channel and at adjacent shores.
5) HarborSym Economics Model – A planning-level simulation model designed to assist in economic analyses of coastal harbors, calculating vessel interactions within the harbor, and capturing delays. The model output can be used to calculate the cost of these delays and any changes in overall transportation costs resulting from proposed modifications to the channel's physical dimensions or restrictions.
6) Habitat Evaluation Procedures (HEP) analysis - Modeling to look at the increase in habitat value for Bahia Grande. Used to analyze channel dredging impacts on seagrasses or other sensitive vegetation along the channel shoreline.

The following are considered engineering models and undergo a different review and approval process for usage. Their certification is not addressed in this Review Plan. These models include:

1. Mii - cost estimating models
2. Crystal Ball Risk Based Analysis

5. REVIEW REQUIREMENTS

A. District Quality Control (DQC)

DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the BIH Channel Improvement Feasibility Study PMP. It is managed by the Galveston District and may be conducted by staff in the home district as long as they are not doing the work involved in the study, including contracted work that is being reviewed. Basic quality control tools include a Quality Management Plan (QMP) providing for seamless review, quality checks and reviews, supervisory reviews, PDT reviews, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and the recommendations before approval by the District Commander. For the BIH Feasibility Study, non-PDT members and/or supervisory staff will conduct this review for major draft and final products, including products provided by the non-Federal sponsors as in-kind services following review of those products by the PDT. It is expected that the Major Subordinate Command (MSC)/District QMP addresses the conduct and documentation of this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for this study and addresses DQC, which is required for this study. DQC is not addressed further in the Review Plan.

B. Agency Technical Review (ATR)

ATR (which replaces the level of review formerly known as Independent Technical Review [ITR]) is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-today production of a project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.), and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC. EC 1105-2-408 requires that DrChecks (https://www.projnet.org/projnet/) be used to document all ATR comments, responses, and associated resolution accomplished. This PRP outlines the planned approach for meeting this requirement for the BIH Feasibility Study. ATR is required for this study.

C. Independent External Peer Review (IEPR)

This 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 of USACE is warranted. IEPR is generally for feasibility and reevaluation studies and modification reports with EISs. IEPR is managed by an outside eligible organization (OEO) that is described in Internal Revenue Code Section 501(c) (3), is exempt from Federal tax under section 501(a), of the Internal Revenue Code of 1986; is

independent; is free from conflicts of interest; does not carry out or advocate for or against Federal water resources projects; and has experience in establishing and administering IEPR panels. The scope of review will address all the underlying planning, engineering, including safety assurance, economics, and environmental analyses performed, not just one aspect of the project. This PRP outlines the planned approach for meeting this requirement for the BIH Feasibility Study. IEPR is required for this study.

D. Policy and Legal Compliance Review

In addition to the technical reviews described above, decision documents will be reviewed throughout the study process for their compliance with law and policy. These reviews culminate in Washington-level 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 Chief of Engineers. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100. The technical review efforts addressed in this Circular are to augment and complement the policy review processes by addressing compliance with published Army policies pertinent to planning products, particularly policies on analytical methods and the presentation of findings in decision documents. DQC and ATR efforts are to include the necessary expertise to address compliance with published planning policy. Counsel will generally not participate on ATR teams, but may at the discretion of the district or as directed by higher authority. When policy and/or legal concerns arise during DQC or ATR efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek issue resolution support from the MSC and HQUSACE in accordance with the procedures outlined in Appendix H, ER 1105-2-100. IEPR teams are not expected to be knowledgeable of Army and administration policies, nor are they expected to address such concerns. An IEPR team should be given the flexibility to bring important issues to the attention of decision makers. Legal reviews will be conducted concurrent with ATR of the preliminary, draft, and final feasibility report and environmental impact statement.

E. Safety Assurance Review

WRDA 2007, Section 2035, Safety Assurance Review, requires all projects addressing flooding or storm damage reduction to undergo a safety assurance review during design and construction activities. This safety assurance review will address the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring public health, safety, and welfare. However, since this project is a channel improvement project and does not address flooding or storm damage reduction, the safety assurance review requirement is not applicable.

F. Planning Center of Expertise (PCX) Coordination

This project is primarily a deep-draft navigation project with potential environmental restoration opportunities. Pursuant to EC 1105-2-408, the District will coordinate with the Deep Draft Navigation Planning Center of Expertise (PCX) in Mobile District as the lead

PCX to organize teams to perform the reviews at various stages throughout the study. This PCX is responsible for the accomplishment and quality of ATR and IEPR for this study. The PCX for Deep Draft Navigation will coordinate with the PCX for Ecosystem Restoration as appropriate. The PCX will also coordinate with Cost Engineering Directory of Expertise at Walla Walla for ATR of the Mii estimate, construction schedules, and contingencies.

6. REVIEW PROCESS

A. Agency Technical Review (ATR)

1) General

The ATR process will be conducted throughout the study process. ATR involvement is anticipated between major project milestones (FSM, IEPR, and AFB). Once the ATR team has been identified, copies of PDT meeting notes will be provided to ATR team for information. ATR participation in PDT meetings on a quarterly basis (at a minimum) will be recommended.

As part of the QCP for the BIH Project, an ATR team will be formed to perform periodic reviews of the feasibility study efforts, including the project assumptions, analyses, and calculations, as needed throughout the planning study process.

The ATR team will meet with PDT members on a quarterly basis or as needed. These quarterly meetings will be documented as required by ER 1165-2-203. Coordination throughout the study will be accomplished through individual contact between the PDT and the ATR team. The ATR will focus on the following:

- Review of the planning study process,
- Review of the methods of analysis and design of the alternatives and recommended plan,
- Review of all spreadsheet models used for economic and environmental purposes,
- Compliance with program and NEPA requirements, and
- Completeness of study and support documentation

More detailed ATR information is found in the Plan Formulation and Evaluation Section of the PMP.

2) ATR Team

The ATR is best conducted by experienced peers within the same discipline who are not directly involved with the development of the study or project being reviewed. Management of ATR reviews is conducted by professionals outside of the home district. For planning feasibility-level studies the ATR is managed by the appropriate Planning Center of Expertise (PCX) with appropriate consultation with the allied Communities of Practice such as engineering and real estate. The Deep Draft Navigation PCX is responsible for identifying the ATR team members. The Galveston District could suggestions on possible reviewers.

The ATR team members will reside outside the Galveston District with the ATR team leader from outside the Southwestern Division. The ATR team has been identified and the names and disciplines of the ATR team are included in Appendix A of this document.

It is anticipated that the review team will consist of nine reviewers, one or more from each of the following disciplines: engineering design, hydraulics and hydrology, economics, environmental, real estate, plan formulation, operations and cost engineering. A brief description of the disciplines required for the ATR team is included below:

a. Engineering Design – the reviewer(s) should have extensive knowledge of channel design for navigation studies

b. Hydraulics and Hydrology – the reviewer(s) should have extensive knowledge of hydrodynamic-salinity, ship simulation, sediment, erosion and coastal shoreline models/studies.

c. Economics – the reviewer should have a strong understanding of economic models or studies relative to deep draft navigation (e.g. multi-port, container and bulk cargo analyses).

d. Environmental – the reviewer(s) should have strong background in coastal ecosystems (e.g. hypersaline, lagoonal, wind-tidal flat system) and Texas environmental laws and regulations.

e. Real Estate – the reviewer should have knowledge in reviewing RE Plans for feasibility studies (e.g. navigation servitude).

f. Plan Formulation – the reviewer(s) should have a strong knowledge in current planning policies and guidance related to feasibility studies.

g. Operations - the reviewer should have a strong knowledge in current operations of deep draft navigation projects.

h. Cost Engineering – the reviewer should have a strong knowledge of the cost estimating practices for deep draft navigation projects.

3) Review Cost

The cost for ATR of the FSM was approximately $20,000. It is estimated that the ATR costs for the remainder of the study will be $30,000.

4) Review Schedule

TASK	Proposed Date
Update of Project Review Plan	May 15, 2009
Coordinate with MSC and post on website	July 9, 2009
PCX identifies ATR team	April 2008
Review of Models	TBD
ATR review of FSM documents	May 2008
ATR review of draft documents (before AFB)	October 2010
Participation in AFB meeting	January 2011
ATR Certification Draft Report	March 2011
Public Review of Draft Report	April 2011
ATR Certification Final Report	July 2011

B. Independent External Peer Review (IEPR)

1) General

The BIH Project is a typical navigation study for deepening and widening an existing navigation channel with possible environmental restoration opportunities. EC 1105-2-408 and EC 1105-2-410 identify concerns which would trigger IEPR: "In cases where there are public safety concerns, a high level of complexity, novel or precedent-setting approaches; where the project is controversial, has significant interagency interest, has a total project cost greater than $45 million, or has significant economic, environmental and social effects to the nation, or where requested by the Governor of an affected state, IEPR will be conducted. Although the scope and technical complexity of this project is not expected to warrant IEPR and it is not controversial, the project will have significant interagency interest because of its location through the sensitive environmental habitat of the Bahia Grande. An EIS will be completed for this study. Additionally, the construction costs for any deepening and/or widening of the channel are anticipated to be in the hundreds of millions of dollars range. For these reasons, IEPR will be conducted.

2) IEPR Panel

IEPR panels will be made up of recognized independent experts from outside of USACE, with disciplines appropriate for the type of review being conducted. The PCX will contract with an appropriate Outside Eligible Organization (OEO) to manage the review. IEPR panel members will be selected by an OEO using the National Academy of Science's policy for selecting reviewers. Since this feasibility study is a navigation study to deepen and/or widen the existing channel, anticipated disciplines of IEPR reviewers are engineering (hydrology and hydraulics), economics, and environmental. The IEPR panel will have a minimum of three members. The IEPR panel review will be federally funded, including the costs associated with obtaining the IEPR panel contract. Responding to IEPR comments will be cost shared with the local sponsor. It is not anticipated that the public, including scientific or

professional societies, will be asked to nominate potential external peer reviewers. Once the panel has been identified, the IEPR Panel members' names and disciplines will be included in Appendix A of this document.

3) Review Cost

The cost for IEPR is estimated to be $250,000. The PCX for Deep Draft Navigation will identify someone independent from the PDT to scope the IEPR and develop an Independent Government Estimate. The Galveston District will provide funding to the IEPR panel.

4) Timing and Sequencing

IEPR will be conducted prior to the AFB.

5) Project Risk

Anticipate minimal risk is involved with the project. This study is a channel deepening and/or widening study using standard methodologies. No novel methods or new models will be utilized in the study. Additionally, there is no significant threat to human life with implementation of the project or in its failure. Project risks in a typical dredging project are generally minimal; however, due to the large scale of this project, implications of project risks are increased. Therefore, IEPR will be conducted

6) Products for Review

Interim products for hydrology and hydraulics, economics, and environmental will be provided before the draft report is released for public review. The full IEPR panel will receive the entire draft feasibility report, environmental impact statement and all technical appendices concurrent with public and agency review. For IEPR, DrChecks will be used to document comments and aid in the preparation of the Review Report by the IEPR Panel. The district, with assistance from the PCX, will prepare a written proposed response to the IEPR Review Report, whether the views expressed in the report are adopted or not adopted, 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 proposed response will be coordinated with the MSC and HQUSACE to ensure consistency with law, policy, project guidance, ongoing policy and legal compliance review, and other USACE or National considerations. The IEPR comments and responses will be discussed at the Civil Works Review Board (CWRB) with an IEPR panel or OEO representative in attendance. Upon satisfying its concerns, HQUSACE will determine the appropriate command level for issuing the formal USACE response to the IEPR Review Report. When the USACE response is issued, the district shall disseminate the final IEPR Review Report, USACE response, and all other materials related to the review on its website, and include them in the applicable decision document. Chief of Engineers' reports for decision documents that undergo IEPR shall summarize the IEPR Review Report and USACE responses. This

documentation will become a critical part of the review record and will be addressed in recommendations made by the Chief of Engineers.

7. PROJECT REVIEW PLAN

The components of the PRP were developed pursuant to the requirements of EC 1105-2-408 and EC 1105-2-410.

A. General Information

The decision documents that will undergo peer review are the Feasibility Report (including Economic Appendix), Environmental Impact Statement, and Engineering Appendix.

B. Scientific Information

The final feasibility report (and supporting documentation) is anticipated to contain standard engineering, environmental and economic analyses and information; therefore no influential scientific information is likely to be contained in any of the documentation.

C. Timing

The peer review process began in April 2008 with the initiation of the ATR team and assessment of key models (e.g. hydrodynamic-salinity model and ship simulation) during this initial plan formulation phase of the study. The ATR process will conclude with the completion of the final report.

D. Public Comment

A Public Scoping Meeting was held in Brownsville, Texas on January 31, 2007. An Interagency Coordination Team (ICT) made of representatives from the District, non-Federal sponsor, state and Federal resource agencies, and interested groups is being formed as part of the study. The ICT will participate in identifying potential sensitive resources and environmental issues and developing ways to address those issues. A Public Involvement Plan will be formulated to ensure public involvement throughout the feasibility study process. Public comments will be made available on the project website. Public review is scheduled after the AFB and those comments will be summarized in the EIS with responses provided.

TASK	START DATE	FINISH DATE
Public Scoping Meeting	January 31, 2007	January 31, 2007
ICT Meetings	May 2007	TBD
Public Review of DFR & EIS	Calendar Yr. 2011	Calendar Yr. 2012

E. Dissemination of Public Comments

Proceedings from all public meetings, minutes from ICT meetings or any other public involvement meetings will be posted on the BIH Project website.

F. Points of Contact

Questions about this Review Plan may be directed to Ms. Sheri Willey, Galveston District PDT Planning contact at (409) 766-3917 or sheridan.s.willey@usace.army.mil or Mr. Bernard Moseby, PCX Manager at (757) 201-7589 or bernard.e.moseby@usace.army.mil .