REVIEW PLAN

New Savannah Bluff Lock and Dam
Section 216, Disposition Study

Savannah District

Project Number: 74343

MSC Approval Date: 18 August 2014
Last Revision Date: None

US Army Corps
of Engineers ®

REVIEW PLAN
New Savannah Bluff Lock and Dam
Savannah River
Georgia and South Carolina
Section 216, Disposition Study

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the New Savannah Bluff Lock and Dam (NSBL&D), Georgia and South Carolina, Section 216 Disposition Study, Feasibility Report.

b. References.

(1) Engineer Circular (EC) 1165-2-214, Civil Works Review, 15 December 2012
(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
(3) Engineer Regulation (ER) 1110-1-12, Quality Management, 21 Jul 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) Project Management Plan (PMP) for NSBL&D (under development).

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 models are subject to certification/approval (per EC 1105-2-412).

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. Inland Navigation is the authorization for this NSBL&D study, thus, the Inland Navigation Planning Center of Expertise (PCX-IN) will be the RMO.

3. STUDY INFORMATION

a. Decision Document

The NSBL&D decision document (which will be an updated Feasibility Report) and appropriate NEPA document will be prepared in accordance with ER 1105-2-100. At this point, Savannah District expects the decision resulting from this report to be within the authority of the Chief of Engineers.

An Environmental Assessment is being prepared for the study and a FONSI is anticipated. The EA will utilize any relevant background information from the 2000 EA/FONSI (the 2000 proposed action included complete removal of the NSBLD lock and dam structure) which was part of the Final Report for the Section 216 Disposition Study for the NSBLD in 2000 (USACE 2000).

The NSBL&D project is located approximately 33 river miles downstream from the J. Strom Thurmond multipurpose dam and reservoir project and approximately 13 river miles downstream from the City of Augusta in Richmond County, Georgia, and the City of North Augusta in Aiken County, South Carolina. The project property lines extend into Richmond County, Georgia and Aiken County, South Carolina.

A Section 216 Report is a feasibility report to Congress recommending changes to a completed project. Decision to undertake feasibility studies and prepare a report rests with the Corps. Such reports are authorized by Section 216 of the Flood Control Act of 1970.

The MSC has the authority to approve the feasibility report.

b. Study/Project Description

The NSBL&D project was authorized by the 1930 and 1935 Rivers and Harbors Acts for the sole purpose of improving commercial navigation on the Savannah River between the upper limits of the Savannah Harbor and Augusta, Georgia. As previously stated, the NSBL&D project is located approximately 13 river miles downstream from the city of Augusta in Richmond County, Georgia, and the City of North Augusta in Aiken County, South Carolina. This project consists of a lock chamber, dam, operation building, and a 50-acre park and recreation area. Construction of the NSBL&D project was completed in 1937.

In 1979, the last commercial shipment passed through the NSBL&D project and, consequently, maintenance of the navigation channel was discontinued. Funding for proper maintenance of the lock and dam was curtailed. The current structural condition of the project is poor. The NSBL&D project is in need of major repairs and rehabilitation to assure a safe and reliable structure. The Corps can no longer justify increasingly costly repairs and rehabilitation since the project is no longer used for its authorized purpose: serving commercial navigation.

The project remains in the ownership of the Federal Government with the Federal Government responsible for operation and maintenance of the dam. Under a lease agreement, Augusta-Richmond County operates and maintains the lock and adjoining recreation area.

The original authorized project purpose was commercial navigation. The project currently serves water supply users (there are 7 major users) including one municipality, five industries, and one sod farm; water-related recreation opportunities such as general

boating and fishing; specialized rowing and powerboat race events; and regional economic development and tourism.

Additional authorizations of the NSBL&D include Section 348(l) of the Water Resources Development Act of 2000, P.L. 106-541 and Section 113, P.L. 106-554- Appendix D, Fish Passage Devices at New Savannah Bluff Lock and Dam, South Carolina. Reference the Omnibus Appropriations Act of 2001.

The original authorized project purpose was commercial navigation. The project currently serves water supply users, there are 7 major users including one municipality, five industries and one sod farm; water-related recreation opportunities such as general boating and fishing; specialized rowing and powerboat events and regional economic development and tourism.

Savannah District recently evaluated potential impacts associated with a dam failure at the NSBL&D through a lock and dam inspection/assessment titled the “New Savannah Bluff Lock & Dam Savannah River, Georgia/South Carolina Periodic Inspection No. 10, Periodic Assessment No. 1.” This Periodic Inspection and Assessment (PI/PA) was conducted for the NSBL&D from March 3 – 12, 2014 as described in ER 1110-2-1156.

The inspection/assessment team included district EN staff and was led by a PA facilitator from the Risk management Center (RMC). The PI/PA report is currently in draft form and will be finalized after review by the RMC’s Senior Oversight Group (SOG), anticipated to be in September 2014. The team found no downstream population at risk. Furthermore, project failure would most likely be contained within the stream channel, so life loss impacts would be minimal.
Currently, the NSBL&D is rated as a Dam Safety Action Classification (DSAC) 4. The DSAC classification system is used by the Corps to set funding priorities for major rehabilitation across its portfolios of dams. The classifications range from 1 to 5, with 1 being the most urgent and 5 being the least urgent (in terms of life loss and economic consequences). DSAC 4 dams are considered ‘marginally safe’ and the combination of life, economic, or environmental consequences with the probability of a dam failure is typically low.

The New Savannah Bluff Lock & Dam received $300K from Investigation Appropriations in the FY14 Consolidated Appropriations Bill dated 17 Jan 2014. It was to be used to complete the Section 216 Report. This report will include: 1) an updated cost estimate, 2) an Environmental Assessment and 3) will develop alternatives to rehabilitate the project. Current alternatives include the without project (or no action) condition and the with project condition (alternative that includes rehabilitation). The no action alternative will leave the site in caretaker status. The rehabilitation will entail repair work of the dam spillway piers, lock walls erosion, lock filling/emptying valves, lock hydraulic, lock general erosion, control building roof, lock timber sidewall and replacement of the gates, hoists and chains The rehab will cost approximately $18 - $21 million.

Part of the no action alternative includes a fish bypass structure. The fish bypass structure was previously authorized as part of the rehab of the NSBL&D and will be constructed as part of the mitigation for the Savannah Harbor Expansion Project. Construction of that feature by SHEP satisfies the environmental requirement for fish passage at this location. As a result, rehab of the lock and dam does not need to consider fish passage issues.

c. Factors Affecting the Scope and Level of Review.

This study will examine different alternatives to rehabilitate the NSBL&D. It is anticipated that the total construction cost will be approximately $18 to $21 million.

- The PDT does not anticipate significant project-related risks to life safety.
- There has not been a request to study this project by a State Governor or an affected state.
- It is not anticipated that there will be any public disputes concerning this project.
- It is not anticipated that there will be any public disputes concerning economic and environmental costs and benefits.
- This project will not involve novel methods, innovative materials or techniques, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices, and
- It is not anticipated that this project will require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule

d. In-Kind Contributions.

Section 348(l) of the Water Resources Development Act of 2000 (P.L. 106-541) contains a provision authorizing the Federal Government to repair the structure at full Federal cost and transfer the structure and adjoining 50-acre park to North Augusta/Aiken County, South Carolina. Thus, at this point, there is no non-Federal Sponsor and no in-kind contributions.

Text from Section 348(l)(2) of WRDA 2000 is "(2) REPAIR AND CONVEYANCE.—After execution of an agreement between the Secretary and the city of North Augusta and Aiken County, South Carolina, the Secretary— (A) shall repair and rehabilitate the New Savannah Bluff Lock and Dam, at Federal expense of an estimated $5,300,000; and (B) after repair and rehabilitation, may convey the New Savannah Bluff Lock and Dam, without consideration, to the city of North Augusta and Aiken County, South Carolina."

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall 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) that is currently being developed. The home district shall manage the DQC. The subject matter experts for each subject will perform the DQC.

A DQC review is a standard requirement for all studies. All DQC comments will be formally answered in a normal comment/response format and compiled together in Dr. Checks. The DQC comments and responses and the back-check will be provided to the ATR team and will become a permanent part of the study documentation. The DQC will be conducted by senior SAS personnel.

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 (Savannah 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 is required to be from outside the home MSC (SAD). An EA and FONSI will likely be the most appropriate level of NEPA documentation. The EA will utilize any relevant background information from the 2000 EA/FONSI.

a. Products to Undergo ATR.

Certification of the ATRs will be provided prior to the District Commander signing the final report. Products to undergo ATR are the draft appropriate NEPA documentation and draft feasibility report and the draft appropriate NEPA documentation and final feasibility report. Additionally, the cost estimate will undergo an ATR with a separate ATR certification.

b. Required ATR Expertise

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead will 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 planning, economics, environmental resources, etc). For this study, it is anticipated that the

	planning ATR team member will also act as the ATR team lead.
Planning	The Planner will be a senior planner, preferably one who has had experience in navigation lock and dam projects. Additionally, the Planner must have a minimum of 5 years experience.
Environmental Resources	The ATR team member must be a senior biologist and have recent experience in navigation lock and dam projects. This person must have recent experience in compliance with environmental laws (NEPA, Clean Water Act, Endangered Species Act, National Historic Preservation Act, etc.) and must have a minimum of 5 years of experience.
Cultural Resources	The archaeologist/cultural resources reviewer must be on the list of certified reviewers that was released by HQ. The ATR member must have experience with historic structures.
Geotechnical Engineering	The reviewer should have extensive experience in the field of geotechnical engineering, analysis, design, and construction/repair of navigation lock and dam projects. Experience shall include the following: subsurface investigations, foundation construction including piles and sheet pile walls, grouting to fill voids below foundations, rip rap design and slope protection. The ATR team member must be a registered professional engineer with at least 5 years experience.
Structural Engineer	The reviewer should have extensive experience in the field of structural engineering particularly relating to concrete dams. The ATR team member must be a registered professional engineer with at least 15 years of experience.
Cost Estimating	The Cost ATR team member should be assigned by the Cost Engineering Mandatory Center of Expertise (MCX), located at the Walla Walla District(NWW). The individual will be from an existing pool of certified reviewers. The reviewer should be familiar with the most recent version of MII software, scheduling, Cost & Schedule Risk Analysis, and the Total Project Cost Summary. He/she must have recent experience with cost estimating for Navigation and Flood Risk Management projects, and will review Rough Order Magnitude (ROM) estimates of the alternatives, as well the updated final costs for the selected plan. NWW will

	oversee the Cost ATR process and will sign off on the ATR certification.
Real Estate	The reviewer should have extensive experience with the acquisition and disposal of real property in accordance with PGL 31 – RE Support to Civil Works Planning Paradigm and ER 405-1-12, Chapter 11.

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. Each review comment should be succinct and enable timely resolution of the concern. 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,ASA (CW)/USACE 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 must be taken to resolve the concern.

In some situations, especially when addressing incomplete or unclear information, ATR team members 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 HQ, the district, RMO, and MSC), 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 will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- 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 may 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 will be completed prior to the District Commander signing off the final report. The ATR team will be assigned by the RMO, which is the Inland Navigation Planning Center of Expertise (IN-PCX). The IN-PCX will assign the ATR team, including the ATR lead.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

a. 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 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:

(1) 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.

(2) Type II IEPR. Type II IEPR, or Safety Assurance Review (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.

a. Decision on IEPR

A Type I IEPR is required for all decision documents unless the exclusion is approved. A project study may be excluded from Type I IEPR with a waiver in cases where none of the mandatory triggers (with limited exception noted in Paragraph 11.d (2)(b)) in EC 1165-2-214 are met. For the NSBL&D study, the triggers requiring a Type I IEPR are not met. Additionally, the consequences of dam failure (i.e., loss of pool) at the NSBL&D were evaluated in December 2013 by the Modeling, Mapping & Consequence Production Center (MMC). The analysis concluded that a breach of the NSBL&D would be unlikely to cause significant downstream property loss or the potential for life loss of as a result of the sudden loss of pool. Flood waters released during a breach would most likely be contained within the channel banks; therefore, any economic damages would be minimal.

There are five mandatory triggers which warrant a Type I IEPR. CESAS reviewed those criteria and reached the following conclusions:

1. Significant threat to human life. Very low risk to human life has been determined at this time but will be confirmed under a risk analysis performed during the PED phase.
2. Total Project Cost> $45 M. The total project cost is anticipated to be approximately $18 -$21 M.
3. A request by a State Governor of an affected state. There is no request by the Governor of an affected state for a peer review by independent experts;
4. Where the Department of Civil Works (DCW) or the Chief of Engineers determines that the project study is controversial due to significant public dispute over either the size, nature, or effects of the project or the economic or environmental costs or benefits of the project. This project is not likely to involve significant public disputes as to size, nature, or effects of the project and is not likely to involve significant public disputes as to the economic or environmental costs and benefits of this project;
5. Cases where information is based on novel methods, presents complex challenges for interpretation, contains precedent-setting methods, or presents

conclusions that are likely to change prevailing practices. The information in the decision document or anticipated project design is not likely to be 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 project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule:

In conclusion, the study would not significantly benefit from a Type I IEPR. Additionally, based on the project as it currently stands, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review of this project at this time. A risk-informed decision concerning the timing and the appropriate level of reviews for the project implementation phase will be prepared and submitted for approval in an updated Review Plan prior to initiation of the design/implementation phase of this project.

a. Products to Undergo Type I IEPR. None
b. Required Type I IEPR Panel Expertise. Not Applicable
c. Documentation of Type I IEPR. Not Applicable. Per EC 1165-2-214.
d. Documentation of Type II IEPR. Not Applicable. "A Type II IEPR (SAR) shall be conducted during the PED phase for any project where potential hazards pose a significant threat to human life (public safety)." Per EC 1165-2-214

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be 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 (MCX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (Cost Engineering MCX), located in the Walla Walla District. The 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 the Cost Engineering certification. The RMO is responsible for coordination with the Cost Engineering MCX.

9. MODEL CERTIFICATION AND APPROVAL

a. 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, ATR, and IEPR (if required).

b. 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 Corps 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, ATR, and IEPR (if required)."

It is not anticipated that there will be any planning or engineering models required for this disposition study.

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. The cost for the ATRs is estimated to be $45,000. The documents to be reviewed and scheduled dates for review are as follows:

Draft Feasibility Report and EA **–** ATR – 4th quarter 2014 - $20,000
Cost Estimate – ATR – 4th quarter 2014 - $5,000
Final Report and EA – ATR- 4th quarter 2015 - $20,000

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

11. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the study as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments. The current schedule calls for the public review period to be between March – May 2015. All significant and relevant public comments on the draft report will be provided to the ATR for review. Once the final report is approved, SAS will post this report on our website which is accessible to the public.

12. REVIEW PLAN APPROVAL AND UPDATES

The SAD Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input as to the appropriate scope and level of review for the decision document. 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. The Review Plan, along with the Commanders' approval memorandum, will be posted on the Home District's webpage. The approved Review Plan will also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact: Beth Cade for the PCX-IN at (304) 399-5848 and/or Patrick O'Donnell for SAD at 404-562-5229.

ATTACHMENT 1: TEAM ROSTERS

Table 1 – Project Delivery Team

Discipline	Office/Agency	Name
Project Manager	CESAS-PM-C	TBD
Plan Formulator	CESAD-PD	TBD
Environmental	CESAS-PD	TBD
Cultural Resources	CESAS-PD	TBD
Real Estate	CESAS-RE-AP	TBD
Mechanical	CESAS-EN	TBD
Structural	CESAS-EN	TBD
Geotechnical	CESAS-EN-GS	TBD
Cost Estimating	CESAS-EN-ET	TBD

Table 2 – Agency Technical Review Team Members

Discipline	Office/Agency	Name
ATR Lead	TBD	TBD
Plan Formulator	TBD	TBD
Environmental	TBD	TBD
Cultural Resources	TBD	TBD
Real Estate	TBD	TBD
Structural	TBD	TBD
Geotechnical	TBD	TBD
Cost Estimation	TBD	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 1165-2-214. 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 have been resolved and the comments have been closed in DrChecks[sm].

SIGNATURE _____ _____

Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____

Name Date
Project Manager
Office Symbol

SIGNATURE _____ _____

Name Date
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ _____

Name Date
Review Management Office
Representative
Office Symbol

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 Date
Chief, Engineering Division
Office Symbol

SIGNATURE _____ _____

Name Date
Chief, Planning Division
Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
ACB	Articulated Concrete Block mattress	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
ATR	Agency Technical Review	PCX	Planning Center of Expertise
		PDT	Project Delivery Team
DQC	District Quality Control/Quality Assurance	PED	Pre-Construction Engineering and Design
DSAC	Dam Safety Action Classification		
EA	Environmental Assessment	PMF	Probable Maximum Flood
EC	Engineer Circular	PMP	Project Management Plan
ER	Engineering Regulation	PL	Public Law
FRM	Flood Risk Management	QA	Quality Assurance
GI	General Investigation	QC	Quality Control
Home District/MSC	The District or Major Subordinate Command responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
		ROM	Rough Order Magnitude
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
IN-PCX	Inland Navigation Center of Expertise		
MCX	Mandatory Center of Expertise	SAR	Safety Assurance Review
		SAD	South Atlantic Division
MSC	Major Subordinate Command	SAS	South Atlantic Savannah
NEPA	National Environmental Policy Act	USACE	United States Army Corps of Engineers
NSBL&D	New Savannah Bluff Lock and Dam		