



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

11 MAY 2015

MEMORANDUM FOR COMMANDER, JACKSONVILLE DISTRICT

SUBJECT: Approval of the Review Plan for the Engineering Documentation Report for Contract 8 of the C-111 Project Modifications to the Central and South Florida Project, Miami-Dade County, Florida

1. References:

a. Memorandum, CESAJ-EN-Q, 8 April 2015, subject: Approval of Review Plan for the Engineering Documentation Report for Contract 8 of the C-111 Project Modifications to the Central and South Florida Project, Miami-Dade County, Florida (Encl 1).

b. EC 1165-2-214, Civil Works Review, 15 December 2012.


2. The enclosed subject Review Plan (RP) submitted by the Jacksonville District via reference 1.a has been reviewed by this office and is hereby approved in accordance with reference 1.b above.

3. We concur with the conclusion of the District Chief of Engineering that a Type II IEPR is not required for the Engineering Documentation Report associated with this effort. The primary basis for this concurrence is that failure or loss of this feature would not pose a significant threat to human life.

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

5. The SAD point of contact is [REDACTED]

Encl

  
DONALD L. WALKER  
Colonel, EN  
Acting Commander

CF:  
[REDACTED]



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 SAN MARCO BOULEVARD  
JACKSONVILLE, FLORIDA 32207

CESAJ-EN-Q

08 April 2015

MEMORANDUM FOR Commander, South Atlantic Division (CESAD-RBT)

SUBJECT: Approval of Review Plan for Engineering Documentation Report for Contract 8 of the C-111 Project Modifications to the Central and Southern Florida Project, Miami-Dade County, Florida

1. References.

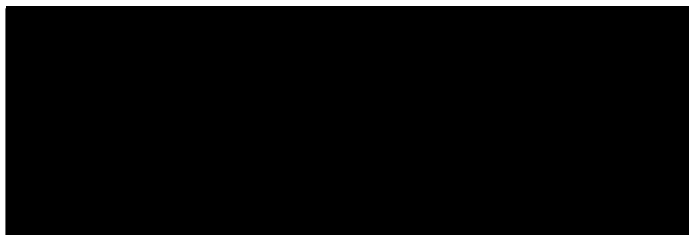
- a. EC 1165-2-214, Civil Works Review, 15 December 2012
- b. WRDA 1996; PL 104-303 dated 12 October 1996 (Project Authorization)

2. I hereby request approval of the enclosed Review Plan and concurrence with the conclusion that a Type II Independent External Peer Review (IEPR) of the subject project is not required. The recommendation to exclude Type II IEPR is based on the EC 1165-2-214 Risk Informed Decision Process as presented in the Review Plan. The Review Plan defines the scope and level of review activities for the Engineering Documentation Report (EDR), provides Agency Technical Review, complies with applicable policy, and has been coordinated with the CESAD. It is my understanding that non-substantive changes to this Review Plan, should they become necessary, are authorized by CESAD.

3. The district will post the CESAD approved Review Plan to its website and provide a link to the CESAD for its use. Names of Corps/Army employees will be withheld from the posted version, in accordance with guidance.

FOR THE COMMANDER:

Encl



# PROJECT REVIEW PLAN

For

## Engineering Documentation Report

For

### C-111 Project Modifications to the C&SF Project Contract 8

Miami-Dade County, Florida

Project P2 number: 114796

Jacksonville District

March 2015

THE INFORMATION CONTAINED IN THIS REVIEW PLAN IS DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER REVIEW UNDER APPLICABLE INFORMATION QUALITY GUIDELINES. IT HAS NOT BEEN FORMALLY DISSEMINATED BY THE U.S. ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT. IT DOES NOT REPRESENT AND SHOULD NOT BE CONSTRUED TO REPRESENT ANY AGENCY DETERMINATION OR POLICY.



US Army Corps  
of Engineers ®

## TABLE OF CONTENTS

<b>1. PURPOSE AND REQUIREMENTS .....</b>	<b>1</b>
a. Purpose .....	1
b. References .....	1
c. Requirements .....	1
d. Review Plan Approval and Updates .....	2
e. Review Management Organization .....	2
<b>2. PROJECT INFORMATION .....</b>	<b>2</b>
a. Project Location and Background .....	2
b. Project Authorization .....	4
c. Current Project Description .....	4
d. Public Participation .....	4
e. In-Kind-Contributions by Project Sponsor .....	4
<b>3. DISTRICT QUALITY CONTROL.....</b>	<b>4</b>
<b>4. AGENCY TECHNICAL REVIEW .....</b>	<b>5</b>
a. Risk Informed Decision on Appropriate Level of Review .....	5
b. Agency Technical Review Scope .....	5
c. ATR Disciplines .....	5
<b>5. INDEPENDENT EXTERNAL PEER REVIEW.....</b>	<b>6</b>
a. General.....	6
b. Type I Independent External Peer Review (IEPR) Determination.....	6
c. Type II Independent External Peer Review (IEPR) Determination (Section 2035).....	6
<b>6. MODEL CERTIFICATION AND APPROVAL .....</b>	<b>7</b>
<b>7. PROJECT DELIVERY TEAM DISCIPLINES .....</b>	<b>7</b>
<b>8. BUDGET AND SCHEDULE.....</b>	<b>7</b>
a. Schedule.....	7
b. ATR Cost .....	7

ATTACHMENT A - Approved Review Plan Revisions

ATTACHMENT B - Partial List of Acronyms and Abbreviations

ATTACHMENT C - ATR Report Outline and Completion of Agency Technical Review Form

## **1. PURPOSE AND REQUIREMENTS**

### **a. Purpose**

This Review Plan defines the scope and level of review activities for the Engineering Documentation Report (EDR) for Contract 8 of the C-111 Project Modifications to the Central and Southern Florida (C&SF) Project, Miami-Dade County, Florida. The EDR is classified as an implementation document. As discussed below, the recommended review activities will consist of a District Quality Control (DQC) effort and an Agency Technical Review (ATR). Also as discussed below, an Independent External Peer Review (IEPR) is not recommended due to the scope of the EDR. The scope and level of review for the Contract 8 plans and specifications are addressed in a separate review plan.

### **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 1165-2-214, "Civil Works Review", 15 December 2012
- (4). SAJ EN QMS 02611, "SAJ Quality Control of In-House Products: Civil Works PED", 21 November 2011
- (5). Enterprise Standard (ES) 08025, "Government Construction Quality Assurance Plan and Project/Contract Supplements"
- (6). Enterprise Standard (ES) 08026, "Three Phase Quality Control System"
- (7). Project Management Plan, Canal 111 (C-111) South Dade, FL, P2 Number: 114796
- (8). C&SF Project Final Integrated General Reevaluation Report and Environmental Impact Statement for Canal 111 (C-111) South Dade County, Florida, May 1994
- (9). Environmental Assessment, Canal 111 (C-111) Basin, South Dade County, Florida, May 2012
- (10). Finding of No Significant Impact, Expansion of the C-111 Detention Area and Associated Features Environmental Assessment, South Dade County, Florida, 06 June 2012

### **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 provides the procedures for ensuring the quality and credibility of U.S. Army Corps of Engineers (USACE) decision, implementation, and operations and maintenance documents and other work products. The EC outlines five levels of review: District Quality Control (DQC), Agency Technical Review (ATR), and an Independent External Peer Review (IEPR), Policy and Legal Review and a Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review.

#### **d. Review Plan Approval and Updates**

The South Atlantic 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. Like the PMP, the Review Plan is a living document and may change as the project progresses. The Jacksonville 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 A. Significant changes to the Review Plan (such as changes to the scope and/or level of review) shall 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, will be posted on the Jacksonville District's webpage. The latest Review Plan will be provided to the RMO and home MSC.

#### **e. Review Management Organization**

The South Atlantic Division is designated as the Review Management Organization (RMO). The RMO, in cooperation of the vertical team, will determine/select/approve the ATR team members. Jacksonville District may assist SAD with management of the ATR and development of the charge to reviewers.

## **2. PROJECT INFORMATION**

### **a. Project Location and Background**

The project is located in southern Miami-Dade County, which is in southeastern Florida (Figure 1). It is situated within the C-111 basin, consisting primarily of abandoned agricultural lands in the Homestead/Florida City area. The project adjoins Everglades National Park (ENP) to the west and discharges water to the eastern panhandle of ENP, Florida Bay, Manatee Bay, and Barnes Sound.

The purpose of the C-111 Project is restoration of the ecosystem in Taylor Slough and the eastern panhandle of ENP that were affected by the construction of the flood control project in the C-111 Basin, while preserving the current level of flood damage reduction for the agricultural activities in the C-111 basin.

In 1994, the C&SF Project Final Integrated General Reevaluation Report and Environmental Impact Statement for Canal-111 (C-111) South Dade County, Florida (1994 GRR/EIS) was completed as a result of the continued project design and reformulation efforts to reconcile the desires of the non-Federal sponsor, stakeholders, and the legislative directive from the Everglades National Park Protection and Expansion Act of 1989 to "take all measures which are feasible and consistent with the purposes of the (C-111) project to protect natural values associated with the ENP".

In May 2012, an Environmental Assessment (EA) was completed which updated the National Environmental Policy Act (NEPA) document of the 1994 GRR/EIS. This updated EA included the evaluation of design refinements to the original 1994 GRR/EIS, including the expansion of the existing S-332B Northern Detention Area (NDA) and associated features. Based on the information presented in the EA, a Finding of No Significant Impact (FONSI) for the Expansion of the C-111 Detention Center and Associated Features was signed in June 2012.

The project features in the plans and specifications for the Contract 8 of the C-111 Project reflect the design refinements documented in the 2012 EA. The purpose of the EDR will be to document the changes in the project features from those authorized in the 1994 GRR/EIS to those features evaluated in the 2012 EA.

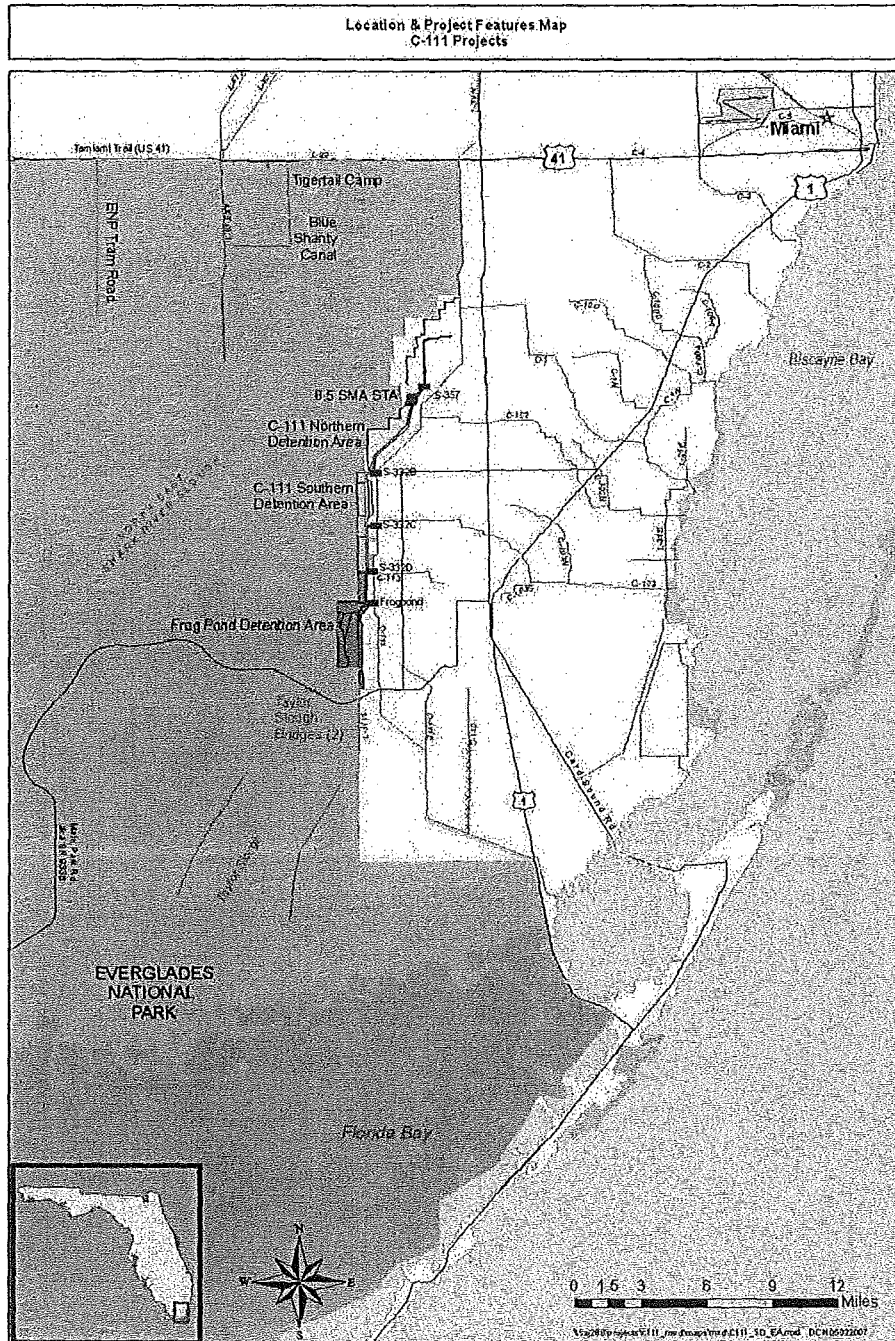


Figure 1: Project Location

**b. Project Authorization**

The C-111 Project Modifications to the C&SF Project were authorized by Section 316 of the Water Resources Development Act (WRDA) of 1996 (Public Law 303, 104th Congress), 110 Stat. 3715, October 12, 1996:

*SEC. 316. CENTRAL AND SOUTHERN FLORIDA, CANAL 111.*

*IN GENERAL.—The project for Central and Southern Florida, authorized by section 203 of the Flood Control Act of 1948 (62 Stat. 1176) and modified by section 203 of the Flood Control Act of 1968 (82 Stat. 740–741), is modified to authorize the Secretary to implement the recommended plan of improvement contained in a report entitled “Central and Southern Florida Project, Final Integrated General Reevaluation Report and Environmental Impact Statement, Canal 111 (C–111), South Dade County, Florida”, dated May 1994, including acquisition by non-Federal interests of such portions of the Frog Pond and Rocky Glades areas as are needed for the project.*

**c. Current Project Description**

Contract 8 of the C-111 Project when complete, will provide a Northern Detention/Retention Area for S-332B and S-357 pump station outflows. This detention area forms a hydraulic ridge to help prevent ground water from seeping out of ENP, thus providing additional hydration for ENP and maintaining the current level of flood damage reduction for the C-111 Basin. The EDR will document the changes in the project features from those authorized in the 1994 GRR/EIS to those features evaluated in the 2012 EA.

**d. Public Participation**

The Jacksonville District Corporate Communications Office continually keeps the affected public informed on Jacksonville District projects and activities. There are no planned activities, public participation meetings or workshops that could generate issues needing provision to review teams. The approved review plan will be posted on the Jacksonville District Internet. Any comments or questions regarding the review plan will be addressed by the Jacksonville District.

**e. In-Kind-Contributions by Project Sponsor**

There are no in-kind sponsor contributions related to the EDR that will affect this review plan or related reviews.

**3. DISTRICT QUALITY CONTROL**

All reports, evaluations, and assessments shall undergo the necessary and appropriate level of DQC. The subject project EDR will be prepared by the Jacksonville District using ER 1110-1-12 procedures and will undergo DQC. Documentation of the DQC activities is required and will be in accordance with SAJ EN QMS 02611. All DQC comments will be formally answered in a normal comment/response format and compiled. The DQC certification will be provided to the ATR team and will become a permanent part of the project's documentation.



#### **4. AGENCY TECHNICAL REVIEW**

##### **a. Risk Informed Decision on Appropriate Level of Review**

An ATR of the EDR will be executed in order to evaluate the documentation of the changes in the project features from those presented in the 1994 GRR/EIS to those features evaluated in the 2012 EA, which were then incorporated into the Contract 8 plans and specifications.

##### **b. Agency Technical Review Scope.**

ATR is undertaken to "ensure the quality and credibility of the government's scientific information" in accordance with EC 1165-2-214 and ER 1110-1-12. Per EC 1165-2-214, ATR is mandatory for all implementation documents. The ATR of the EDR will be conducted by individuals and organizations that are external to the Jacksonville District. The ATR Team Leader will be a Corps of Engineers employee outside the South Atlantic Division. The required disciplines and experience are described below.

ATR comments are documented in the DrChecks<sup>sm</sup> model review documentation database. DrChecks<sup>sm</sup> is a module in the ProjNet<sup>sm</sup> suite of tools developed and operated at ERDC-CERL ([www.projnet.org](http://www.projnet.org)). At the conclusion of ATR, the ATR Team Leader will prepare an ATR Review Report that summarizes the review. An outline for an ATR Review Report is in Attachment C. The report will include at a minimum the Charge to Reviewers, ATR Certification Form from EC 1165-2-214, and the DrChecks<sup>sm</sup> printout of the comments.

##### **c. ATR Disciplines.**

As stipulated ER 1110-1-12, ATR members will be sought from the following sources: regional technical specialists (RTS); subject matter experts (SME) certified in CERCAP; senior level experts from other districts; Center of Expertise staff; experts from other USACE commands; contractors; academic or other technical experts; or a combination of the above. The ATR Team will be comprised of the following disciplines; knowledge, skills and abilities; and experience levels.

ATR Team Leader. The ATR Team Leader will be from outside SAD and should have 10 years of experience with civil works projects. ATR Team Leader may also serve as a co-duty to one of the review disciplines.

Civil Engineering. The team member should be a registered professional engineer with 5 years minimum experience in civil/site work that encompasses embankment, road and channel design, earthwork operations, and mass balancing. Related construction experience is also desired.

Geotechnical Engineering. The team member should be a registered professional engineer with 5 years minimum experience that encompasses retention/detention area design, and embankment design and analyses. Related construction of earthwork project experience is also desired.

Hydrology and Hydraulics. The H&H team member should be a registered professional with a minimum of 5 years experience that encompasses detention/retention area, embankment, weir and flow way modeling and design.

Structural Engineering. The team member should be a registered professional engineer with 5 years minimum project experience that includes concrete structures, culverts, and pumping

stations. Experience is also required to address structure monitoring, pre- and post-construction structure surveys and Federal historical structure protection requirements. Related project construction experience is desired.

NEPA Compliance. The team member should have experience in NEPA compliance activities and preparation of Environmental Assessments and Environmental Impact Statements for civil works projects.

## **5. INDEPENDENT EXTERNAL PEER REVIEW**

### **a. General.**

EC 1165-2-214 provides implementation guidance for both Sections 2034 and 2035 of the Water Resources Development Act (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). The EC defines Section 2035 Safety Assurance Review (SAR), Type II Independent External Peer Review (IEPR). The EC also requires Type II IEPR be managed and conducted outside the Corps of Engineers.

### **b. Type I Independent External Peer Review (IEPR) 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 Review Plan.

### **c. Type II Independent External Peer Review (IEPR) Determination (Section 2035).**

This project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-214) and 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 review plans applicability statements follow.

- (1) The failure of the project would pose a significant threat to human life.

*Failure of the project would not pose a threat to human life. The C-111 South Dade Project is on lands that are utilized for restoration of the Everglades National Park and to restore more natural hydroperiods in the Taylor Slough, ENP, and lower section of the C-111. In addition, the East Coast Protective Levee (L-31N) provides redundant protection to the east of the project area.*

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

*This project will utilize methods and procedures used by the Corps of Engineers on other similar works.*

- (3) The project design lacks redundancy.

*The project features are not complex in nature and do not employ the concept of redundancy.*

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

*This project's construction does not have unique sequencing or a reduced or overlapping design. The installation sequence and schedule has been used successfully by the Corps of Engineers 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 EDR.

## 6. MODEL CERTIFICATION AND APPROVAL

No engineering models are being used to prepare the documents covered by this review plan.

## 7. PROJECT DELIVERY TEAM DISCIPLINES

Discipline/Expertise
Civil Site Design
Structural Engineering
Geotechnical Engineering
Cost Engineering
Environmental Engineering
Hydraulic & Hydrologic Engineering

## 8. BUDGET AND SCHEDULE

### a. Schedule.

Task	Start Date	End Date
EDR complete	9 Mar 2015	9 Mar 2015
DQC	10 Mar 2015	27 Apr 2015
ATR Review	5 May 2015	18 May 2015
ATR Review Certification	18 June 2015	18 June 2015

### b. ATR Cost.

Funds will be budgeted to execute ATR and schedule as outlined above. It is envisioned that each reviewer will be afforded 20 hours review plus 8 hours for coordination. The estimated cost range is \$18,000 - \$20,000.

**ATTACHMENT A: APPROVED REVIEW PLAN REVISIONS**

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

**ATTACHMENT B: PARTIAL LIST OF ACRONYMS AND ABBREVIATIONS**

<u>Acronyms</u>	<u>Defined</u>
AFB	Alternatives Formulation Briefing
ATR	Agency Technical Review
BCOES	Biddability, Constructability, Operability, Environmental, and Sustainability Review
CAP	Continuing Authorities Program
CERCAP	Corps of Engineers Reviewer Certification and Access Program
CY	Cubic Yards
DDR	Design Documentation Report
DQC	District Quality Control
DQCR	Discipline Quality Control Review
EC	Engineering Circular
EA	Environmental Assessment
ER	Engineering Regulation
EA	Environmental Assessment
ERDC-CERL	Engineer Research and Development Center – Construction Engineering Research Laboratory
ESA	Endangered Species Act
ETL	Engineering Technical Lead
FDEP	Florida Department of Environmental Protection
FONSI	Findings of No Significant Impacts
FSCA	Feasibility and Cost Sharing Agreement
FY	Fiscal Year
GRR	General Reevaluation Report
IEPR	Independent External Peer Review
LPP	Locally Preferred Plan
MCX	Mandatory Center of Expertise
MLLW	Mean Low Low Water
MSC	Major Subordinate Command
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
ODMDS	Ocean Dredged Material Disposal Site
OMB	Office of Management and Budget
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
P&S	Plans and Specifications
PED	Preconstruction Engineering and Design
PDT	Project Delivery Team
PM	Project Manager

<u>Acronyms</u>	<u>Defined</u>
PMP	Project Management Plan
PPA	Project Partnering Agreement
PQCR	Product Quality Control Review
QA	Quality Assurance
QCP	Quality Control Plan
QMP	Quality Management Plan
QMS	Quality Management System
RMC	Risk Management Center
RMO	Review Management Organization
RP	Review Plan
RTS	Regional Technical Specialist
SAJ	South Atlantic Jacksonville District Office
SAD	South Atlantic Division Office
SAR	Safety Assurance Review (also referred as Type II IEPR)
SME	Subject Matter Expert
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources and Development Act

## **Attachment C**

### **ATR Report Outline and COMPLETION OF AGENCY TECHNICAL REVIEW**

#### **C-111 Project Modifications to the C&SF Project, Contract 8 Miami-Dade County, Florida**

#### **Review of Engineering Documentation Report (EDR)**

**ATR REPORT OUTLINE (Unneeded items, such as ATR Team Member Disciplines that are not identified as needed in the Review Plan, shall be deleted from the ATR Report.)**

- 1. Introduction:**
- 2. Project Description:**
- 3. ATR Team Members:**
  - ATR Team Leader.**
  - Civil Engineering.**
  - Geotechnical Engineering.**
  - Hydrology and Hydraulics.**
  - Structural Engineering.**
  - NEPA Compliance.**
- 4. ATR Objective:**
- 5. Documents Reviewed:**
- 6. Findings and Conclusions:**
- 7. Unresolved Issues:**

**Enclosures:**

- 1. ATR Statement of Technical Review**
- 2. ATR Comments (DrChecks)**
- 3. Project Review Plan**
- 4. Charge to Reviewers**
- 5. Certification of District Quality Control Review**

## COMPLETION OF AGENCY TECHNICAL REVIEW

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The Agency Technical Review (ATR) has been completed for the Engineering Documentation Report for the C-111 Project Modifications to the C&SF Project, Contract 8, Miami-Dade County, Florida. ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214 and ER 1110-1-12. 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.

\_\_\_\_\_  
NAME  
ATR Team Leader

\_\_\_\_\_  
Date

\_\_\_\_\_  
NAME  
Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
NAME  
Review Management Office Representative

\_\_\_\_\_  
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.

\_\_\_\_\_  
NAME  
Chief, Engineering Division  
SAJ-EN

\_\_\_\_\_  
Date