



DEPARTMENT OF THE ARMY

MISSISSIPPI VALLEY DIVISION, CORPS OF ENGINEERS

P.O. BOX 80

VICKSBURG, MISSISSIPPI 39181-0080

REPLY TO
ATTENTION

CEMVD-PD-N

8 Oct 2010

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: Review Plan Approval for Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report

1. References:

a. Memorandum, CEMVD-DE, 16 Mar 10, subject: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project (SELA), Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533(d) Report.

b. Memorandum, CESPDPDS-P, 28 Jun 10, subject: Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report Review Plan.

c. Memorandum, CEMVN-PM-OP, 6 Jul 10, SAB

d. Memorandum, CECW-MVD, 28 Sep 10, subject: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project (SELA), Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533(d) Report.

2. I hereby approve subject Review Plan (RP) and concur in the conclusion for conducting a modified Type II Independent External Peer Review per guidance in reference 1.a. The proposed RP has been coordinated with the Flood Risk Management Center of Expertise (FRM-PCX), and their concurrence for approval is reference 1.b. The RP has further been coordinated with HQUSACE through the MVD Regional Integration Team, per guidance in reference 1.b, with concurrence provided in reference 1.d.

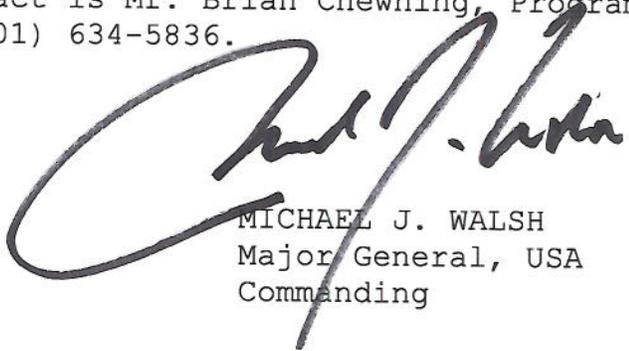
CEMVD-PD-N

SUBJECT: Review Plan Approval for Southeast Louisiana Urban
Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana
Section 533(d) Report

3. The District should take steps to post the RP to its website
and to provide a link to the FRM-PCX for their use.

4. Point of contact is Mr. Brian Chewning, Program Manager,
CEMVD-PD-N, at (601) 634-5836.

4 Encls



MICHAEL J. WALSH
Major General, USA
Commanding



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

REPLY TO
ATTENTION OF:

16 June 2010

CEMVD-DE

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project, Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533(d) Report

1. I approve your enclosed request to process subject reports to MVD for approval prior to completion of independent external peer review (IEPR).
2. In reference to EC 1165-2-209, dated 31 January 2010 and taking into consideration WRDA 1996 Section 533(d) authorization, a modified Type II IEPR shall be conducted to focus on safety assurance review and that validates the results of subject reports to ensure the projects are technically sound, environmentally acceptable, and economic, as applicable, and is in accordance with the original reconnaissance reports cited in statute.
3. Any questions should be directed to Mr. Brian Chewning at (601) 634-5836.

Encl

A large, handwritten signature in black ink, appearing to read "Michael J. Walsh".

MICHAEL J. WALSH
Brigadier General, USA
Commanding



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

06 JUL 2010

CEMVN-PM-OP

MEMORANDUM THRU Commander, Mississippi Valley Division (CEMVD-PD-N)

FOR Commander, HQUSACE (CECW-MVD), WASH DC 20314

SUBJECT: Review Plan Approval for Southeast Louisiana Urban Flood Control Project,
W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report

1. The enclosed Review Plan for the Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report has been prepared in accordance with EC 1165-2-209.
2. The Review Plan has been coordinated with the Flood Risk Management Center of Expertise (FRM-PCX). The enclosed FRM-PCX memorandum dated 28 June 2010 recommends approval of the Review Plan.
3. Due to the request for a modified Type II IEPR, the FRM-PCX recommends the Review Plan be submitted to HQUSACE through the MVD RIT for endorsement prior to final approval by the MSC Commander.
4. MVN requests approval of the Review Plan.

Encls

ALVIN B. LEE
Colonel, EN
Commanding

REVIEW PLAN

Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report

New Orleans District

June 2010



**US Army Corps
of Engineers®**

REVIEW PLAN

Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report

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1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan defines the scope and level of peer review for the Southeast Louisiana Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana, Section 533(d) Report as designated in EC 1165-2-209.

b. References

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010.
- (2) EC 1105-2-407, Planning Models Improvement Program: Model Certification, 31 May 2005
- (3) Engineering Regulation (ER) 1110-2-12, Quality Management, 30 Sep 2006
- (4) Southeast Louisiana Urban Flood Control Project, St. Tammany Parish, Louisiana, Project Management Plan for the W-14 Canal Basin

c. **Requirements.** This review plan was developed in accordance with EC 1165-2-209, which establishes the procedures for ensuring the quality and credibility of U.S. Army Corps of Engineers (USACE) decision documents through independent review. The EC outlines three levels of review: District Quality Control, Agency Technical Review, and Independent External Peer Review. In addition to these three levels of review, decision documents are subject to policy and legal compliance review and, if applicable, safety assurance review and model certification or approval.

- (1) 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 Project Management Plan (PMP). It is managed in the home 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 providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (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. The Major Subordinate Command (MSC)/District quality management plans address the conduct and documentation of this fundamental level of review; DQC is not addressed further in this review plan.
- (2) Agency Technical Review (ATR). ATR 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-to-day production of the 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 assure 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.
- (3) 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 outside of USACE is warranted. IEPR is generally for feasibility and reevaluation studies and modification reports with Environmental Impact Statements (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.

- (4) Policy and Legal Compliance Review. 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, Planning Guidance Notebook. When policy or legal concerns arise during DQC or ATR 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. The home district Office of Counsel is responsible for the legal review of each decision document and signing a certification of legal sufficiency.
- (5) Safety Assurance Review. In accordance with Section 2035 of Water Resources Development Act (WRDA) of 2007, EC 1165-2-209 requires that all projects addressing flooding or storm damage reduction undergo a safety assurance review of the design and construction activities prior to initiation of physical construction and periodically thereafter until construction activities are completed on a regular schedule sufficient to inform the Chief of Engineers on the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring public health, safety, and welfare. A future circular will provide a more comprehensive Civil Works Review Policy that will address the review process for the entire life cycle of a Civil Works project. That document will address the requirements for a safety assurance review for the Pre-Construction Engineering Phase, the Construction Phase, and the Operations Phase. The decision document phase is the initial design phase; therefore, EC 1165-2-209 requires that safety assurance factors be considered in all reviews for decision document phase studies. The safety factors to be considered include:
 - Where failure leads to significant threat to human life
 - Novel methods\complexity\precedent-setting models\policy changing conclusions
 - Innovative materials or techniques
 - Design lacks redundancy, resiliency of robustness
 - Unique construction sequence or acquisition plans
 - Reduced/overlapping design construction schedule
- (6) Model Certification/Approval. EC 1105-2-407 requires certification (for Corps models) or approval (for non-Corps models) of planning models used for all planning activities. The EC defines planning models 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. The EC does not cover engineering models used

in planning. Engineering software is being addressed under the Engineering and Construction (E&C) Science and Engineering Technology (SET) initiative. Until an appropriate process that documents the quality of commonly used engineering software is developed through the SET initiative, engineering activities in support of planning studies shall proceed as in the past. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed.

2. STUDY INFORMATION

- a. **Decision Document.** A Section 533(d) Report has been prepared as the decision document for the Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana. The Southeast Louisiana Project (SELA) was authorized by the Fiscal Year 1996 Energy and Water Development Appropriations Act, Public Law 104-46 (Section 108), and the Water Resources Development Act (WRDA) of 1996, Public Law 104-303 (Section 533). Section 533 authorized SELA projects for construction without preparation of a feasibility report. Section 533 requires that the plan must be shown to be "technically sound, environmentally acceptable, and economic, as applicable." The purpose of the study was to investigate rainfall flooding problems in the W-14 Canal basin in the city of Slidell; to develop a plan that was consistent with the recommendation of the July 1996 St. Tammany Parish, Louisiana, reconnaissance study; and to determine whether the proposed plan met the requirements of Section 533(d) of WRDA 1996. This Section 533(d) report provides the detailed findings of investigations to determine the feasibility of implementing improvements for flood damage reduction in the W-14 Canal drainage basin in Slidell, Louisiana. The report includes the Environmental Assessment, Real Estate Supplement, Engineering Appendix, micro-computer aided cost estimating system (MCACES) cost estimate, and Economics Appendix. The decision document will be approved by MVD or HQUSACE. The decision document does not require Congressional authorization.
- b. **Study Description.** The study area consists generally of that portion of the W-14 Main Diversion Canal drainage basin that lies within the city of Slidell, Louisiana. The project area is along and adjacent to the W-14 Canal, north of Lake Pontchartrain, south of Interstate Highway 12, east of U.S. Highway 11, and west of Interstate Highway 10. The W-14 Canal drainage basin is the most developed in the area and drains most of the incorporated area of Slidell. The canal extends approximately 20,000 feet in length and intersects six bridges at the following streets: North Boulevard, Robert Boulevard, Independence Drive, Florida Avenue, Cousin Street, and Daney Street. The W-14 Canal is hydrologically connected to Lake Pontchartrain. Storm water runoff from the study area flows into the W-14 Canal via natural gravity drainage, and drains southeasterly into the Fritchie Marsh, along the northeast shore of Lake Pontchartrain. The Slidell area is subject to heavy rain storms, the effects of hurricanes, and spring floods that periodically threaten homes and businesses, requiring drainage measures to reduce potential damages. The project includes improving approximately 4.1 miles of the W-14 Canal by widening the existing canal and lowering its invert elevation to improve flood flow capacity, excavating two new detention ponds with overflow weirs, expanding an existing pond, installing culverts, replacing three existing bridges, and constructing a new pump station. The estimated cost for this project is between \$200 million and \$250 million. The non-Federal sponsor will be the Coastal Protection and Restoration Authority of Louisiana.
- c. **Factors Affecting the Scope and Level of Review.** Although no EIS was prepared for the proposed project, an IEPR is necessary because the estimated implementation cost of approximately \$234,000,000 exceeds the \$45,000,000 threshold indicated in EC 1165-2-209.

- The type of work being completed in this study is routine work for the New Orleans District. The PDT did not encounter any challenging aspects or out of the ordinary work while preparing and completing this study.
- Preliminary Assessment of Project Risks. Based on the results of the Cost and Schedule Risk Analysis performed by Walla Walla District, it was determined that the key cost risk drivers are Market Conditions and Acquisition Plan. These risks together contribute nearly 80 percent of statistical cost variance. The key schedule risk drivers are Changes in SELA Priority, Market Conditions, Inadequate Skilled Trades Labor Force, and Corps and AE Staff Turnover/Losing Staff at Critical Points. These risks together contribute 86 percent of statistical variance. Listed below are the uncertainties and how they may affect the success of the project.

Key Cost Risk Drivers

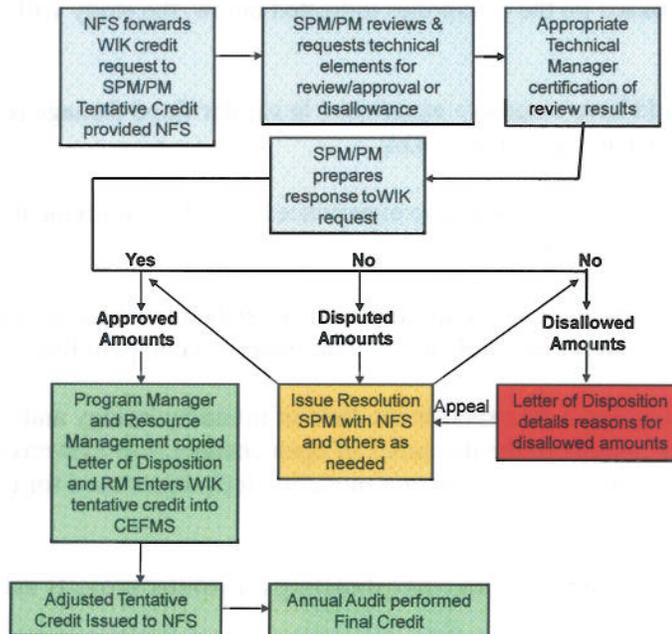
- (1) Market Conditions. Due to the ongoing work of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), market conditions indicate that an increase in cost is likely to occur.
- (2) Acquisition Plans. The types of contracts available and special requirements (e.g., small business set asides) may significantly affect project costs.

Key Schedule Risk Drivers

- (1) Changes in SELA Priority. This project will be competing for funding with other SELA components and other HSDRRS projects through the 2011 timeframe. Other impacts due to lack of funding or untimely receipt of funds exist. This project is not included in the FY10 and FY11 President's budget.
 - (2) Market Conditions. Due to the extraordinary demands on resources incurred by the ongoing work of the HSDRRS, market conditions indicate that an increase in schedule is likely to occur.
 - (3) Inadequate Skilled Trades Labor Force. Many projects will occur concurrent to this project. This project will be competing with other projects for skilled labor in a saturated market (equipment operators, cement masons, steel/bridge, pump stations, etc.).
 - (4) Corps and AE Staff Turnover/Losing Staff at Critical Points. There is a potential to lose critical staff throughout the life of the project due to workload and attrition.
- The study utilized standard methods of analysis to investigate rainfall flooding problems, and construction would employ conventional techniques. The report is not considered to contain influential scientific information or assessments.
 - The project is not likely to have significant economic, environmental, or social effects to the Nation. The project will not require an Environmental Impact Statement. An Environmental Assessment was prepared for the report. The costs and benefits of the project are typical of other flood damage reduction projects, and the environmental effects will be minimized or mitigated. The project does not have any cultural, historical or tribal impacts.

- The project is not likely to have significant interagency interest. Initial interagency discussions suggest that involvement by other agencies will not be unusually significant.
 - The study investigated means of reducing the risk associated with damages due to rainfall flooding. The threat to human life associated with the events for which the project is designed is minimal, and failure of the project would result in no significant increase in threat to human life.
 - The project is not considered to be controversial. It provides a reduction in flood damages in an area subject to repetitive flooding; negative environmental impacts are relatively small due to the high degree of development in most of the project area, and mitigation will be provided for unavoidable impacts. Some resistance from residents in the immediate vicinity of construction might be anticipated, but such resistance is not considered likely to push the project to a point of being “highly controversial.”
 - As has been noted, the study utilized standard methods of analysis to investigate rainfall flooding problems. The report is not based on novel methods, nor does it contain any precedent-setting methods or present conclusions likely to change prevailing practices.
- d. **In-Kind Contributions.** The expected in-kind contributions to be provided by the sponsor are those attributed to the lands, easements, relocations, rights-of-way, and damages (LERRDS). The local sponsor may also contribute to the development of plans and specifications. The in-kind contributions and LERRDS will be reviewed/approved in accordance with the established process developed by the New Orleans District.

Work In-Kind Review/Approval Process



3. AGENCY TECHNICAL REVIEW (ATR)

- a. **General.** ATR for decision documents covered by EC 1165-2-209 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 ATR shall ensure that the product is consistent with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and the results in a reasonably clear manner for the public and decision makers. Members of the ATR team will be from outside the home district. The ATR lead will be from outside the home MSC. The leader of the ATR team will participate in milestone conferences and the Civil Works Review Board (CWRB) to address review concerns. This review plan was prepared subsequent to ITR. The ITR was conducted largely prior to notification of guidance for an ATR. The District did not nominate ATR reviewers.
- b. **Products for Review.** The products that were reviewed through an ITR are the Environmental Assessment, Engineering Appendix, and Real Estate supplement. The Environmental Assessment was reviewed by New Orleans District employees who were not involved in the project. The Engineering Appendix, except for the geotechnical portion and H&H portion, were reviewed by St. Louis District. The geotechnical portion of the Engineering Appendix was reviewed by Memphis District. The H&H section of the Engineering Appendix was reviewed by Huntington District. The MCACES cost estimate was prepared by Rock Island District. The ITR of the MCACES cost estimate was performed by the New Orleans District. The Real Estate supplement was reviewed by MVD. The Economics Appendix was reviewed by San Francisco District. The ITR was conducted largely prior to establishment of guidance for an ATR.
- c. **Required ATR Team Expertise.** Based on the disciplines indicated below, the study will require a minimum of nine reviewers.

Economics: Team member should have extensive experience in similar flood damage reduction projects and has a thorough understanding of HEC-FDA

Environmental: Team member should have extensive experience in NEPA requirements, cultural resources, recreational resources, and HTRW.

Planning/Project Management: Team member is familiar with watershed level projects, current flood damage reduction planning, and policy guidance and has experience in plan formulation.

Hydraulic Engineering: Team member is an expert in the field of urban hydrology and hydraulics, has a thorough understanding of the dynamics of open channel flow systems and enclosed systems, and has an understanding of computer modeling techniques used for this project.

Cost Engineering: Team member is familiar with cost estimating for similar projects using MCACES.

Geotechnical Engineering: Team member should have a thorough understanding of soils and soils analysis.

Civil Engineering: Team member should have experience in utility relocations, internal drainage construction, projects engineering, and operations.

Mechanical Engineering: Team member is familiar with pump station and closure structure design.

Real Estate: Team member should have extensive experience in acquisition and leasing, including right-of-way issues and appraisals.

d. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
- (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in or to then assess whether further specific concerns may exist. The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical coordination, and lastly the agreed upon resolution. The ATR team will prepare a Review Report which includes a summary of each unresolved issue; each unresolved issue will be raised to the vertical team for resolution. Review Reports will be considered an integral part of the ATR documentation and 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; and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to HQUSACE for resolution and the ATR documentation is complete. Certification of ATR should be completed, based on work reviewed to date, for the draft report, and final report. A sample certification is included in ER 1110-2-12.

4. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

- a. **General.** IEPR is conducted for decision documents if there is a vertical team decision (involving the district, MSC, PCX, and HQUSACE members) that the covered subject matter meets certain criteria (described in EC 1165-2-209) where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside the USACE is warranted. IEPR is coordinated by the appropriate PCX and managed by an Outside Eligible Organization (OEO) external to the USACE. IEPR panels shall evaluate whether the interpretations of analysis and conclusions based on analysis are reasonable. To provide effective review, in terms of both usefulness of results and credibility, the review panels should be given the flexibility to bring important issues to the attention of decision makers; however, review panels should be instructed to not make a recommendation on whether a particular alternative should be implemented, as the Chief of Engineers is ultimately responsible for the final decision on a planning or reoperations study. IEPR panels will accomplish a concurrent review that covers the entire decision document and will address all the underlying engineering, economics, and environmental work, not just one aspect of the study. Whenever feasible and appropriate, the office producing the document shall make the draft decision document available to the public for comment at the same time it is submitted for review (or during the review process) and sponsor a public meeting where oral presentations on scientific issues can be made to the reviewers by interested members of the public. An IEPR panel or OEO representative will participate in the CWRB.
- b. **Decision on IEPR.** Although no EIS was prepared for the proposed project, an IEPR is necessary because the estimated implementation cost exceeds the \$45,000,000 threshold for the IEPR requirement as indicated in EC 1165-2-209. Per Memorandum dated March 16, 2010, Subject: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project, Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533(d) Report, a modified Type II IEPR shall be conducted to focus on safety assurance review and that validates the results of subject reports to ensure that projects are technically sound, environmentally acceptable, and economic, as applicable, and is in accordance with the original reconnaissance reports cited in statute.
- c. **Products for Review.** The products to be reviewed are the Design Document Reports (DDR), plans and specifications, and cost estimates for the nine contracts listed in the W-14 Canal 533(d) report .
1. 30' Wide Rectangular Channel; Sta. 53+59.72 to Sta. 90+00
 2. 30' Wide Rectangular Channel; Sta. 90+00 to Sta. 98+35.17, includes 100' Overflow Weir and Robert Blvd Detention Pond
 3. 45' Wide Rectangular Channel; Sta. 98+35.17 to Sta. 120+00, includes Independence Drive Bridge Replacement
 4. 45' Wide Rectangular Channel; Sta. 120+00 to Sta. 140+00
 5. 45' Wide Rectangular Channel; Sta. 140+00 to Sta. 164+59.2, includes Florida Ave Bridge Replacement
 6. 10' Wide Trapezoidal Channel; Sta. 164+59.2 to Sta. 193+00, includes Cousin St. Bridge Replacement and Daney St. Detention Pond with 100' Overflow Weir

7. 20' Wide Trapezoidal Channel; Stat. 193+00 to Sta. 256+86.98

8. Pump Station

9. Marsh Creation

- d. **Required IEPR Panel Expertise.** The IEPR Panel will consist of three reviewers. The District will not nominate IEPR candidates. There will not be public nominations of IEPR reviewers. Reviewers will be required for the following disciplines:

Engineering. Team member should have experience in: urban hydrology and hydraulics, with an understanding of open channel flow systems and relevant computer modeling techniques; geotechnical engineering; design of features such as pump stations and water control structures; and cost estimating techniques.

Economics. Team member should have extensive experience in related flood damage reduction projects, and have a thorough understanding of HEC-FDA.

Environmental. Team member should have extensive experience in NEPA requirements and be familiar with issues concerning cultural resources, recreational resources, and HTRW.

- e. **Documentation of IEPR.** DrChecks review software will be used to document IEPR comments and aid in the preparation of the Review Report. Comments should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 3. The OEO will be responsible for compiling and entering comments into DrChecks. The IEPR team will prepare a Review Report that will accompany the publication of the final report for the project and 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; and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

The final Review Report will be submitted by the IEPR panel no later than 60 days following the close of the public comment period for the draft decision document. The report will be considered and documentation prepared on how issues were resolved or will be resolved by the District Commander before the district report is signed. The recommendations and responses will be presented to the CWRB by the District Commander with an IEPR panel or OEO representative participating, preferable in person.

5. MODEL CERTIFICATION AND APPROVAL

- a. **General.** The use of certified or approved models for all planning activities is required by EC 1105-2-407. This policy is applicable to all planning models currently in use, models under development and new models. The appropriate PCX will be responsible for model certification/approval. The goal

of certification/approval is to establish that planning products are theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. The use of a certified or approved model does not constitute technical review of the planning product. Independent review of the selection and application of the model and the input data and results is still required through conduct of DQC, ATR, and, if appropriate, IEPR. Independent review is applicable to all models, not just planning models. Both the planning models (including the certification/approval status of each model) and engineering models used in the development of the decision document are described below:

b. Planning Models. The following planning models were used:

Economic Damage Models

The New Orleans District used HEC-FDA (version 1.2.4b) to perform the economic analysis. The Hydrologic Engineering Center Flood Damage Analysis (HEC-FDA 1.2.4b) computer program was utilized to evaluate flood damages using risk-based methods. This program is used to quantify the uncertainty in discharge-exceedance probability, stage-discharge, and stage-damage functions and assimilates that uncertainty into the economic and engineering performance analyses of alternatives. Monte Carlo simulation is used to compute the expected value of damage while explicitly accounting for the uncertainty in economic and hydraulic parameters used to determine flood inundation damages. The analysis considered a range of possible values, with a maximum and a minimum value for each economic variable used to calculate the elevation- or stage-damage curves, and for each hydrologic/hydraulic variable used to calculate the stage-frequency curves. It also considered a probability distribution for the likely occurrence of any given outcome within the specified range. The HEC-FDA program used Monte Carlo simulation to derive the possible occurrences of each variable. Randomly generated numbers were used to simulate the occurrences of selected variables from within the established ranges and distributions. In order to use this program the inherent uncertainty associated with each of the key hydrologic/hydraulic and economic variables in the analysis was quantified.

Environmental Models for Habitat Evaluation or Mitigation Planning

Modified Charleston Method - The Modified Charleston Method (MCM) of habitat assessment was used to determine the number of credits and acres that would be required at the mitigation site to compensate for unavoidable project impacts. The MCM is a variation of the mitigation assessment technique developed by the Corps of Engineers' Charleston District and presented in their Standard Operating Procedure issued September 19, 2002. The New Orleans District (CEMVN) found it necessary to modify this established method of determining adverse impacts and compensation calculations to retrofit the assessment technique to account for regional wetland type differences. Although the Wetland Value Assessment (WVA) model is typically used in Louisiana's coastal zone, the MCM was used to calculate impacts, as the pine savannah habitat mitigation requirement cannot be calculated using the WVA model.

The Modified Charleston Method was used to calculate mitigation credits. The Modified Charleston Method is not an approved planning model. The ECO-PCX obtained permission from HQUSACE to have the MCM reviewed as part of the IEPR for study specific approval. The IEPR review of the model is underway.

c. **Engineering Models.** The following engineering models were used:

Micro Computer Aided Cost Estimating System (MCACES). MCACES MII 3.0 was used to prepare the cost estimate for the project. MII provides an integrated cost estimating system (software and databases) that meets the U.S. Army Corps of Engineers (USACE) requirements for preparing cost estimates.

Cost and Schedule Risk Analysis (CSRA). In compliance with Memorandum CECW-CE(1110), dated 3 July 2007, from Major General Don T. Riley, a formal risk analysis study was conducted for the development of contingency on the total project cost. The purpose of the risk analysis study was to establish project contingencies by identifying and measuring the cost and schedule impact of project uncertainties with respect to the estimated total project cost. The risk analysis process uses *Monte Carlo* techniques to determine probabilities and contingency. The *Monte Carlo* techniques are facilitated computationally by a commercially available risk analysis software package (Crystal Ball) that is an add-in to Microsoft Excel. The cost estimates were developed in an MII 3.0 (MCACES) format, and information was extracted into Microsoft Excel for cost risk analysis purposes.

HEC-RAS 4.0. The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program was used for unsteady flow analysis to evaluate the future without- and with-project conditions along the W-14 Canal.

6. REVIEW SCHEDULES AND COSTS

- a. **ATR Schedule and Cost.** In September 2008, CEMVN made a request to CEMVS to perform an independent technical review (ITR) on the Engineering Appendix of the W-14 Canal 533(d) study. CEMVS had the capability of performing the reviews on all disciplines of work except for geotechnical analysis. The geotechnical review was performed by CEMVM. The ITR was completed by November 2008. Comments from the result of the ITR were resolved and implemented in the Engineering Appendix in January 2009. These comments were back-checked in February 2009. The final revisions to the Engineering Appendix were completed in February 2009. The estimated cost for performing the review of the Engineering Appendix was approximately \$27,000. The Environmental Assessment was reviewed by New Orleans District employees who were not involved in the project. The ITR of the Environmental Assessment was performed in December 2008. The estimated cost for performing the review of the Environmental Assessment was approximately \$2,000. The Economics Appendix had an agency technical review performed by the San Francisco District. The cost for the review was \$5,500. The Hydraulics and Hydrologic Section of the Engineering Appendix had an agency technical review performed by the Huntington District. The cost for the review was \$5,000. A feasibility scoping meeting and alternative formulation briefing are not required for a 533(d) study.
- b. **Type II - IEPR Methodology and Cost.** The estimated cost for the modified Type II IEPR is \$200,000. A Type II IEPR will be conducted for each contract.

1. **PED/Design Phase.** The SAR will focus on unique features and confirmation of the assumptions and conditions that formed the basis for the design during the decision document phase.

2. Construction Phase. The Construction Phase Type II IEPR will be initiated at the start of each contract and will have an additional review near the construction midpoint.

The Type II SAR shall address the following questions:

(a) Do the assumptions made during the decision document phase for hazards remain valid through the completion of design as additional knowledge is gained and the state-of-the art evolves?

(b) Do the project features adequately address redundancy, resiliency, or robustness with an emphasis on interfaces between structures, materials, members, and project phases?

(c) Do the project features and/or components effectively work as a system?

c. Model Certification/Approval Schedule and Cost.

The Modified Charleston Method was used to calculate mitigation credits. The Modified Charleston Method is not an approved planning model. The ECO-PCX obtained permission from HQUSACE to have the MCM reviewed as part of the IEPR for study specific approval. The IEPR review of the model is underway (see schedule below). The cost of the IEPR for the MCM review is \$92,000.

**Model Review of the Modified Charleston Method for the Southeast Louisiana Urban
Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana. (TCN 10-081)
Schedule (as of 5-11-2010)**

Deliverables are noted by an asterisk (*)

TASK	ACTION	DUE DATE
	NTP for contract modification	4/20/2010
	Review documents available	4/20/2010
	End of Period of Performance	8/30/2010
1	USACE/Battelle Kick-off Meeting	4/22/2010
	Battelle submits Draft Charge	4/29/2010
2 & 3	USACE provides comments on Draft Charge	4/30/2010
	Battelle submits Final Charge with Final Work Plan and Final Schedule	5/5/2010
	USACE approves Final Work Plan, Charge, and Schedule	5/6/2010
	Battelle provides USACE with conflicts of interest (COI)	4/20/2010
4	Battelle recruits and screens up to 6 potential panel members	4/30/2010
	Battelle submits list of selected panel members	4/30/2010
	USACE provides comments on panel members	5/3/2010
	Battelle completes subcontracts for panel	5/17/2010
	Review documents sent to panel	5/18/2010
	Battelle/panel Kick-off Meeting	5/24/2010
5	USACE/Battelle/panel Kick-off Meeting with peer reviewers	5/24/2010
	Model review panel completes their review	6/8/2010
	Battelle collates comments from panel	6/9/2010
	Battelle convenes model review teleconference	6/11/2010
	Panel provides draft Final Panel Comments (FPCs) to Battelle	6/21/2010
	Battelle provides Final Model Review Report to panel for review	6/29/2010
6	Panel provides comments on Final Model Review Report	6/30/2010
	Battelle submits Final Model Review Report to USACE	7/6/2010
7	Battelle convenes teleconference to discuss USACE clarifying questions on Final Model Review Report	7/13/2010
	Project Closeout	9/8/2010

7. PUBLIC PARTICIPATION

A public meeting was held on June 16, 2009, to inform the residents of St. Tammany Parish of the ongoing progress of the W-14 Canal project. Attendees were provided comment cards at the public meeting. CEMVN has provided feedback regarding the concerns of the St. Tammany Parish residents. These concerns will be posted to the SELA, St. Tammany Parish project website. The Environmental Assessment (EA) was made available for public review in June 2009. CEMVN received five requests for copies of the EA and draft FONSI from the general public. The requestors had the option to retrieve the information electronically from the www.nolaenvironmental.gov website or request a hard copy of the documents. CEMVN did not receive any letters of objection.

The only portion of the decision document (533d) that required a public comment period was the Environmental Assessment. The public comment period for the Environmental Assessment was June 9,

2009 – July 10, 2009. CEMVN did not receive any letters of objection. Therefore, CEMVN does not have any public comments to provide to the reviewers.

The final decision document, resolution of IEPR comments, and USACE responses will be posted to the SELA, St. Tammany Parish project website:

<http://www.mvn.usace.army.mil/pd/projectslist/home.asp?projectID=104&directoryFilePath=ProjectData\>

The final decision document, resolution of IEPR comments, and USACE responses will also be posted to the following website: http://www.mvn.usace.army.mil/pd/pd_peerreview.asp

8. PCX COORDINATION

Review plans for decision documents and supporting analyses outlined in EC 1165-2-209 are coordinated with the appropriate Planning Center(s) of Expertise (PCXs) based on the primary purpose of the basic decision document to be reviewed. The lead PCX for this study is the Flood Risk Management PCX.

9. MSC APPROVAL

The MSC that oversees the home district is responsible for approving the review plan. Approval is provided by the MSC Commander. The commander's approval should reflect vertical team input (involving district, MSC, PCX, 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. Changes to the review plan should be approved by following the process used for initially approving the plan. In all cases the MSCs will review the decision on the level of review and any changes made in updates to the project.

10. REVIEW PLAN POINTS OF CONTACT

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

Home District (MVN)

Senior Project Manager, 504-862-1486
Project Manager, 504-862-1249

Home MSC (MVD)

New Orleans District Support Team, Deputy Chief, 601-634-5928

PCX POC

Program Manager, FRM-PCX

ATTACHMENT 1: TEAM ROSTERS

SELA, St. Tammany Parish, W-14 Canal Project Delivery Team			
Name	Function	Office	Phone Number
Stan Green	Sr. Project Manager	CEMVN-PM-OP	504-862-1486
Donna Urban	Project Manager	CEMVN-PM-OP	504-862-1249
Brett Herr	Chief, Regional Proj Br	CEMVN-PM-OP	504-862-2495
Anthony Pegues	Engr Team Leader	CEMVN-ED-E	504-862-2677
Mike Voich	Engr Team Leader	CEMVN-ED-E	504-862-1636
Heath Jones	Hydraulic Engineer	CEMVN-ED-H	504-862-2426
Joseph Diaz	Hydraulic Engineer	CEMVN-ED-H	504-862-1457
Jennifer Wedge	Structural Engineer	CEMVN-ED-T	504-862-1664
Rob Dauenhauer	Structural Engineer	CEMVN-ED-T	504-862-1840
Bich Quach	Geotechnical Engineer	CEMVN-ED-F	504-862-1504
Sylvia Smith	Relocations Specialist	CEMVN-ED-SR	504-862-2879
Chris Talbert	Relocations Specialist	CEMVN-ED-SR	504-862-1407
John Petitbon	Cost Engineer	CEMVN-ED-SC	504-862-2732
Elizabeth McCasland	Biologist	CEMVN-PM-RS	504-862-2021
Christopher Brown	Biologist/HTRW	CEMVN-PM-RP	504-862-2508
Paul Hughbanks	Archeologist	CEMVN-PM-RM	504-862-1100
Toni Baldini	Economist	CEMVN-PM-AW	504-862-1913
Greg Carter	Realty Specialist	CEMVN-RE-L	504-862-1980
Sidney Taylor	Realty Specialist	CEMVN-RE-E	504-862-2578
Gayle Rouse	Contract Specialist	CEMVN-CT-E	504-862-1547
Gary Allmond	Construction Manager	CEMVN-CD-B	504-862-2898
Charles Owens	Evans-Graves Contractor	CEMVN-PM-OP	504-862-1075
Steve Schinetsky	Operations Division	CEMVN-OD-T	504-862-2343
Jon Fleischman	Design Engineer	CEMVR-EC-DM	309-794-5322
Alaena Ensey	Cost Engineer	CEMVR-EC-N	309-794-5735

**SELA, St. Tammany Parish, W-14 Canal
Agency Technical Review Team**

Name	Function	Office	Phone
Donald Duncan	Hydraulics	CEMVS-EC-HW	314-331-8809
Mr. Duncan has nearly seven years' experience in hydrologic and hydraulic engineering. This experience includes both large scale and small scale studies for flood damage reduction and ecosystem restoration.			
Kenneth C. Halstead, P.E.	Hydraulics	CELRH-EC-WH	304-399-5811
Mr. Halstead will have 30 years of experience with the Corps of Engineers in January 2011. Mr. Halstead serves as Regional Technical Specialist for all hydrologic and hydraulic engineering aspects of flood damage reduction projects throughout the Great Lakes and Ohio River Division. His expertise includes the hydrologic and hydraulic design and evaluation of all features of Flood Damage Reduction (Flood Risk Management) Engineering projects from inception to completion. Functional areas include execution of reconnaissance reports, feasibility studies, site investigations, physical hydraulic model studies, design and construction of flood control projects, navigation projects, and other water resource projects.			
Carol Kreutzer	Relocations	CEMVS-EC-DC	314-331-8335
Ms. Kreutzer will have 30 years of experience with the Corps of Engineers in February 2010. During this period, she has been employed in the Environmental Engineering Section in Design Branch. She has been involved as a team member performing planning studies and designs and plans and specifications development for water supply and distribution, and waste water collection and treatment projects. For the last 6 years, she has been the District's Utility Relocation/Alteration Coordinator.			
Taylor Canfield	Cost Engineering	CEMVN-ED-SC	504-862-2181
Mr. Canfield has been working as a Cost Engineer for MVN for approximately 2-1/2 years. His duties include preparing cost estimates for civil works construction contracts. Mr. Canfield has a BS in Civil Engineering with a minor in Business from the University of Kentucky.			
Cory Williams, P.E.	Geotechnical	CEMVM-EC-G	901-544-0667
Mr. Williams is the Chief of the Geotechnical Engineering Branch in the Memphis District. He has over 13 years of Geotechnical Engineering experience with 10 years' experience with the Corps of Engineers. He holds a Master's Degree and Professional License in Civil Engineering. He has experience in design of various flood control projects including levees, floodwall, and pumping stations.			
Arden Sansom	Economics	CESPN-PM-B	415-503-6748
Mr. Sansom has 14 years' experience with the USACE. He is a Regional Technical Specialist for the SPD. He has 12-1/2 years' experience in Planning/Plan Formulation/Economics. He has 1-1/2 years' experience in Project Management. He has a BA in Economics from Marshall University (1993) and an MA in Mathematics (Statistics Concentration) from Marshall University (2000).			
Michael Brown	Environmental	CEMVN-PM-RP	504-862-1570
Mr. Brown has nine years' experience in National Environmental Policy Act (NEPA) compliance and biological studies for navigation, flood control, and ecosystem restoration projects.			
Gary Demarcay	Cultural Resources	CEMVN-PM-R	504-862-2039
Mr. Demarcay has been a professional archaeologist for 35 years and has worked for the federal government as an archaeologist for 23 years. He received a BA in Anthropology from the University of New Orleans and an MA from Texas A&M University.			

**SELA, St. Tammany Parish, W-14 Canal
Agency Technical Review Team**

Andrew Perez **Recreation** **CEMVN-PM-RN** **504-862-1442**
Mr. Perez has worked as an Outdoor Recreation Planner for the New Orleans District for the past five years. Previously he has worked as an Economist for MVN and POH for a total of five years. He received a BS in Business Administration from Louisiana State University and a Master of Urban and Regional Planning from the University of North Carolina.

Kelly McCaffrey **Aesthetics** **CEMVN-PM-R** **504-862-2552**
Mr. McCaffrey is a Landscape Architect with seven years' experience in both the private and public sectors. He received a BLA from Mississippi State University in 2002. He worked for Clark Condon Associates, Houston, Texas for 1-1/2 years on various landscape projects including parks and recreation, urban design, and thoroughfares planning and design. He worked for the City of Vicksburg as both the Community Planner and the City Planner, during which he participated in a variety of projects including site design for public infrastructure projects, urban design, land use planning and comprehensive master planning. Since joining the Corps of Engineers in 2008, his project focus has been on NEPA document preparation (visual resources assessments in particular), site design, urban forestation, and outdoor recreation planning.

Cassandra Price **Real Estate** **CEMVD-PD-SP** **601-634-5860**
Ms. Price is a Realty Specialist for the Mississippi Valley Division. She has 34 years of Real Estate experience with the Corps of Engineers. She has a B.A. and J.D. from the University of Mississippi.

Burke Torrey **Real Estate** **CEMVD-PD-SP** **601-634-5859**
Mr. Torrey has gained over 35 years of Corps Real Estate experience, serving as Staff Real Estate Attorney, Branch Chief, Ass't Real Estate Division Chief, with 22 years of service as Vicksburg District Real Estate Division Chief. He has currently served 2 years as CEMVD Senior Real Estate Staff Functional Area Leader, YA-3. During this entire career he has participated as a Team Member or Leader in producing numerous Planning Reports, Studies and Real Estate Design Memorandums and Real Estate Sections thereof that served as Command Decision Documents to USACE HRTRS

**SELA, St. Tammany Parish, W-14 Canal
Vertical Team**

Name	Function	Office	Phone
Brian Chewning	NOD Support Team	CEMVD-PD-N	601-634-5836
Greg Ruff	Dpt Chief, NOD Suppt Team	CEMVD-PD-N	601-634-5928
Buddy Torrey	Real Estate	CEMVD-PD-SP	601-634-5859

**SELA, St. Tammany Parish, W-14 Canal
PCX Points of Contact**

Name	Function	Office	Phone
Eric Thaut	Program Manager	FRM-PCX	415-503-6852
Jodi Staebell	Program Manager	ECO-PCX	309-794-5448

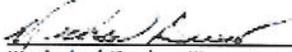
**SELA, St. Tammany Parish, W-14 Canal
IEPR Panel Members**

Name	Function	Office	Phone
TBD			

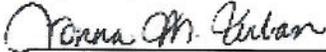
ATTACHMENT 2: ATR CERTIFICATION TEMPLATE

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

The District has completed the ITR of the Environmental Assessment of the Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana project. Notice is hereby given that an independent technical review, that is appropriate to the level of risk and complexity inherent in the project, has been conducted as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level obtained; and reasonableness of the result, including whether the product meets the customer's needs consistent with law and existing Corps policy. The independent technical review was accomplished by Michael Brown, Gury Demarcay, Andrew Perez, and Kelly McCaffrey. All comments resulting from ITR have been resolved.


Technical Review Team Leader
(Signature)

7-10-09
Date


Project Manager

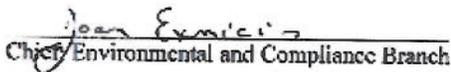
7/10/09
Date

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows:

(Describe the major technical concerns, possible impact, and resolution)

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


Chief Environmental and Compliance Branch

July 10, 2009
Date

Independent Technical Review Checklist - PM-RS and PM-RP

EA Number: 409 Title: SELA, W-14 Drainage Canal, Slidell Area, St. Tammany Parish, LA

Task	Addressed	Not Addressed	N/A	Remarks
Was coordination with OD-S, State, local, and Federal agencies conducted?	✓			<i>Well prepared written document.</i>
Has the no-action plan been addressed?	✓			
Has the environmental setting been described?	✓			
Have the assumptions and rationale for the without-project conditions been stated?	✓			
Have indirect project impacts been addressed?	✓			
Has a Cumulative Impacts section been included?	✓			
Has mitigation of adverse effects been considered?	✓			
Have beneficial and adverse effects been evaluated for the selected plan and alternatives?	✓			
Does the EA conform to the sample EA format?	✓			
Was an Endangered Species BA prepared to assess impacts, and coordinated with NMFS and USFWS?			✓	
Was there coordination with USFWS? Was a Fish and Wildlife CAR or PAL prepared?	✓			
Were impacts to prime and unique farmlands addressed?			✓	
Was a CIH investigation performed?			✓	
Was a Phase I HTRW assessment performed? Depending on the results, has a Phase II HTRW been scoped?	✓			
Was avoidance of potential HTRW problems incorporated into alternative plans?	✓			
Was a Coastal Zone Consistency Determination prepared?	✓			
Was a 404(b)(1) Evaluation prepared?	✓			
Was EFH evaluated?	✓			
Were Air Quality impacts evaluated?	✓			
Was environmental input provided to the PM for report?	✓			
Was the DEA submitted to the PM and OC for review?	✓			
Was a Louisiana Scenic Rivers Permit request prepared?			✓	

Reviewer Signature *[Signature]* Date 12-5-08
 TR Supervisor Initials RB Draft Final ✓
 EM/TM Supervisor Initials GO Draft Final ✓

Independent Technical Review Checklist - PM-RS and PM-RP

12/3/08

EA Number 409 Title SELA When Flood Damage Reduction Project
W-14 Waterway Canal, Midland Area

Task	Addressed	Not Addressed	N/A	Remarks
Was coordination with OD-S, State, local, and Federal agencies conducted?	✓			
Has the no-action plan been addressed?	✓			
Has the environmental setting been described?	✓			
Have the assumptions and rationale for the without-project conditions been stated?	✓			
Have indirect project impacts been addressed?		✓		<i>Es though important resources had impact direct, indirect</i>
Has a Cumulative Impacts section been included?	✓			
Has mitigation of adverse effects been considered?	✓			
Have beneficial and adverse effects been evaluated for the selected plan and alternatives?	✓			
Does the EA conform to the sample EA format?	✓			
Was an Endangered Species BA prepared to assess impacts, and coordinated with NMFS and USFWS?			✓	
Was there coordination with USFWS? Was a Fish and Wildlife CAR or PAL prepared?	✓			
Were impacts to prime and unique farmlands addressed?			✓	
Was a CIH investigation performed?			✓	
Was a Phase I HTRW assessment performed? Depending on the results, has a Phase II HTRW been scoped?	✓			
Was avoidance of potential HTRW problems incorporated into alternative plans?	✓			
Was a Coastal Zone Consistency Determination prepared?	✓			
Was a 404(b)(1) Evaluation prepared?	✓			
Was EFH evaluated?	✓			
Were Air Quality impacts evaluated?	✓			
Was environmental input provided to the PM for report?	✓			
Was the DEA submitted to the PM and OC for review?	✓			<i>Will after average complete.</i>
Was a Louisiana Scenic Rivers Permit request prepared?			✓	

Reviewer Signature _____ Date _____
 TR Supervisor Initials RB Draft Final _____ *See final review 12/5/08*
 EM/TM Supervisor Initials _____ Draft _____ Final _____

Independent Technical Review Checklist - PM-RN

EA Number: 409 Title: SELA, W-14 Drainage Canal, Slidell Area, St. Tammany Parish, LA

Task	Addressed	Not Addressed	N/A	Remarks
Was a land-use history performed?			✓	
Was a literature and records review completed including consultation of the Louisiana Division of Archaeology's site file database, site maps, and survey maps?	✓			
Has an on-site inspection or pedestrian overview been completed?	✓			
Has Louisiana's Comprehensive Archeological Plan been consulted?			✓	
Have cultural resources been identified and evaluated?			✓	
Has a mitigation strategy been designed to meet the requirements of Section 106 of the National Historic Preservation Act?			✓	
Have the necessary cultural resource studies been conducted in accordance with the National Historic Preservation Act and other applicable cultural resources laws and regs?	✓			
Have Native American trust assets been addressed.			✓	
Has coordination with Native Americans required by the Native American Graves Protection and Repatriation Act of 1990 been completed?		✓		
Have copies of final cultural resources reports been furnished to the SHPO and appropriate organizations?	✓			
Have the necessary recreational and aesthetic studies and agency coordination been conducted in accordance with the provisions of FPWRA of 1965; WRDA of 1986; the LAWCON Fund Act of 1965; Flood Control Act of 1944, and appropriate Corps regulations?	✓			
Has recreational or aesthetic development been documented through supply and demand analysis?			✓	
If recreation benefits are claimed, is an adequate evaluation of the competing facilities and their existing and expected use with and without the proposed project included?			✓	
Have appropriate NED recreation unit day values been determined via Economic Guidance Memorandum for the current fiscal year?			✓	

Reviewer: Adam A. Perry Recreation 5 Dec 08
 Signature: [Signature] Date: 12/9/08 TR Supervisor: [Signature] Initials: JME Draft: _____ Final: [Signature]
Kelly P. McCaffrey Aesthetics 12/5/08

ATTACHMENT 3: ACRONYMS AND ABBREVIATIONS

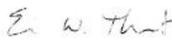
<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
CWRB	Civil Works Review Board	OMB	Office of Management and Budget
DPR	Detailed Project Report	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DQC	District Quality Control	OEO	Outside Eligible Organization
DX	Directory of Expertise	OSE	Other Social Effects
EA	Environmental Assessment	PCX	Planning Center of Expertise
EC	Engineer Circular	PDT	Project Delivery Team
EIS	Environmental Impact Statement	PAC	Post Authorization Change
EO	Executive Order	PMP	Project Management Plan
ER	Ecosystem Restoration	PL	Public Law
FDR	Flood Damage Reduction	QMP	Quality Management Plan
FEMA	Federal Emergency Management Agency	QA	Quality Assurance
FRM	Flood Risk Management	QC	Quality Control
FSM	Feasibility Scoping Meeting	RED	Regional Economic Development
GRR	General Reevaluation Report	RTS	Regional Technical Specialist
HQUSACE	Headquarters, U.S. Army Corps of Engineers	USACE	U.S. Army Corps of Engineers
IEPR	Independent External Peer Review	WRDA	Water Resources Development Act
ITR	Independent Technical Review		
LRR	Limited Reevaluation Report		
MSC	Major Subordinate Command		

MEMORANDUM FOR Donna Urban, New Orleans District

SUBJECT: Southeast Louisiana Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana, Section 533(d) Report Review Plan

1. The Flood Risk Management Planning Center of Expertise (FRM-PCX) has reviewed the updated Review Plan (RP) for the subject study and concurs that the RP satisfies peer review policy requirements outlined in Engineering Circular (EC) 1165-2-209 Civil Works Review Policy, dated 31 January 2010.
2. The review plan recognizes that both Type I and Type II IEPR are appropriate for the subject study; however, it recommends that a modified Type II IEPR be conducted during detailed design to address the requirements of Type I and Type II IEPR. This recommendation is in accordance with a memorandum dated March 16, 2010. Subject: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project, Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533(d) Report, signed by the MSC Commander. Per the memorandum, a modified Type II IEPR shall be conducted to focus on safety assurance review and that validates the results of subject reports to ensure that projects are technically sound, environmentally acceptable, and economic, as applicable, and is in accordance with the original reconnaissance reports cited in statute.
3. The FRM-PCX recommends the RP for approval by the MSC and, due to the request for a modified Type II IEPR, further recommends the RP be submitted to HQUSACE through the MVD RIT for endorsement. Upon approval of the RP, please provide a copy of the approved RP, a copy of the MSC Commander approval memorandum, a copy of any HQUSACE endorsement, and the link to where the RP is posted on the District website to Eric Thaut, FRM-PCX National Program Manager (eric.w.thaut@usace.army.mil) and Michelle Kniep, FRM-PCX Regional Manager for MVD (michelle.r.kniep@usace.army.mil).
4. Thank you for the opportunity to assist in the preparation of the RP. If there are any questions, please contact Michelle Kniep or myself.

Encl


Eric Thaut
Program Manager, FRM-PCX

Memorandum
To: Eric W. Thaut
From: Eric W. Thaut
Date: 06/28/2010
Subject: Southeast Louisiana Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana, Section 533(d) Report Review Plan



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
WASHINGTON, D.C. 20314-1000

Reply to
Attention of:

SEP 28 2010

CECW-MVD (1105-2-10a)

MEMORANDUM FOR Commander, Mississippi Valley Division (CEMVD-PD-N)

SUBJECT: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project (SELA), Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533 (d) Report

1. Reference is made to the following:

a. CEMVD-DE memorandum, dated 16 March 2010, Subject: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project, Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533(d) Report, and

b. CEMVN-PM-OP memorandum, dated 6 July 2010, Subject: Review Plan Approval for Southeast Louisiana Urban Flood Control Project, W-14 Canal, St. Tammany Parish, Louisiana Section 533(d) Report which transmitted the review plan for the W-14 Canal for concurrence.

c. CEMVN-PM-OP memorandum, dated 8 September 2010: Subject: Review Plan Approval for Southeast Louisiana Urban Flood Control Project, Algiers Subbasin, Orleans Parish, Louisiana Section 533(d) Report which transmitted the review plan for the Algiers Subbasin for concurrence.

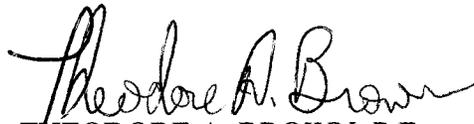
2. We have reviewed the Mississippi Valley Division's direction to the New Orleans District related to conduct of a modified Type II Independent External Peer Review (IEPR) for the Slidell W-14 Canal and Algiers Subbasin provided in reference 1.a., and the District's June 2010 Review Plan for Slidell W-14 Canal provided in reference 1.b and September 2010 Review Plan for Algiers Subbasin provided in reference 1.c. Headquarters concurs in the direction provided in reference 1.a., taking into consideration the authorization for the SELA project, that a modified Type II IEPR be conducted to focus on safety assurance review while validating the results of the section 533(d) reports to ensure the projects are technically sound, environmentally acceptable, and economic as applicable, and are in accordance with the original reconnaissance reports cited in the authorization. The review plans for Slidell W-14 Canal and Algiers Subbasin is consistent with this direction.

CECW-MVD (1105-2-10a)

SUBJECT: Request for Deferral of Independent External Peer Review for Southeast Louisiana Project (SELA), Slidell W-14 Drainage Canal Improvements Section 533(d) Report and Algiers Subbasin Section 533 (d) Report

3. Please direct any questions to CECW-MVD, Mr. John Lucyshyn, at 202-761-4515.

FOR THE COMMANDER:

A handwritten signature in black ink, appearing to read "Theodore A. Brown". The signature is fluid and cursive, with the first name being the most prominent.

THEODORE A. BROWN, P.E.

Chief, MVD Regional Integration Team
Directorate of Civil Works