**DEPARTMENT OF THE ARMY**
U.S. ARMY CORPS OF ENGINEERS, SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

CESAD-RBT

MEMORANDUM FOR Commander, Mobile District, P.O. Box 2288, Mobile, Alabama 36628-0001

SUBJECT: Approval of the Review Plan for Proctor Creek Watershed, Aquatic Ecosystem Restoration Project, City of Atlanta, Georgia

1. References:

a. Memorandum, CESAM-PD-FP, 25 January 2021, subject as above.

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

2. The Review Plan (RP) for the Proctor Creek Watershed Aquatic Ecosystem Restoration Project, submitted by the Mobile District via reference 1.a noted above has been reviewed by South Atlantic Division (SAD). The RP is hereby approved in accordance with reference 1.b.

3. The South Atlantic Division Office shall be the Review Management Organization (RMO) for this project.

4. SAD concurs with the District's RP recommendation that outlines the requirements for District Quality Control (DQC), Agency Technical Review (ATR), and Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review and the conclusion that a Safety Assurance Review/Type II Independent External Peer Review is not required.

5. The District should take steps to post the approved RP to its website and provide a link to CESAD-RBT. Before posting to the website, the names of Corps/Army employees should be removed. Subsequent significant changes to this RP, such as scope or level of review changes, should they become necessary, will require new written approval from this office.

6. The SAD point of contact is Ms. Shannon L. Geoly, CESAD-RBT, (404) 562-5121.

MCCALLISTER.LARRY.DWAYNE.1144889661
Digitally signed by MCCALLISTER.LARRY.DWAYNE.1144889661
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Encl

LARRY D. MCCALLISTER, PhD, PE, SES
Director of Programs

# PROJECT REVIEW PLAN

# for

# Proctor Creek,
# Aquatic Ecosystem Restoration Project
# City of Atlanta, Georgia

P2 Project No: 470672

## Mobile District
## FEBRUARY 2021



US Army Corps
of Engineers®
Mobile District

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**ATTACHMENTS**

# 1. GENERAL

## a. Purpose

This Review Plan (RP) for the Proctor Creek Watershed Aquatic Ecosystem Restoration Project, City of Atlanta, Georgia, will help to ensure development of a quality engineered project by the U.S. Army Corps of Engineers (USACE) in accordance with EC 1165-2-217, “Review Policy for Civil Works.” This RP establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products, lays out a value-added process, and describes the scope of review for the final plans and specifications (P&S) and the design documentation report (DDR). The EC outlines five general levels of review: District Quality Control/Quality Assurance (DQC/QA), Agency Technical Review (ATR), Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review, Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. This RP will be provided to the Project Delivery Team (PDT) and the DQC, ATR, and BCOES Teams. The technical review efforts addressed in this RP, DQC and ATR, are to augment and complement the policy review processes. The USACE Mobile District (SAM) Chief of Engineering has assessed that the life safety risk of this project is not significant; therefore, a Type II IEPR/Safety Assurance Review (SAR) will not be required, see Paragraph 8. Any levels of review not performed in accordance with EC 1165-2-217 will require documentation in the RP of the risk-informed decision not to undertake that level of review.

## b. References

(1) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 August 1999

(2) ER 1110-1-12, Engineering and Design Quality Management, 31 March 2011

(3) EC 1165-2-217, Review Policy for Civil Works, 20 February 2018

(4) ER 415-1-11, Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review, 1 January 2013

## c. Review Plan Approval and Updates

The USACE South Atlantic Division (SAD) Commander is responsible for approving this RP. The Commander’s approval reflects vertical team input as to the appropriate scope and level of review. The RP is a living document and may change as the project progresses. The SAM is responsible for keeping the RP up to date. Minor changes to the RP since the last SAD Commander approval will be documented in Attachment 1. Significant changes to the RP (such as changes to the scope and/or level of review) must be re-approved by the SAD Commander following the process used for initially

approving the plan. The latest version of the RP, along with the Commander's approval memorandum, will be posted on the SAM's webpage. The latest RP will be provided to SAD.

### Review Management Organization

SAD is designated as the Review Management Organization (RMO). The RMO, in cooperation with the vertical team, will approve the ATR team members. SAM will assist SAD with management of the ATR and development of the charge to reviewers.

## 2. PROJECT INFORMATION

### a. Project Study Area

The project study area includes the Proctor Creek Watershed, which is located on the northwest side of the City of Atlanta. The creek drains northwesterly and joins the Chattahoochee River (Figure 1).

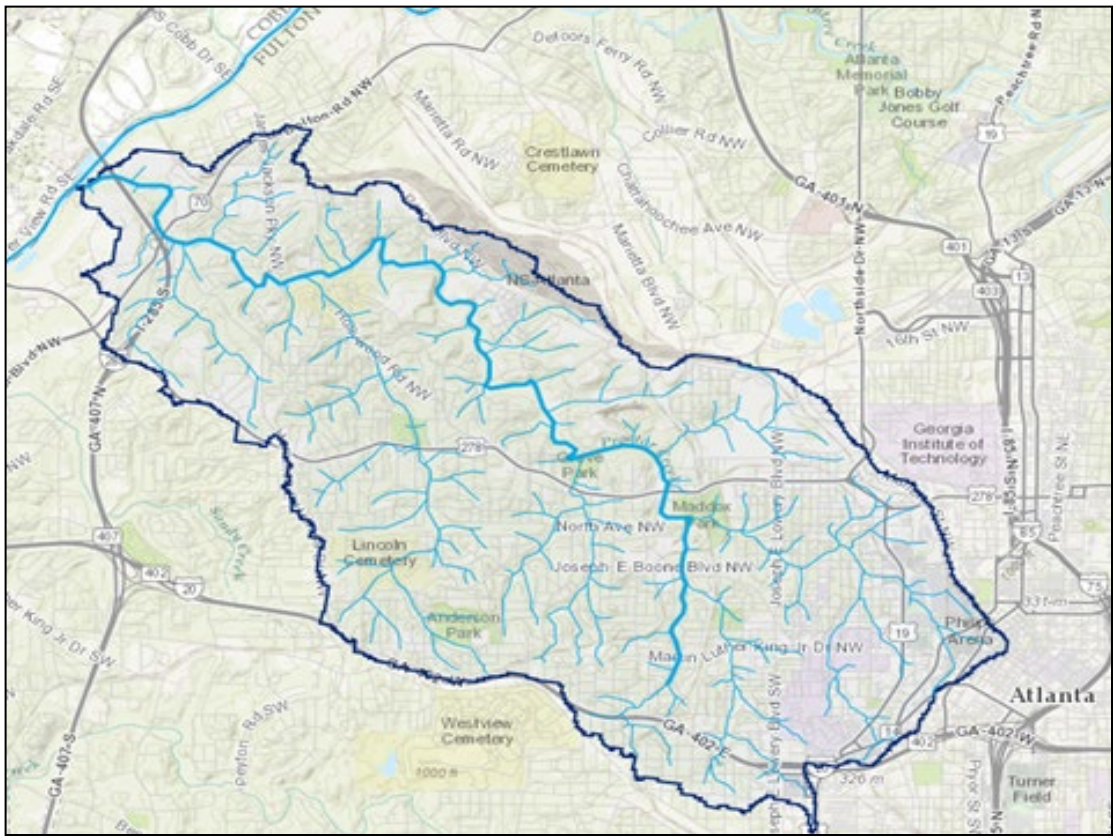


Figure 1. Location Map

The Proctor Creek Watershed has approximately 12 miles of urban stream draining approximately 16 square miles. It is an Environmental Protection Agency Priority One watershed and is one of the 19 watersheds nationwide selected to the Urban Waters

Federal Partnership for a comprehensive study. The creek lies in an urbanized area where there is a need for an ecosystem restoration program to enhance aquatic and ecological functions lost or degraded during urbanization.

### b. Project Description

The project is being constructed under the continuing authority of Section 206 of the Water Resources Development Act (WRDA) of 1996, as amended. As shown in Figure 2, the Proctor Creek Watershed Aquatic Ecosystem Restoration Project includes:

(1) restoration of the channel to a less degraded condition through bank stabilization, bank protection and in-channel bar shaping,

(2) connectivity improvements including daylighting and rock ramps at two sewer crossings in the watershed, one on the Proctor Main-stem and one on the Terrell Creek Tributary,

(3) riparian restoration features which includes invasive species removal and riparian plantings of native species.

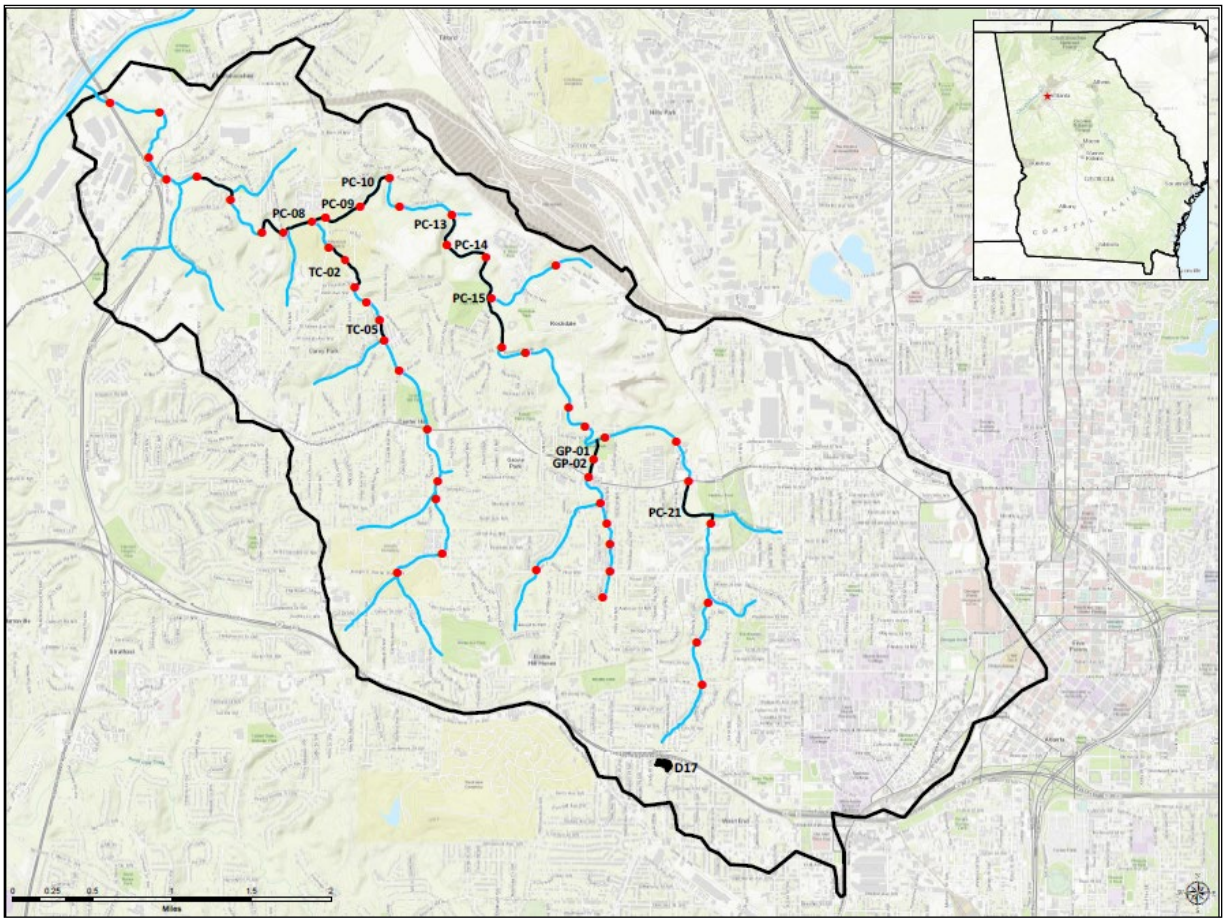


Figure 2. Watershed and Project Measures Map

## 3. PROJECT DELIVERY TEAM

The Project Delivery Team (PDT) is comprised of those individuals involved directly in the development of the implementation documents. The individual contact information and disciplines of the SAM PDT are included in Attachment 2 of this document.

## 4. REVIEW PROCESS

Products to be reviewed will include the final plans and specifications (P&S) and the design documentation report (DDR).

## 5. LEVELS OF REVIEW

This RP describes the levels of review and the anticipated review process for the various documents to be produced. The levels of review included in this RP are DQC/QA, ATR, and BCOES Review. DrChecks$^{SM}$ review software will be used to document all comments, responses, and associated resolutions accomplished throughout the review process. Comments will be limited to those that are required to ensure adequacy of the product.

## 6. DISTRICT QUALITY CONTROL/QUALITY ASSURANCE (DQC/QA)

All documents to be produced will undergo District Quality Control/Quality Assurance (DQC/QA). DQC/QA is the review of basic science and engineering work products focused on fulfilling project quality. Major Subordinate Command (MSC) and District quality management plans address the conduct and documentation of this fundamental level of review. DQC/QA will be managed by the SAM in accordance with ER 1110-1-12 (Engineering & Design Quality Management), EC 1165-2-217 (Review Policy for Civil Works), and the District Quality Management Plan. The DQC/QA will include quality checks and reviews, supervisory reviews, and PDT reviews required by ER 1110-1-12. Additionally, the PDT is responsible to assure the overall integrity of the documents produced. The DQC/QA review will be completed prior to submitting documents for ATR. At a minimum, the following disciplines should be represented on the DQC Team:

| DQC Team Disciplines | Expertise Required |
|---|---|
| DQC Lead | A senior professional with extensive experience preparing Civil Works P&S, DDR, and conducting DQC. The lead may also serve as a reviewer for a specific discipline (such as hydraulics, geotechnical or environmental resources, etc.). |
| Environmental Compliance Lead | A senior environmental resources specialist with experience with environmental compliance requirements. Can be assigned to the Cultural Resources Specialist if qualified. |
| Cultural Resources Specialist | A senior cultural resource specialist with experience with cultural resource compliance. Can be assigned to the Environmental Compliance Lead, if qualified. |
| Hydraulic Engineer | A hydraulic engineer with experience with hydraulic design of aquatic ecosystem restoration projects and river training structures. |
| Geotechnical Engineer | A geotechnical engineer with experience with geologic and geotechnical analyses that are used to support the development of aquatic ecosystem restoration projects. |
| Civil Engineer (Construction) | Team member with experience with administration of contracts for civil works project construction. |

## 7. AGENCY TECHNICAL REVIEW

All documents produced as part of this effort will undergo ATR to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses and the design plans and specifications presented are technically correct and comply with published USACE guidance.

The ATR team will consist of individuals that represent the significant disciplines involved in the accomplishment of the work. ATR will be managed within the USACE and conducted by senior USACE personnel outside of SAM that are not involved in the day-to-day production of the project. DrChecks$^{SM}$ review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. The documents to be reviewed are the DDR and technical plans and specifications. The PDT will evaluate comments in DrChecks$^{SM}$ and revise materials as necessary. The ATR leader will be from outside the MSC and must complete a statement of technical review for all final products and final documents. By signing the ATR certification, the reviewers and the District leadership certify policy compliance of the document and that the DQC/QA activities were sufficient and documented. At a minimum, the following disciplines should be represented on the ATR team:

| ATR Team Disciplines | Required Expertise |
|---|---|
| ATR Leader | Team member should have necessary expertise needed to lead ATRs, etc. The ATR lead may also have been a senior ATR reviewer on similar type projects within the past 5 years. ATR Team Leader can also serve as one of the review disciplines in addition to team leader duties. |
| Environmental Compliance Lead | Team member should have a minimum of 5 years of experience with environmental compliance requirements. Can be assigned to the Cultural Resources Specialist if qualified. |
| Cultural Resources Specialist | Team member should have a minimum of 5 years of experience with cultural resource compliance. |
| Geotechnical Engineer | Team member should have a minimum of 5 years of experience with geotechnical design including design of aquatic ecosystem restoration projects. |
| Hydraulic Engineer | Team member should have a minimum of 5 years of experience with hydraulic design including design of aquatic ecosystem restoration projects. |

## 8. INDEPENDENT EXTERNAL PEER REVIEW

### a. General

EC 1165-2-217 provides implementation guidance for both Sections 2034 and 2035 of the WRDA of 2007 (Public Law (P.L.) 110-114). The EC addresses review procedures for both the Planning and the Design and Construction Phases (also referred to in USACE guidance as the Feasibility and the Pre-construction, Engineering and Design Phases, respectively). The EC defines Section 2035 SAR as a Type II Independent External Peer Review (IEPR). The EC requires Type II IEPR be conducted outside USACE.

### b. Type I Independent External Peer Review Determination

A Type I IEPR is primarily associated with decision documents. A Type I IEPR is not applicable to the implementation documents covered by this RP.

### c. Type II Independent External Peer Review Determination

This project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-217). Therefore, a review under Section 2035 is not required. The factors in determining whether a review of design and construction activities of a project are necessary as stated under Section 2035, along with this RP's applicability statements, follow:

(1) Failure of the project would pose a significant threat to human life.

*Failure of the project would not pose a threat to human life. Placement of the aquatic ecosystem restoration measures would address hydraulic changes that are affecting habitat for endangered species. These measures would not transfer or transform risk up or downstream of the project area.*

(2) The project involves the use of innovative materials or techniques.

*This project will utilize methods and techniques used by the USACE on other similar projects.*

(3) The project design lacks redundancy.

*There is no need for redundant design features for the aquatic ecosystem measures since no risks to life safety are involved.*

(4) The project has unique construction sequencing or a reduced or overlapping design construction schedule.

*The project does not have or pose unique sequencing or a reduced or overlapping design. The construction methods and procedures have been used successfully by the USACE on other similar works.*

Based on the discussion above, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review of the P&S and DDR. If the project scope is changed, this determination will be reevaluated.

## 9. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY REVIEW

The value of a BCOES review is based on minimizing problems during the construction phase through effective checks performed by knowledgeable, experienced personnel prior to advertising for a contract. BCOES review requirements must be emphasized throughout the planning and design processes for all programs and projects, including during planning and design. This will help to ensure that the government's contract requirements are clear, executable, and readily understandable by private sector bidders or proposers. It will also help ensure that the construction may be done efficiently and in an environmentally sound manner and that the construction activities and projects are sufficiently sustainable. Effective BCOES reviews of design and contract documents will reduce risks of cost and time growth, unnecessary changes and claims, as well as support safe, efficient, sustainable operations and maintenance by the facility users and maintenance organization after construction is complete. A BCOES Review will be conducted for this project. Requirements and further details are stipulated in ER 1110-1-12 and ER 415-1-11.

## 10. POLICY AND LEGAL COMPLIANCE

The P&S and the DDR and the supporting environmental documents will be reviewed by the SAM Office of Counsel. Once approved, SAM will post the approved RP on the SAM web site for viewing by the public.

## 11. REVIEW SCHEDULE AND COSTS

The cost for DQC/QA and ATR is estimated to be approximately $10,000.00 and $15,000.00, respectively. The documents to be reviewed and scheduled dates for review are as follows:

| Milestone | Date |
|---|---|
| DQC Complete | 18 Oct 2021 |
| ATR Complete | 25 Oct 2021 |
| BCOES Complete | 08 Nov 2021 |

## ATTACHMENT 1 - REVIEW PLAN MINOR REVISIONS

| Revision Date | Description of Change | Page / Paragraph Number |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

# ATTACHMENT 2 – TEAM ROSTER

**Project Delivery Team Members**

| Discipline | Office/Agency |
|---|---|
| Project Manager | CESAM-PD-FP |
| Engineering Technical Lead (ETL) | CESAM-EN-HH |
| Environmental Compliance Lead | CESAM-PD-EI |
| Cultural Resources | CESAM-PD-EI |
| Geotechnical Engineer | CESAM-EN-GG |
| Cost Engineer | CESAM-EN-E |
| Hydraulic Engineer | CESAM-EN-HH |

**DQC/QA Team Members**

| Office | Discipline | Name | Phone Number |
|---|---|---|---|
| CESAM-EN-HH | DQC Lead | TBD | TBD |
| CESAM-PD-E | Environmental Compliance Lead and Cultural Resources | TBD | TBD |
| CESAM-PEN-HH | Hydraulic Engineer | TBD | TBD |
| CESAM-EN-GG | Geotechnical | TBD | TBD |
| CESAM-CD | Civil Engineer (Construction) | TBD | TBD |

## ATR Team Members

| Office | Discipline | Name | Phone Number |
|---|---|---|---|
| TBD | ATR Lead | TBD | TBD |
| TBD | Environmental Compliance Lead | TBD | TBD |
| TBD | Cultural Resources | TBD | TBD |
| TBD | Geotechnical | TBD | TBD |
| TBD | Hydraulic Engineer | TBD | TBD |

# ATTACHMENT 3 - ACRONYMS AND ABBREVIATIONS

| Term | Definition |
|---|---|
| ATR | Agency Technical Review |
| BCOES | Biddability, Constructability, Operability, Environmental, and Sustainability Review |
| DDR | Design Documentation Report |
| DQC | District Quality Control |
| DQC/QA | District Quality Control/Quality Assurance |
| EC | Engineer Circular |
| ER | Engineer Regulation |
| IEPR | Independent External Peer Review |
| MSC | Major Subordinate Command |
| P&S | Plans and Specifications |
| PDT | Project Delivery Team |
| QA | Quality Assurance |
| QC | Quality Control |
| RMO | Review Management Organization |
| RP | Review Plan |
| SAD | USACE South Atlantic Division |
| SAM | USACE Mobile District |
| SAR | Safety Assurance Review |
| USACE | U.S. Army Corps of Engineers |
| WRDA | Water Resources Development Act |

# ATTACHMENT 4

**Completion of District Quality Control Review**
**Proctor Creek Watershed Aquatic Ecosystem Restoration, City of Atlanta, Georgia**

The District Quality Control Review (DQC) has been completed for the Plans and Specifications and the Design Documentation Report for the Proctor Creek Watershed Aquatic Ecosystem Restoration Project, City of Atlanta, Georgia. The DQC was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-217. During the DQC, 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, 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. All comments resulting from the DQC have been resolved and the comments have been closed in DrChecks[SM].

_____ _____
Date

_____ _____
Date

_____ _____
Date

_____ _____
Date

**CERTIFICATION OF DISTRICT QUALITY CONTROL REVIEW**

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

_____ _____
Chief, Engineering Division
CESAM-EN
Date

_____ _____
Chief, Planning and Environmental Division
CESAM-PD
Date

# ATTACHMENT 5

## Completion of Agency Technical Review
## Proctor Creek Watershed Aquatic Ecosystem Restoration, City of Atlanta, Georgia

The Agency Technical Review (ATR) has been completed for the Plans and Specifications and the Design Documentation Report for the Proctor Creek Watershed Aquatic Ecosystem Restoration Project, City of Atlanta, Georgia. 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, 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 Lead also reviewed the District Quality Control (DQC) signature page verifying that all DQC comments were resolved. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[SM].

| | |
|---|---|
| ATR Lead | Date |
| Project Manager | Date |
| Review Management Office Representative | Date |

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

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

| | |
|---|---|
| Chief, Engineering Division<br>CESAM-EN | Date |
| Chief, Planning and Environmental Division<br>CESAM-PD | Date |