DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, NORTH ATLANTIC DIVISION
FORT HAMILTON MILITARY COMMUNITY
302 GENERAL LEE AVENUE
BROOKLYN, NY 11252-6700

SEP 30 2013

CENAD-RBT

MEMORANDUM FOR Commander, Philadelphia District, (CENAP-EC / Mr. Tranchik), Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107-3390

SUBJECT: Review Plan Approval for Bernville Protective Works Levee Safety Evaluation Report (LSER)

1. References:

a. Memorandum, CENAP-EC-EG, 29 August 2013, subject: Review Plan for Bernville Protective Works Levee Safety Evaluation Report

b. EC 1165-2-214, Water Resources Policies and Authorities – Civil Works Review, 15 December 2012

2. The enclosed revised Review Plan for Bernville Protective Works Levee Safety Evaluation Report (LSER) was prepared in accordance with Reference 1.b.

3. NAD Business Technical Division is the Review Management Organization (RMO) for the Agency Technical Review (ATR). The Review Plan does not include Type II Independent External Peer Review (IEPR) (Safety Assurance Review) because the review is for a LSER and does not include construction.

4. The revised Review Plan for the Bernville Protective Works LSER is approved. The Review Plan is subject to change as circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution requires new written approval from this office.

5. In accordance with Reference 1.c, Appendix B, Paragraph 6, post this approved Review Plan on your district website for public review and comment. NAD will post on the Division website.

6. The point of contact in Business Technical Division for this action is Alan Huntley, 347-370-4664 or Alan.Huntley@usace.army.mil.

Encl

KENT D. SAVRE
Brigadier General, USA
Commanding

REVIEW PLAN

Bernville Protective Works
NFIP Levee System Evaluation Report (NLSER)

Philadelphia District

Last Revision Date: 25 Sep 2013

MSC Approval Date: 30 SEP 2013

Table of Contents

Contents

1. Purpose and Requirements 1
2. Project Information 1
3. Review Management Organization (RMO) Coordination 1
4. District Quality Control (DQC) Review 1
5. Agency Technical Review (ATR) 2
6. Independent External Peer Review (IEPR) 4
7. Policy and Legal Compliance Review 4
8. Review Schedules and Costs 4
9. Review Plan Approval 5
10. Review Plan Points of Contact 5
11. Attachment 1: Team Rosters 6
12. Attachment 2: Sample Statement of Technical Review for Decision Documents 8

1. Purpose and Requirements

a. Purpose. This Review Plan defines the scope and level of peer review for the Bernville Protective Works Flood Risk Management Project, NFIP Levee System Evaluation Report (NLSER).

b. References.

(1) EC 1165-2-214, Water Resources Policies and Authorities – Civil Works Review Policy, 15 December 2012

(2) EC 1110-2-6067, Engineering and Design – USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation, 31 August 2010

(3) ER 1110-1-12, Engineering Design – Quality Management, 30 September 2006

(4) Code of Federal Regulations 44CFR 65.10

2. Project Information

The project is referred to as the Bernville Protective Works NFIP Levee System Evaluation Report. The Bernville Protective Works primarily consists of approximately 4,800-feet of earthen levee which reduces the risk of flooding to the Borough of Bernville, Pennsylvania. The primary purpose of the NLSER is to determine whether the levee system meets the requirements for inclusion in the National Flood Insurance Program (NFIP), in accordance with EC 1110-2-6067. The Bernville Protective Works NLSER has been classified as an "Other Work Product" pursuant to EC 1165-2-214, Paragraph 9.c (2).

3. Review Management Organization (RMO) Coordination

The RMO is responsible for managing the overall peer review effort described in this Review Plan. Pursuant to EC 1165-2-214, the RMO for a decision document is the appropriate Planning Center of Expertise, and for Dam and Levee Safety modifications the RMO is the Risk Management Center (RMC). For "other work products," the Major Subordinate Command (MSC) shall serve as the RMO. The NLSER is not considered a decision or implementation document, thereby making it an "other work product." The RMO for the peer review of the NLSER is the North Atlantic Division Business Technical Division.

4. District Quality Control (DQC) Review

Pursuant to USACE guidance, all work products and reports shall undergo the necessary and appropriate DQC Review. The DQC Review will be performed in accordance with EC 1165-2-214 and ER 1110-1-12. The members of the DQC Review team are identified in Attachment 1.

The staff performing the DQC Review are not involved with the development of the NLSER. DQC Review will be documented through DrChecks and a DQC Review report will be signed by all reviewers. The completed NLSER with referenced attachments will be reviewed by the DQC Review team. The referenced attachments may include but are not limited to:

a. Hydrologic Reports and Models

b. Hydraulic Reports and Models (to include FDA Models)

c. Geotechnical Reports

d. Design Criteria and Assumptions

e. As-Built drawings and specifications

f. Construction completion reports

g. Miscellaneous other documents pertinent to the design of the project elements.

5. Agency Technical Review (ATR)

In accordance with EC 1165-2-214, Paragraph 15b, the NLSER will require an ATR. The NLSER will include a recommendation to another federal agency (FEMA), the report evaluates structures that pose potential life safety risks, and the report could be controversial if the evaluation determines that the levee systems is ineligible for inclusion in the NFIP. The completed NLSER, with referenced attachments, will be reviewed by the ATR team. The RMO shall select the ATR Team leader and members, but it is recommended that the regional Levee Safety Production Center (CENAB) be included as part of the ATR. The ATR team composition and documentation requirements are noted below.

a. Required ATR Team Expertise. The RMO, in cooperation with the PDT, determines the final make-up of the ATR team. As a minimum, the following table provides the types of disciplines that should be included on the ATR team and the expertise required. The names, organizations, contact information, credentials, and years of experience of the ATR members will be included in Attachment 1 once the ATR team is established.

ATR Team Members/Disciplines	Expertise Required
ATR Lead/Geotechnical Engineering	Team member should have expertise in levee construction and other local flood risk management techniques. A registered professional engineer is required
Hydraulics & Hydrology	Team member should be an expert in the field of urban hydrology and hydraulics, have a thorough understanding of flash flooding, open channel systems, and the use of HEC computer modeling systems. A registered professional engineer is required

b. Documentation of ATR. DrChecks review software (https://www.projnet.org/projnet/) will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those 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 was not properly followed;

(3) The significance of the concern - indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and

(4) The probable specific action needed to resolve the concern - identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to assess whether further specific concerns may exist.

c. Documentation in DrChecks. 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 and RMO), 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 1110-2-12. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

d. ATR Report. 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:

(1) Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on the credentials and relevant experience of each reviewer;

(2) Include the charge to the reviewers;

(3) Describe the nature of their review and their findings and conclusions;

(4) Identify and summarize each unresolved issue (if any); and

(5) Include a copy of each ATR comment, the PDT response, a brief summary of pertinent points in the follow-on discussion including any vertical coordination, and the agreed upon resolution.

e. ATR Certification. The ATR may be certified when all ATR concerns are 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 were resolved (or elevated to the vertical team). Complete a "Statement of Technical Review" based on work reviewed to date, for the initial IPR, the subsequent IPRs, draft report, and final report. A sample "Statement of Technical Review" is in Attachment 2.

6. Independent External Peer Review (IEPR).

Under certain circumstances IEPR may be required for decision documents. 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 Type I IEPR does not apply because the NLSER is not a study document and a Type II IEPR (Safety Assurance Review) does not apply because the NLSER is not a design or construction document.

7. Policy and Legal Compliance Review.

Per EC 1165-2-214, all decision documents must be reviewed for compliance with law and policy. Since the NLSER is an evaluation of an existing project, it is not considered a decision document. A policy and legal compliance review is not required.

8. Review Schedules and Costs

a. ATR Schedule and Cost. The NLSER should be ready for ATR on 3 September 2013. Comments will be due one week from issuance of ATR. All comments should be

addressed/resolved within 30 days of the ATR team's review. The ATR has a current budget of $10,000.00.

b. Type I IEPR Schedule and Cost. Not Applicable

9. Review Plan Approval

The North Atlantic Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district and MSC RMO) as to the appropriate scope and level of review for the NLSER. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home District is responsible for updating the Review Plan. 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. The latest Review Plan will be provided to the RMO/MSC.

10. Review Plan Points of Contact

Direct questions or comments regarding this Review Plan to the following points of contact:

Robert Phillips, Team Lead/Geotechnical, 215-656-6682

Bruce Rogers, P.G. LSPM, 215-656-6673

Alan Huntley, PE, RMO, NAD BTD, 347-370-4664

11. Attachment 1: Team Rosters

Attachment 1: Team Roster				
PDT				
Name	**Discipline**	**Office Code**	**Phone Number**	**Email**
Robert W. Phillips	Team Leader/ Geotechnical	CENAP-EC-EG	215-656-6682	robert.w.phillips@usace.army.mil
Matthew Sosna	Structural	CENAP-EC-ER	215-656-6455	matthew.r.sosna@usace.army.mil
Daniel Edwards, P.E.	Mechanical	CENAP-EC-ED	215-656-6661	daniel.edwards@@usace.army.mil
Antonino Marzullo	Electrical	CENAP-EC-ED	215-656-6665	antonino.marzullo@usace.army.mil
Michael D. Bartles	Hydrology & Hydraulics	CENAP-EC-EH	215-656-6466	michael.d.bartles@usace.army.mil

DQC Review Team				
Name	**Discipline**	**Office Code**	**Phone Number**	**Email**
Peter M. Tranchik, P.E.	Levee Safety Officer	CENAP-EC	215-656-6600	peter.m.tranchik@usace.army.mil
Bruce R. Rogers, P.G.	Levee Safety Program Manager	CENAP-EC-EG	215-656-6673	bruce.r.rogers@usace.army.mil
Jiten K. Soneji, P.E.	Structural	CENAP-EC-ER	215-656-6441	jiten.k.soneji@usace.army.mil
Roger N. Hunsicker, R.A.	General Design	CENAP-EC-ED	215-656-6676	roger.n.hunsicker@usace.army.mil
Laura Bittner, P.E.	Hydrology & Hydraulics	CENAP-EC-EH	215-656-6688	laura.d.bittner@usace.army.mil
Daniel J. Kelly, P.E.	Geotechnical	CENAP-EC-EG	215-656-6889	daniel.j.kelly@usace.army.mil
Thomas E. Heary, P.E.	Civil	CENAP-EC-EC	215-656-6648	thomas.e.heary@usace.army.mil
Monica Chasten	Operations Project Manager	CENAP-OP	215-656-6683	monica.a.chasten@usace.army.mil
George Sauls, P.E.	Northern Area Engineer	CENAP-OP-NA	610-377-0438	george.a.sauls@usace.army.mil

ATR Team Members	Discipline	Review District
TBD	ATR Lead/Geotechnical	TBD
TBD	Hydraulics & Hydrology	TBD

12. 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 deemed 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 Review 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.

Signature _____ _____

Name Date
ATR Team Leader
Office Symbol/Company

Signature _____ _____

Name Date
Project manager
Office Symbol

Signature _____ _____

Name Date
Architect/Engineer Project Manager
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 concerns and their resolution.

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

Signature _____ _____

Name Date
Chief, Engineering Division
Office Symbol

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
WANAMAKER BUILDING-100 PENN SQUARE EAST
PHILADELPHIA, PENNSYLVANIA 19107-3390

REPLY TO
ATTENTION OF

29 August 2013

CENAP-EC-EG

MEMORANDUM FOR Chief, Business Technical Division, North Atlantic Division

SUBJECT: Review Plan for Bernville Protective Works Levee System Evaluation Report

1. We respectfully request that the attached review plan be approved for execution of the ATR for a Levee System Evaluation Report. This report will determine whether the Bernville Protective Works is eligible for inclusion in the National Flood Insurance Program.

2. This plans details the requirements set forth in the Civil Works Review Policy (EC 1165-2-214). Pursuant to these requirements, we have determined that the appropriate level of review is an ATR.

3. Should you have any questions or concerns regarding this review plan, please contact Bob Phillips at 215-656-6682.

FOR THE COMMANDER:

Encls

PETER M. TRANCHIK, P.E.
Chief, Engineering and Construction
Division

ROUTING AND TRANSMITTAL SLIP

Date: 16-Sep-2013

TO:			Initials	Date
1.	CENAD-RBT	Mr. Huntley		16 Sep 2013
2.	CENAD-PDX	Mr. Cocchieri		9/16/13
3.	CENAD-PDC	Ms. Monte		
4.	CENAD-RB	Mr. Grewatz		17 Sep 2013
5.	CENAD-PD	Mr. Leach done		17 Sep 13
6.	CENAD-EX	Ms. Lloyd pls make corrections to plan		~~23 Sep 13~~ 25 Sep
7.	CENAD-DD	COL Degidio		27 Sep 13
8.	CENAD-EX	BG Savre		
9.	CENAD-RBT			
10.				

	Action		File		Note and Return
X	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate	8	Signature
1-7	Coordination		Justify		

REMARKS

SUBJECT: Review Plan Approval for Bernville Protective Works Levee Safety Evaluation Report (LSER)

1. BACKGROUND

a. EC 1165-2-214, Water Resources Policies and Authorities – Civil Works Review, requires that a Review Plan (RP) be prepared that describes the scope of review for the current and/or upcoming phase of work. All appropriate levels of review will be included in the RP. RPs require MSC Commander's approval.

b. NAP has submitted a RP for the Bernville Protective Works Levee System Evaluation Report (LSER). The Bernville Protective Works consist of ~4800 lf of earthen levee which reduces the risk of flooding to the Borough of Bernville, PA. The primary purpose of the LSER is to determine if the levee system meets the requirements for inclusion in the National Flood Insurance Program (NFIP) IAW EC 1110-2-6067 & 44CFR65.10. There is no construction associated with the LSER.

c. The RP includes District Quality Control (DQC) and Agency Technical Review (ATR) reviews. NAD BTD is the Review Management Organization (RMO) for the ATR. The RP does not include Type II Independent External Peer Review (IEPR) (Safety Assurance Review) because the review is for a LSER and does not include construction.

2. PURPOSE: To obtain MSC Commander approval of the RP.

3. RECOMMENDATION: That the Commander approve the RP.

4. Request the Commander's signature on the enclosed memo.

5. After signature, please return to RBT for continued action.

TAB A- NAP Bernville LSER RP & approval request (memo)

DO NOT use this form as a RECORD of approvals, concurrence, disposals, clearances, and similar actions

FROM: (Name, org symbol, Agency/Post)	Room No. - Bldg
	Cube 132 - Bldg 301
Alan Huntley CENAD-RBT	Phone No. x4664

Locally Produced Exception

OPTIONAL FORM 41