



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
PO BOX 2870
PORTLAND OR 97208-2870

CENWD-PDD

27 NOV 2013

MEMORANDUM FOR Commander, Kansas City District (CENWK-PM-CJ/Melissa Corkill)

SUBJECT: Review Plan (RP) Approval for the Swope Park Industrial Area, Kansas City, Missouri, Flood Damage Reduction Project Post Authorization Change Report (PACR)

1. Reference EC 1165-2-214, Civil Works Review, 13 June 2013.
2. The RP for the Swope Park Industrial Area, Kansas City, Missouri, Flood Damage Reduction Project PACR has been prepared in accordance with the reference guidance.
3. The RP has been revised to incorporate Northwestern Division review comments.
4. I hereby approve this RP, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this RP or its execution will require review by CENWD-PDD and approval by this office.
5. The RP should be posted to the internet and available for public comment.
6. Please contact Jeremy Weber, at 503-808-3858, if you have further questions regarding this matter.


JOHN S. KEM
BG/USA
Commanding

REVIEW PLAN

**Swope Park Industrial Area Flood Damage Reduction Project
Kansas City, Missouri**

**Post Authorization Change Report/
Limited Reevaluation Report
Decision Document**

**Kansas City District
Northwestern Division**

**P2#: 156415
AMSCO No.: 012821**

**MSC Approval Date: 27 Nov 2013
Last Revision Date: 18 November 2013
Original Submittal Date: 15 August 2013**



**US Army Corps
of Engineers®**

REVIEW PLAN

**Swope Park Industrial Area Flood Damage Reduction Project
Kansas City, Missouri
Post Authorization Change Report/Limited Reevaluation Report**

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Swope Park Industrial Area Flood Damage Reduction Project ("Swope Park") Post Authorization Change Report/Limited Reevaluation Report (PACR/LRR). It has been determined that the projected total project cost may exceed the authorized Section 902 limit for the project, which is now 10% constructed. Other than costs, the project features and benefits have not significantly changed. The PACR/LRR is a decision document and based on a Level II Economic Update.

b. References. The following documents have been used are references for this PACR Review Plan:

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 DEC 12
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 MAR 11
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 SEP 06
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 NOV 07
- (5) US Army Field Manual 5-19, Composite Risk Management, 21 AUG 06
- (6) Swope Park Industrial Area PACR Project Management Plan, 26 JUL 13
- (7) Kansas City District Quality Management Plan (QMS Site)
- (8) Director of Civil Works' Policy Memorandum CWPM 12-001, 8 MAR 12

c. Requirements. This Review Plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-214) and planning model certification/ approval (per EC 1105-2-412).

d. Project Authority. Section 101(a) (24) of the Water Resources Development Act (WRDA) of 1984 authorized construction of a flood damage reduction project for the Blue River Basin, Missouri, as described in the report of the Chief of Engineers dated January, 1999. The 1999 authority was modified by section 123, Division D, Title I, of the FY03 Omnibus Act (Public Law 108-7), as described in the report of the Chief of Engineers dated December 19, 2003. In 2007, Public Law 110-114 (WRDA 2007), section 1001, paragraph 29 authorized:

"SWOPE PARK INDUSTRIAL AREA, BLUE RIVER, KANSAS CITY, MISSOURI. The project for flood damage reduction, Swope Park Industrial Area, Blue River, Kansas City, Missouri: Report of the Chief of Engineers dated December 30, 2003, at a total cost of \$16,980,000, with an estimated Federal cost of \$11,037,000 and an estimated non-Federal cost of \$5,943,000."

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. In this case, because the effort is focused primarily on the determination of the total project cost, with minimal

changes to the authorized project features, the RMO for the peer review effort described in this Review Plan is the Major Subordinate Command (MSC), Northwestern Division.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. REPORT INFORMATION

a. Decision Document. The Swope Park PACR/LRR is intended to recommend an increase to the maximum amount that the USACE is authorized to spend to complete the project and document the reasons for recommendation. The Swope Park project is a single-purpose flood damage reduction project. A portion of the overall project is already constructed. A PACR/LRR will determine the cost of the project features not yet constructed, determine if the total estimated project cost will exceed the 902 limit, and if it does, provide sufficient supporting documentation to support an increase to the authorized project cost. If the PACR/LRR recommends an increase in the authorized project cost, the PACR/LRR will require approval by the Chief of Engineers and the projects new total cost will need Congressional authorization. The report is not anticipated to recommend any significant changes to the authorized project features or locations of those features.

b. Report/Project Description. The Swope Park Industrial Area is a 50 acre site located on the left descending bank of the Blue River that drains about a 272 square-mile area, much of which is highly urbanized. Within the corporate limits of Kansas City, Missouri, the industrial park is centered on 75th Terrace and bounded by a Union Pacific Railroad track and the Blue River channel. The area was fully developed prior to enactment of the Flood Insurance Act and is almost entirely within the 100-year floodplain. The city of Kansas City, Missouri (KCMO) is the non-Federal project sponsor. The flood damage reduction plan consists of floodwalls and levees approximately 6,000 feet in length to protect the area from up to the 0.2 percent chance (500-year) flood event. Included in the authorized project are various floodwall and levee sections, gatewells, a rolling gate structure, interior drainage collection system, and environmental mitigation..

The pipes for the interior drainage system are partially constructed. This was done to initiate construction and also to ensure the interior drainage system is completed before the perimeter levees and floodwalls are constructed.

In accordance with the above mentioned authorization, the total project cost was authorized at \$16,980,000 (FY07 price level). Using this authorized cost, the calculated 902 limit is \$24,864,000 (FY13 price level). The goal of the current project is to construct all flood damage reduction features in order to provide the originally authorized level of flood level risk reduction.

c. Factors Affecting the Scope and Level of Review.

- **Level of Difficulty.** The study is anticipated to include minor design efforts of authorized features to support a cost update, as well as a confirmation of economic benefits. These efforts will utilize standard practices and models. There are no changes to the National Economic Development (NED) Plan scope of the authorized project, no changes to the project purpose, and no changes to the local cooperation requirements. The emphasis of the PACR/LRR will be documenting the project cost increases that have occurred since authorization, most of which

are historical in nature. There are also no significant changes to project outputs, benefits or level of protection. Based on these factors, the PACR/LRR does not warrant a high level review.

- **Life Safety.** This study will not result in any change to the authorized project and will not affect the life safety risks that are already present. Approval of the PACR/LRR would ensure that the project remains on track to move forward to provide the authorized protection level.

- **Public Support.** There is strong public support for this project as existing residents, businesses, and infrastructure benefit greatly from the completion of the project. Little or no public controversy is expected.

- **Standard USACE Practices.** There is no information in the decision document or any designs in support of the cost estimate which are based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices. The methods being utilized for design, cost estimating and economic calculations are standard USACE practices.

- **Project Visibility.** The project has support from the Congressional delegation, the local government, the business community, and the local media. This PACR/LRR has minimal effects on the performance of the project, but will ensure future viability of the project and continued support from the local community.

d. In-Kind Contributions. None.

e. Causes of Total Project Cost Increase. Cost increases experienced and anticipated for the project are primarily not design or scope changes but quantity increases and delayed funding. A segment of the bank within the project limits has experienced excessive erosion over the years since the feasibility was completed. Plans to reconstruct the bank and measures to prevent future erosion will require substantial fill and riprap not identified in the feasibility study. Engineering costs have also exceeded feasibility estimates primarily due to the protracted time to execute the project due to limited funding. The design has been drawn out over a long period resulting in disjointed and interrupted efforts often as the result of changing staff when work is resumed. Cost risk analysis has also added to the current cost estimates.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district manages DQC. Documentation of DQC activities is required in accordance with the Quality Manual of the District and the home MSC. DQC is overseen by the District's Chief of Engineering and Chief of Geotechnical Branch.

- a. Documentation of DQC.** The Kansas City District's process for QC requires documentation of DQC comments and responses. Certification of DQC is provided to the ATR team.

- b. Products to Undergo DQC.** The final draft PACR/LRR will undergo DQC.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency 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 results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

c. Products to Undergo ATR. The final draft of the PACR will undergo ATR.

d. Required ATR Team Expertise.

Table 5-1: ATR TEAM EXPERTISE

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as Civil Works Project Management).
Civil Works Project Management	The Civil Works Project Management reviewer shall have experience in Civil Works flood damage reduction projects and also in-depth knowledge of the PACR/LRR requirements and process. The ATR lead may also be the Civil Works Project Management team member.
Economics	Team member will be experienced in civil works and related flood risk reduction projects.
Cost Engineering	Team member will be familiar with cost estimating for similar civil works projects using the Microcomputer Aided Cost Engineering System (MCACES) model. Team member will be a Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer. It is anticipated the Cost Engineering ATR will be NWW Cost DX.
Real Estate	Team member will be experienced in Federal civil work real estate laws, policies and guidance. Member will have experience working with relevant non-federal sponsor real estate issues.
Civil Engineer	Team member will be experienced in levee design, with at least five years of experience. A PE is not required.

e. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments are

limited to those required to ensure adequacy of the product. The four key parts of a quality review comment 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 order 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 team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team prepares a Review Report summarizing the review. Review Reports are an integral part of the ATR documentation and also:

- Identify the document(s) reviewed and the purpose of the review;
- 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;
- Identify and summarize each unresolved issue (if any); 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 is certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead prepares a Statement of Technical Review certifying that the issues raised by the ATR team are resolved (or elevated to the vertical team). A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for decision documents under certain circumstances. 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. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review. There are two types of IEPR:

- **Type I IEPR.** Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

- **Type II IEPR.** Type II IEPR, or Safety Assurance Review (SAR), is managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

f. Decision on IEPR. This report does not meet any of the mandatory triggers for Type I IEPR found in EC 1165-2-214 and does not increase any life safety risks inherent to the original project. The report does not consider any changes to the authorized features. The report involves minimal design work in support of the update to the cost estimate, as well as confirmation of the economic costs and benefits. Moreover, this PACR/LRR very is limited in scope or impact, addressing only a change in the total project costs that it would not significantly benefit from an independent peer review. For this reason, it is not anticipated that IEPR would add value to the study. Therefore, Independent External Peer Review will not be performed.

This risk informed decision explicitly considered that:

- This PACR/LRR does not meet the mandatory triggers for Type I IEPR described in Paragraph 11.d.(1) and Appendix D of EC 1165-2-214:
 - Minimal, if any, consequences of non-performance on Project economics, the environmental and social well-being (public safety and social justice);
 - The PACR/LRR contains no influential scientific information or highly influential scientific assessment; and

- The PACR/LRR decision document will meet the exclusions described in Paragraph 11.d.(3) and Appendix D of EC 1165-2-214:
 - The project is not controversial;
 - The project has no adverse impacts on scarce or unique tribal, cultural, or historic resources;
 - The project has no adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures; and
 - The project has no adverse impacts on a species listed as endangered or threatened under the Endangered Species Act of 1973 or the critical habitat of such species.
- There are no requests to conduct IEPR from a head of a Federal or state agency charged with reviewing the Project; and
- Due to the very limited scope change covered by this PACR/LRR, there is no reformulation of plans or changes to benefits, outputs, performance, or level of protection. Therefore, this PACR/LRR is in effect an implementation document and not a major decision document requiring a Type I IEPR.

g. Products to Undergo Type I IEPR. Not applicable.

h. Required Type I IEPR Panel Expertise. Not applicable.

i. Documentation of Type I IEPR. Not applicable.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents are reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in 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 home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING MANDATORY CENTER OF EXPERTISE REVIEW AND CERTIFICATION

All decision documents are coordinated with the Cost Mandatory Center of Expertise (MCX), located in the Walla Walla District. The Cost MCX will assist in determining the expertise needed on the ATR team and in the development of the review charge(s). The MCX will also provide ATR certification. The RMO is responsible for coordination with the Cost MCX.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, 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. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC and ATR.

EC 1105-2-412 does not cover engineering models used in planning. 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. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on USACE studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC and ATR.

j. Planning Models. Use of the following planning model is anticipated in the development of the decision document:

Table 9-1: Planning Models

Model Name And Version	Brief Description Of The Model And How It Will Be Applied In The Study	Certification/ Approval Status
HEC-FDA 1.2.5	Changes in potential economic flood damages, and damages prevented (benefits), will be evaluated using HEC-FDA (Hydrologic Engineering Center Flood Damage Analysis). This is the official, standard USACE program used in economic analysis of flood damage. Version 1.2.5 of HEC-FDA, the most current version of the software, is certified and will be used in this analysis.	Certified
Section 902 Analysis Certified Tool	Section 902 of the Water Resources Development Act (WRDA) of 1986 defines the maximum amount that a project can cost. This is often called the 902 Limit or Project Cost Cap. "The maximum project cost limit imposed by Section 902 is a numerical value specified by law which must be computed in a legal manner (ER 1105-2-100 Appendix G)."	Certified

k. Engineering Models. Use of the following engineering model is anticipated in the development of the decision document:

Table 9-2: Engineering Models

Model Name And Version	Brief Description Of The Model And How It Will Be Applied In The Study	Certification/ Approval Status
------------------------	--	--------------------------------

Crystal Ball Software, Version 11.1.1.3.00	Excel based model will be used to identify, quantify, and analyze risk related to total project costs, to include planning, engineering and design costs. The model will be used to develop a contingency percentage that will be applied to the remaining work.	Allowed for Use
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10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. Due to the limited scope of the study, a single ATR is anticipated for the final draft of the report. The cost of the ATR is estimated to be approximately \$30,000 and is scheduled for December 2013.

b. Type I IEPR Schedule and Cost. Not applicable.

c. Model Certification/Approval Schedule and Cost. All models anticipated for use on this project are already certified or approved for use.

11. PUBLIC PARTICIPATION

a. The public comment period is 30 days. The Kansas City District will consider all public comments and recommend changes to the Review Plan, if necessary, to the RMO. Significant and relevant public comments will also be provided to reviewers prior to conducting the review. The Review Plan is posted to the Kansas City District’s webpage, located at the path below:

<http://www.nwk.usace.army.mil/Missions/CivilWorks/CivilWorksProgramsandProjects/CivilWorksReviewPlans.aspx>

b. Public comments to the Review Plan may be made in writing or emailing the following contact:

U.S. Army Corps of Engineers, Kansas City District
c/o Kent Myers, CENWK-PM-CJ
601 East 12th Street
Kansas City, MO 64106
Email: kent.n.myers@usace.army.mil

12. REVIEW PLAN APPROVAL AND UPDATES

The Northwestern Division Commander issues approval of this Review Plan. The Commander’s approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) are re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders’ approval memorandum, is posted on the Home District’s webpage.

13. REVIEW PLAN POINTS OF CONTACT

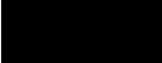
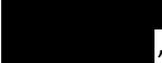
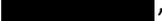
Public questions and/or comments on this review plan can be directed to Kent Myers, Project Manager, Kansas City District at (816) 389-3399.

Attachments follow.

ATTACHMENT 1: TEAM ROSTERS

District-level names are redacted from the version posted for public comment to protect privacy.

Product Delivery Team:

Project Manager	Kent Myers, CENWK-PM-CJ
Economics	 CENWK-PM-PF
Cost Estimating	 , CENWK-ED-DC
Environmental	 , CENWK-PM-PR

Agency Technical Review Team:

ATR Lead	TBD
Civil Works Project Management	TBD
Economics	TBD
Cost Estimating	TBD
Real Estate	TBD
Civil Engineer	TBD

Vertical Team:

Review Management Office	Jeremy Weber, CENWD-PDD
NWD Point of Contact	Jeremy Weber, CENWD-PDD
NWD Regional Integration Team	Andy Miller, CECW-NWD

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) for the [Post Authorization Change Report](#) for the [Blue River Basin, Swope Park Industrial Area, Flood Damage Reduction Project, Kansas City, Missouri](#) is complete. The ATR was conducted as defined in the project’s Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, 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 results, including whether the product meets the customer’s needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR are resolved and closed in DrCheckssm.

_____	_____
Name	Date
ATR Team Leader	
Office Symbol/Company	

_____	_____
<i>Kent N. Myers</i>	Date
Project Manager	
<i>CENWK-PM-CJ</i>	

_____	_____
<i>Jeremy J. Weber</i>	Date
Review Management Office Representative	
<i>CENWD-PDD</i>	

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: [Describe the major technical concerns and their resolution.](#)

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

_____	_____
<i>David L. Mathews</i>	Date
Chief, Engineering Division	
<i>CENWK-ED</i>	

_____	_____
<i>Jennifer L. Switzer</i>	Date
Chief, Planning Branch	
<i>CENWK-PM-P</i>	

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NER	National Ecosystem Restoration
ASA(CW)	Assistant Secretary of the Army for Civil Works	NEPA	National Environmental Policy Act
ATR	Agency Technical Review	O&M	Operation and maintenance
CSDR	Coastal Storm Damage Reduction	OMB	Office and Management and Budget
DPR	Detailed Project Report	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DQC	District Quality Control/Quality Assurance	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	PACR	Post Authorization Change Report
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home District/MSD	The District or MSC responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
MCX	Mandatory Center of Excellence	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act
NED	National Economic Development		