



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, SOUTHWESTERN DIVISION  
1100 COMMERCE STREET  
DALLAS, TX 75242-1317

CESWD-RBT

MEMORANDUM FOR Commander, Little Rock District

SUBJECT: Review Plan Approval for Three Rivers, Southeast Arkansas,  
Preconstruction Engineering and Design and Construction Phase

1. References:

a. CESWL memorandum dated 15 March 2019, subject: Three Rivers PED – Request Southwestern Division Review and Approval of Review Plan, P2#478043

b. EC 1165-2-217, Water Resources Policies and Authorities- Review Policy for Civil Works, 20 February 2018

c. CESWD-RBT memorandum dated 4 March 2019, subject: Delegation of Authority for Review Plans for Civil Works Projects

2. In accordance with references 1b and 1c, I hereby approve the enclosed Review Plan (RP) for the subject project

3. Please post the final approved RP with a copy of this memorandum to the District's public internet website. Prior to posting to the District website, the names of USACE employees should be removed.

4. The SWD point of contact for this action is Mr. Michael Sterling, CESWD-RBT, at 469-487-7096.

Encl

A handwritten signature in blue ink, appearing to read "PETE PEREZ".

PETE PEREZ, P.E.  
Director, Regional Business

# REVIEW PLAN

Three Rivers Study, Southeast Arkansas  
Pre-Construction, Engineering, and Design (PED)  
Phase

Little Rock District

Submission Date: March 2019

MSC Approval Date: JUNE 6, 2019

Last Revision Date: \_\_\_\_\_

# REVIEW PLAN

## Three Rivers, Arkansas Pre-Construction, Engineering, and Design (PED) Phase

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## 1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This review plan defines the scope and level of review for implementation documents. Implementation documents include design documentation reports (DDR) and Construction Plans and Specifications. This review plan defines scope and level of review for the DDR and Plans and Specifications associated with the Pre-construction, Engineering, and Design Phase of the Three Rivers, Southeast Arkansas Project.

### b. References

- (1) EC 1165-2-217 Civil Works Review, February 2018.
- (2) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 August 1999.
- (3) ER 1110-1-12, Engineering and Design Quality Management, 31 July 2006, as revised through 31 March 2011.
- (4) ER 415-1-11 – Biddability, Constructability, Operability, Environmental and Sustainability (BCOES) Reviews, 1 January 2013.
- (5) ER 1100-2-8162, Incorporating Sea Level Change in Civil Works Programs, 31 December 2013.
- (6) Resolution by the Senate Committee on Environment and Public Works, 5 June 1997.
- (7) Water Resources Reform and Development Act of 2014 (WRRDA 2014), Public Law 113-121, 10 June 2014.
- (8) Climate Change – ER 1110-2-1941, 02 February 2018, ECB 2016-25 (reference a), Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs, and Projects.

c. **Requirements.** This review plan was developed in accordance with EC 1165-2-217 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) and BCOES (Biddability, Constructability, Operability, Environmental and Sustainability) review, Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, the cost estimate may be subject to cost engineering review and certification (per EC 1165-2-217).

## 2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall review effort described in this Review Plan. The RMO for implementation documents is the Major Subordinate Command (MSC), (per EC 1165-2-217). Therefore, the RMO for the review effort described in this review plan is Southwestern Division.

### 3. STUDY INFORMATION

#### a. Implementation Document.

This review plan has been prepared for the Design Document Reports and the Construction Documents (Plans and Specifications) for the Three Rivers, Southeast Arkansas Project. The DDR will serve as the record of the design of the project. The Plans and Specifications will serve as the bid documents for the construction of the Three Rivers, Southeast Arkansas construction features such as the new containment structure at an elevation of 157 feet above NAVD88 with a relief channel through the Historic Closure Structure, removal of the existing Melinda Structure, and opening the Owens Lake Structure between Owens Lake and the White River. Approval of these implementation documents is at the district level.

#### b. Project Description.

- (1) The Three Rivers Feasibility Study was conducted at the request of the Arkansas Waterways Commission and under the authority of Section 216 of the Flood Control Act of 1970 (Public Law 91-611), which authorized the U.S. Army Corps of Engineers to “review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest”. Pre-construction, engineering and design (PED) activities for the project will continue under the authority cited above.



**Figure 1. Three Rivers Project Area**

- (2) The study culminated in the *Final Three Rivers Southeast Arkansas Integrated Feasibility*

*Report and Environmental Assessment*, dated August 2018. A Chief of Engineers Report recommending the plan in the feasibility report was signed on 6 September 2018.

(3) Section 1401 of the Water Resources Development Act of 2018 authorized the construction of the Three Rivers, Southeast Arkansas project.

(4) The authorized project is a plan to promote a long-term sustainable navigation system by reducing the risk of a cutoff forming near the entrance channel of the MKARNS between the Arkansas and White rivers, particularly if the existing containment structure fails (i.e., breaches). The recommended plan is the National Economic Development plan that consists of a new containment structure at an elevation of 157 feet above NAVD88 with a relief channel through the Historic Closure Structure, which would dramatically reduce the risk of a cutoff forming. The structure would be approximately 2.5 miles long, and would begin on natural high ground south and west of the Melinda Structure located on the south side of Owens Lake. Continuing east, it crosses the Melinda head cut south of the Melinda Structure, and then heads northeast connecting to the existing containment structure north of Jim Smith Lake. It follows the Soil Cement Structure alignment, and terminates at the Historic Closure Structure. In most locations, the structure will rise five to seven feet above ground elevation and be no more than 12 feet above ground at its highest point. The relief opening at the Historic Cutoff would be at an elevation of 145 feet. The width of the opening will be optimized during PED. This will ensure that flows through the Historic Cutoff, the natural path by which waters of the White and Arkansas Rivers have historically flowed, would not adversely impact navigation.

Opening the Historic Cutoff would reduce maximum head differentials across the isthmus allowing better control over the location of future overtopping events and would decrease the duration of head differentials and flow velocities and hence erosion across the isthmus. Lastly, the opening would restore ecosystem functions of Webfoot Lake and reduce erosion on the east side of the lake where there are nick points that will likely lead to head cutting and a resultant decline in the ecosystem function of Webfoot Lake. Similarly, removing the existing Melinda Structure would reconnect Owens Lake to its former southern limb, thereby returning open water ecosystem functions to the oxbow portion of the surrounding flooded bottomland hardwood forest. Demolition debris would be pushed into the deep scour hole at the top of the Melinda head cut to reduce the area's water turbulence and erosion. Opening the Owens Lake Structure between Owens Lake and the White River would prevent water from backing up into Owens Lake, benefiting adjacent bottomland hardwood forests and preplacing a fish passage into Owens Lake. Other than changes described above, implementation of the recommended plan would not alter hydrology in the surrounding bottomland hardwood forests. MKARNS will have no operational changes to navigation.

### **c. Factors Affecting the Scope and Level of Review.**

(1) The focus of this review plan is on the implementation documents for the initial construction of the Three Rivers, Southeast Arkansas project. Since the project construction features are situated in and around the McClellan-Kerr Arkansas River Navigation System (MKARNS), the designs will take into account the latest regulations and guidance on climate change.

(2) An assessment of the need for a Type II Independent External Peer Review (IEPR), Safety

Assurance Review, is documented in Section 6 of this review plan. This assessment by the Little Rock District Chief of Engineering and Construction Division considered life safety and other factors. This assessment was conducted for the initial construction contracts only.

#### **4. DISTRICT QUALITY CONTROL (DQC) AND BCOES REVIEW**

All implementation documents will undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project requirements defined in the design phase project management plan (PMP). The Little Rock District will manage the DQC. The DQC process will be performed in two phases. The initial phase will be the day-to-day production reviews performed by the designers' supervisor, team leader, or senior engineer as the product is being developed. For the second phase, qualified engineers/scientists not affiliated with the development of the product will be selected commensurate with the complexity of the product to be reviewed. Branch and Section Chiefs will sign-off to complete the review for the plans and specifications. The Engineering Chief will sign-off when the plans and specifications are ready to advertise thus completing the DQC review process. These reviews will be documented in Dr. Checks (PROJNET).

For Civil Works projects, the BCOES review will include evaluation of Plans and Specifications, Engineering Considerations and Instruction for Field Personnel (ECIFP) reports, the operations, maintenance, repair, replacement, and rehabilitation (OMRR&R) plan for the project and other required documents as mentioned in ER 415-1-11. The Little Rock District will manage the BCOES review.

- a. Documentation of DQC and BCOES. DQC and BCOES will be documented through the use of DrChecks and DQC/BCOES certifications.
- b. Products to Undergo DQC and BCOES. The P&S packages will undergo DQC and BCOES reviews.
- c. Required DQC and BCOES Expertise. DQC and BCOES will be performed by staff in the home district that are not involved in preparing the implementation documents. The required disciplines for review are similar to the PDT disciplines listed in Attachment 1. The DQC supplements the reviews provided by the Project Delivery Team during the course of completing the design.

#### **5. AGENCY TECHNICAL REVIEW (ATR)**

ATR is mandatory for all implementation documents. 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. 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.

- a. Products to Undergo ATR. The DDR documents will undergo an ATR.
- b. Required ATR Team Expertise.

<b>ATR Team Members/Disciplines</b>	<b>Expertise Required</b>
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works implementation 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 engineering).
Environmental Resources	Team member will have independently completed EA/EIS's and be well versed in the NEPA process, completed all environmental compliance and permits, will have participated in partnerships with other environmental resource agencies, and will have experience with wetland mitigation and Section 106 actions and documentation.
Hydrology and Hydraulic Engineering	Team member shall be an expert in hydrology and hydraulics related to inland navigation systems and the use of HEC computer modeling. A registered professional engineer (PE) is preferred.
Civil Engineering	Team member shall have expertise in civil engineering design and review of site/civil layout, grading, drainage and utilities for inland navigation projects, and shall be a registered professional engineer.



Structural Engineering	Team member will be an expert in the field of structural engineering, especially in review of inland navigation structures. The team member must be a licensed professional engineer with the ability to exercise engineering judgment based on experience in design of inland navigation features.
Geotechnical Engineer	Team member shall have expertise in geotechnical engineering design and shall be an actively licensed professional engineer. Team member shall have experience in review of armored containment dikes, stone sills, and breakwaters.
Construction Manager	Team member shall have experience in the management of inland navigation construction projects. Team member shall have experience as an Administrative Contracting Officer of projects involving construction of inland navigation structures. Team member shall be a registered professional engineer.
Real Estate	Team member shall have experience with similar civil works projects and should also be familiar with preparing, processing, and reviewing Real Estate Plans. Team member shall have experience with land acquisition strategies.
Operations – Navigation	Team member shall have extensive knowledge and experience with operation and maintenance of inland navigation systems.

c. 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 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 ER 1110-1-12. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

- d. Review Report. At the conclusion of the ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:
- (1) Identify the document(s) reviewed and the purpose of the review;
  - (2) Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
  - (3) Include the charge to the reviewers;
  - (4) Describe the nature of their review and their findings and conclusions;
  - (5) Identify and summarize each unresolved issue (if any); and
  - (6) Include a copy of each ATR comment, the PDT response, a brief summary of the pertinent points in the follow on discussion, including any vertical coordination, and the agreed upon resolution.
- e. ATR Certification. ATR will be 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 will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed for all the implementation documents. A sample Statement of Technical Review is included in Attachment 2.

## **6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)**

An IEPR may be required for implementation 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 1165-2-217, is made as to whether an IEPR is appropriate. IEPR panels will 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 being conducted. There are two types of IEPR:

- a. Type I IEPR. Type I IEPRs 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 1165-2-217.

- b. Type II IEPR. Type II IEPRs, or Safety Assurance Reviews (SAR), are 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.
- c. Decision on IEPR.
  - (1) Type I IEPR's are conducted on project studies and reports. Since this review plan deals with implementation documents, a Type I IEPR is not applicable.
  - (2) Type II Independent External Peer Review, Safety Assurance Review, is required by EC 1165-2-217 for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life.
  - (3) Based on a risk informed assessment (attached memorandum dated March 2019 – Attachment 5), Little Rock District Chief, Engineering and Construction Division determined that there is not a significant threat to human life associated with the Three Rivers, Southeast Arkansas Project construction contracts. Therefore, a Type II IEPR is not required for this contract.
- d. Products to Undergo IEPR. Not applicable.
- e. Required IEPR Panel Expertise. Not applicable.
- f. Documentation of IEPR. Not applicable.

**7. POLICY AND LEGAL COMPLIANCE REVIEW**

All implementation documents will be reviewed for their compliance with law and policy. The DQC will facilitate the policy and legal compliance review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of results in implementation documents.

**8. COST ENGINEERING AGENCY TECHNICAL REVIEW AND MANDATORY CENTER OF EXPERTISE REVIEW AND CERTIFICATION**

This is not applicable since this review plan is for implementation documents associated with the PED phase of the Three Rivers, Southeast Arkansas Project.

**9. MODEL CERTIFICATION AND APPROVAL**

- 1. ADH = Adaptive Hydraulics Model System.  
<https://www.ercd.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article->

[View/Article/476708/adaptive-hydraulics-model-system/](#) Adaptive Hydraulics (ADH) is a modular, parallel, adaptive finite-element model for one-, two- and three-dimensional flow and transport. ADH is a module of the Department of Defense (DoD) Surface-Water Modeling System and Ground-Water Modeling System. ADH simulates groundwater flow, internal flow and open channel flow. The ADH module was developed in the Engineer Research and Development Center's Coastal and Hydraulics Laboratory and is a product of the System-Wide Water Resources Program. Modeling technology on the ERDC Ship/Tow Simulator accurately portrays currents, wind and wave conditions, shallow water effects, bank forces, ship handling, ship to ship interaction, fender forces, anchor forces and tug assistance.

2. ERDC Ship/Tow Simulator. <https://www.erd.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/476712/erd-shiptow-simulator/> Engineers and ship pilots can now overcome the challenges of evaluating navigation channel designs, modifications and safety issues. Located at ERDC's Coastal and Hydraulics Laboratory (CHL), the ERDC Ship/Tow Simulator can simulate ports, harbors, inland waterways and any other maritime environment.
3. Sediment Transport: HEC-RAS and ADH. Sediment transport is the movement of solid particles (sediment), typically due to a combination of gravity acting on the sediment, and/or the movement of the fluid in which the sediment is entrained. Sediment transport due to fluid motion occurs in rivers, oceans, lakes, seas, and other bodies of water due to currents and tides. Sediment transport is important in the fields of sedimentary geology, geomorphology, civil engineering and environmental engineering. Knowledge of sediment transport is most often used to determine whether erosion or deposition will occur, the magnitude of this erosion or deposition, and the time and distance over which it will occur. ([https://en.wikipedia.org/wiki/Sediment\\_transport](https://en.wikipedia.org/wiki/Sediment_transport), accessed 19 April 2019).
4. Bathymetric Surveys: Multibeam. Bathymetric surveys allows for the measurement of the depth of a water body as well as map the underwater features of a water body. Bathymetric surveys are used for many different types of research including flood inundation, contour of streams and reservoirs, leakage, scour and stabilization, water-quality studies, dam removal, biological and spill, and storage and fill in reservoirs and ponds. Multi-beam surveying: A multibeam echo sounder attached to a boat sends out a wide array of beams across a "swath" of the waterbody floor. As the beams are bounced back from the waterbody floor, the data is collected and processed. The processed data can be viewed in real time on the boat during the survey. ([https://www.usgs.gov/centers/oki-water/science/bathymetric-surveys?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/centers/oki-water/science/bathymetric-surveys?qt-science_center_objects=0#qt-science_center_objects), accessed 18 April 2019)
5. InRoads and OpenRoads are the civil engineering software packages used for 3-D modeling and plan production. InRoads is the current version and OpenRoads the successor which we currently estimate to be implemented later this year. This software allows a designer to model new, linear projects such as roadways with respect to an existing ground surface that is obtained through ground survey (and/or bathymetry). Once an existing surface is obtained, a horizontal and vertical alignment (i.e. road centerline) is placed into the model to designate the planned location of the roadway. A designer then

places a template (basically a proposed cross section) on this alignment and the software calculates a new surface which is used to show new contours which is then used to calculate earthwork volumes. The template can be defined further to describe the different layers of a road and its embankment which is then used to more exactly calculate all of the different materials in the road section. Although we are not exactly building roads in this project, all of the stone containment structures are embankments that are directly analogous to a roadway, and hence, well suited to the use of this software.

6. Soil Borings. The objective of the proposed exploration program is to obtain subsurface information necessary to complete geotechnical evaluation and design of containment structures and foundations. The program will consist of soil borings and cone penetration tests along the centerline of the containment structure and sheet pile wall. The data obtained is necessary to characterize the thickness, strength and permeability of the underlying foundational materials, and provide design parameters that include seepage, slope stability, and settlement analyses.

The exploration project described herein is justified by the Three Rivers Project (Section 1401 of the Water Resources Development Act of 2018) which is currently in a preliminary engineering and design phase. The proposed measures require a thorough geotechnical investigation to provide greater insight of the existing condition within the project area and will determine design parameters that are required for structural and geotechnical engineering. The lack of a thorough exploration project may result in unknown risk to the public, as well as differing site condition claims during construction.

## **10. REVIEW SCHEDULES AND COSTS**

ATR Schedule and Cost. The estimated schedule and cost budgeted for ATR is \$75,000 and is scheduled for 3<sup>rd</sup> QTR FY20. The District will advise RMO of any changes to the ATR schedule and request from the RMO when an ATR team should be assembled.

## **11. PUBLIC PARTICIPATION**

Public participation is not required for this review plan.

## **12. REVIEW PLAN APPROVAL AND UPDATES**

The Southwestern Division Commander is responsible for approving 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) should be 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, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

### **13. POCs**

#### **Review Plan POC's**

District Contact, Project Manager: Dana Coburn, 501-324-5601

District Contact, Design Team Lead: Andrew Brown, 501-324-6161

MSC Contact: TBD

**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS**

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-217. 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 have been resolved and the comments have been closed in DrChecks<sup>sm</sup>.

*SIGNATURE*

Name

ATR Team Leader

Office Symbol/Company

Date

*SIGNATURE*

Name

Project Manager

Office Symbol

Date

*SIGNATURE*

Name

Architect Engineer Project Manager<sup>1</sup>

Company, location

Date

*SIGNATURE*

Name

Review Management Office Representative

Office Symbol

Date

## 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.

*SIGNATURE*

Name

Chief, Engineering and Construction Division

Office Symbol

Date

*SIGNATURE*

Name

Chief, Planning Division

Office Symbol

Date

<sup>1</sup> Only needed if some portion of the ATR was contracted



**ATTACHMENT 3: REVIEW PLAN REVISIONS**

<b>Revision Date</b>	<b>Description of Change</b>	<b>Page / Paragraph Number</b>

**ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS**

<b>Term</b>	<b>Definition</b>	<b>Term</b>	<b>Definition</b>
ASA(CW)	Assistant Secretary of the Army for Civil Works	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
ATR	Agency Technical Review	PCX	Planning Center of Expertise
DQC	District Quality Control/Quality Assurance	PDT	Project Delivery Team
Home District/M SC	The District or MSC responsible for the preparation of the decision document	RED	Regional Economic Development
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMC	Risk Management Center
IEPR	Independent External Peer Review	RMO	Review Management Organization
MCX	Mandatory Center of Expertise	SAR	Safety Assurance Review
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers
NED	National Economic Development	WRDA	Water Resources Development Act
NEPA	National Environmental Policy Act		