



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
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CENWD-RBT

14 DEC 2012

MEMORANDUM FOR Commander, Portland District (CENWP-PM-PM/Chris Budai)

SUBJECT: Review Plan (RP) Approval for U.S. Moorings Environmental Cleanup, NWP District, Northwestern Division

1. References:

a. Memorandum, CEHNC-EM, 14 December 2012, subject: Review Plan Approval for U.S. Government Moorings Environmental Cleanup, Portland, Oregon (Encl).

b. EC 1165-2-209 Change 1, Civil Works Review Policy, 31 January 2012.


2. Reference 1.a. above has been prepared in accordance with reference 1.b. above.

3. The RP has been coordinated with the Business Technical Division, Northwestern Division, U.S. Army Corps of Engineers, and with the Environmental and Munitions Center of Expertise (EMCX). The Review Plan includes District Quality Control and Agency Technical Review (ATR). The EMCX will be the Review Management Organization for the ATR.

4. I hereby approve this RP, which is subject to change as circumstances require, consistent with the study development process and the Project Management Business Process. Subsequent revisions to this RP or its execution will require written approval from this office.

5. For further information, please contact Mr. Steve Bredthauer at (503) 808-4053.

Encl


ANTHONY C. FUNKHOUSER, P.E.
COL, EN
Commanding

CF: CENWD-PDS



DEPARTMENT OF THE ARMY
HUNTSVILLE CENTER, CORPS OF ENGINEERS
P.O. BOX 1600
HUNTSVILLE, ALABAMA 35807-4301

REPLY TO
ATTENTION OF

CEHNC-EM

14 December 2012

MEMORANDUM FOR U.S. Army Corps of Engineers, Portland District, ATTN: CENWP-PM-PM (Dasso), 333 SW First Ave, Portland, OR 97208

SUBJECT: Review Plan Approval for U.S. Government Moorings Environmental Cleanup, Portland, Oregon

1. The attached Review Plan for the U.S. Government Moorings Environmental Cleanup has been prepared in accordance with EC 1165-2-209.
2. The Environmental and Munitions Center of Expertise (EM CX) concurs with this Review Plan, which 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 will require new written concurrence from this office.
3. The Review Plan has been coordinated with the EM CX of the Huntsville Engineering and Support Center, which is the lead office to execute this plan. For further information, contact the Review Management Organization, Sam Bass of this office at 402-697-2654. The Review Plan does not include independent external peer review.

Encl
as

for SANDRA M. ZEBROWSKI, P.E.
Director, USACE Environmental &
Munitions Center of Expertise Directorate

CF:
CENWP-PM-F (Hicks)
CENWD-RBT (Putman/Bredthauer)

REVIEW PLAN

U.S. Government Moorings Environmental Cleanup
Portland District

MSC Approval Date:

Last Revision Date:



**US Army Corps
of Engineers®**

REVIEW PLAN

U.S. Government Moorings Environmental Cleanup

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS1

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION1

3. STUDY INFORMATION1

4. DISTRICT QUALITY CONTROL (DQC)3

5. AGENCY TECHNICAL REVIEW (ATR).....4

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

7. POLICY AND LEGAL COMPLIANCE REVIEW.....7

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION7

9. MODEL CERTIFICATION AND APPROVAL.....7

10. REVIEW SCHEDULES AND COSTS.....8

11. PUBLIC PARTICIPATION8

12. REVIEW PLAN APPROVAL AND UPDATES.....8

13. REVIEW PLAN POINTS OF CONTACT.....8

ATTACHMENT 1: TEAM ROSTERS.....10

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS12

ATTACHMENT 3: REVIEW PLAN REVISIONS13

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS.....14

1. PURPOSE AND REQUIREMENTS

Purpose. This Review Plan defines the scope and level of peer review for technical and decision documents required to complete CERCLA response requirements at the U.S. Government Moorings, Portland Oregon.

a. References

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2010
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 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) US Government Moorings Environmental Cleanup Project Management Plan, updated 30 Sep 2009

b. Requirements. This review plan was developed in accordance with EC 1165-2-209, 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 1165-2-209) and planning model 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 the peer review effort described in this Review Plan is the Environmental and Munitions Center of Expertise.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. STUDY INFORMATION

Decision Document.

a. The US Government Moorings (Moorings) Site, Portland Oregon, is located within the Portland Harbor National Priorities List (NPL) site under the Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA). This Review Plan is for all documents leading to remedial decisions and design documents to restore the functional facilities at the site impacted by the Portland Harbor NPL site. A Remedial Investigation completed in 2010 has described nature and extent of contamination at the Moorings and in sediments near the site. Several decisions will be made as a result of the findings and are discussed below. This document will be revised as necessary should additional actions be necessary.

- (1) Action Memorandum – Non Time Critical Removal Action. This memorandum documents the decision taken by the Corps to complete a removal of contaminated soil, and represents the final decision to remediate upland soils at the site.
- (2) Upland Removal Plans and Specifications. The contract documents to complete the upland soil removal will be prepared as a result of the Action Memorandum.
- (3) Dock Removal Design Document Report and Plans and Specifications. The existing dock structure at the Moorings has deteriorated and is in need of repair. Because of heavy sediment contamination and a need to remediate sediments to dredge the berths for USACE dredges at the moorings, the District has recommended under separate decision document that removal and replacement of the dock structure will best serve the mission of the Moorings facility. Sediment cleanup be completed under EPA enforcement by others after the dock structure is removed and prior to replacement of the dock. Sediment cleanup must be accomplished considering the mission of the Moorings.
- (4) Dock Design Document Report and Plans and Specifications. The redesign of a dock and berth for the dredges will be completed after dock removal. The design will be coordinated with the sediment cleanup and dredging of the berths for dredges. The dock will be reconstructed after the sediment remedy is complete.

These remedial actions are necessary to address contaminant source control to the Willamette River and the Portland Harbor National Priorities List (NPL). As required by ER 1165-2-163, CERCLA actions taken at Civil Works sites are required to be approved by the Assistant Secretary of the Army (Civil Works). Authority to complete the interim remedial action outside of the EPA led CERCLA process rests in E.O. 12580. Although the Action Memorandum documents the decision for an interim remedial action under CERCLA, it represents the final decision for upland soils at the site. Because it is a CERCLA action, no NEPA documents are required. A Biological Opinion for effects to salmonids under the Endangered Species Act will not be required because the action is proposed above ordinary high water.

b. Study/Project Description. USEPA has named USACE as a Potentially Responsible Party under CERCLA in the Portland Harbor NPL Site due to sediment contamination at the Moorings. The Portland Harbor NPL site addresses sediment contamination in a 12 mile reach between Willamette River miles 0 and 12 in Portland, Oregon.

The Moorings is at WRM 6.2 in Portland Harbor and is USACE's ship maintenance and berthing facility for the minimum dredge fleet. In 2012 USACE completed a Remedial Investigation and Feasibility Study (RI/FS) for upland sources that may contribute to the sediment contamination while EPA completes a harbor wide RI/FS for sediments. Source control to sediment contamination is being addressed in advance of the harbor wide sediment remedy. An EPA Record of Decision for the harbor wide remedy is scheduled for 2014. The RI/FS completed for the Moorings identifies sources and remedies for contamination to the river contributed by activities at the Moorings. The Action Memorandum

documents the decision and action proposed for completing USACE source control requirements at the Moorings. A final decision document for the Moorings will be tied to a final decision for the harbor.

There is no non-federal sponsor as the work is a USACE requirement as a Potentially Responsible Party under CERCLA. Under USACE policy outlined in ER 1165-2-132 USACE will propose no actions to address contamination potentially caused by other parties. Guidance for preparation and review of these documents are provided in ER 1165-2-132.

c. Factors Affecting the Scope and Level of Review. ATR is mandatory for all decision and implementation documents. The completed RI/FS discusses the potential human health and ecological risks present at the site. The Feasibility Study, reviewed by USEPA and the public has been finalized and recommends the action proposed by the Action Memorandum. The Action Memorandum is a summary of the risks and recommended decision.

- The site is within a larger Portland Harbor Superfund site. Although the project is listed as potentially responsible for contamination in the harbor, the RI/FS identifies limited potential liability from contamination at the site. USEPA continues enforcement against other responsible parties for contamination at the site not the responsibility of USACE.
- Removal of the dock may potentially free contamination caused by others to be freed to move. Coordination and negotiation with actions by others is critical to this activity. Potential USACE liability from other USACE actions in the harbor is being managed through the allocation process by Department of Justice.
- Upland activities at the Moorings are simple and propose standard technical responses to soil contamination and simple engineering principles.
- Risks to USACE from other actions and contamination caused by others impacts the present and future use of the ship berths. Design of the ship berth rearrangement is dependent on a sediment remedy by others.
- The project is justified to protect the legal and fiduciary rights of USACE under CERCLA and to protect the environment from potential risks from site contamination.
- The project is relatively small in scope compared to the larger harbor contamination and risk. Public interest has been light in the Moorings portion of the project and the public has had no comments to date on the technical documents.
- USACE proposes to use EO 12580 to complete an interim remedy within a larger NPL site being evaluated by EPA under CERCLA. EPA supports this action.

d. In-Kind Contributions. No products are provided by non-Federal sponsors as in-kind services. There are no non-federal sponsors on the project.

4. DISTRICT QUALITY CONTROL (DQC)

a. General. 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). DQC for decision documents, as covered by EC 1165-2-209, will be managed by the home district in accordance with the Major Subordinate Command (MSC) and district Quality Management Plans. All draft products and deliverables will be reviewed within the district as they are developed by the PDT to ensure they meet project and customer objectives, comply with regulatory and engineering

guidance, and meet customer expectations of quality. Work products will be forwarded to the appropriate Branch Chiefs of disciplines directly involved with the development of the document. The Branch Chiefs will determine the most appropriate person to carry out the review of the document.

b. Products for Review.

All work products and reports, evaluations, and assessments shall undergo necessary and appropriate DQC, including Proposed Plans, remedial decision documents, remedial design products, ESA compliance documents, and other environmental compliance products. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices, and the recommendations before approval by the District Commander. Documents include the Action Memorandum, Soil Removal Plans and Specifications, Dock Removal DDR and Plans and Specifications and supporting environmental assessments and biological assessments. Additional documents will be included in this plan as they are identified.

Disciplines anticipated for DQC will include Civil, Structural and Hydraulic designs and Environmental compliance section chiefs.

c. Documentation of DQC.

DrChecks review software will be used to document all DQC comments, responses, and associated resolutions accomplished throughout the review process. Relevant DQC records will be reviewed during each ATR event and the ATR team will provide comments as to the adequacy of the DQC effort for the associated product.

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 that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR. HTRW Decision documents such as the Action Memorandum, Records of Decision, and supporting documents including Remedial Investigation, Feasibility Study Reports, and Proposed Plan, with Environmental supporting documentation for CERCLA activities will be included in the ATR. Additionally, Remedial Design documents, plans and specifications, and Remedial Action Reports will be included and will be added to this Review Plan as they are identified.

b. Required ATR Team Expertise. The current ATR Plan will include 5 members. This number is based on the following disciplines required to develop the reports.

Table 4.1 ATR Team Requirements

ATR Team Members/Disciplines	Expertise Required
ATR Lead/ HTRW Engineer	The ATR lead will be a senior professional with extensive

	experience in preparing HTRW decision documents and conducting ATR. Experience with all phases of the CERCLA process and with risk management decision in remedial projects is required.
Environmental Resources	The environmental resource professional will have extensive experience in CERCLA ARARs, NEPA compliance and pacific northwest endangered species.
Geotechnical Engineering	The geotechnical engineer will have experience in sediment management sites, and technical aspects of environmental dredging and remediation.
Structural Engineering	The structural Engineering reviewer will have experience in marine engineering structures.
Cost Engineering	The Cost Engineer will be an expert in HTRW and marine cost engineering.

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan 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 then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in 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 should be completed, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

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 1165-2-209, 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:

- **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 1165-2-209.
 - **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.** While this work will be somewhat challenging, the potential risk management decisions related to related to potential liability and responsibility under CERCLA are relatively minor and not precedent setting. There is no threat to human life. Current cost estimates for remedial and or construction costs range to \$30 million. Many of

these costs will not be borne by the project, therefore, there is no IEPR anticipated for this work.

b. Products to Undergo Type I IEPR. No IEPR is anticipated as costs for this work are not expected to exceed \$30 million.

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, and in ER 1165-2-132 for HTRW concerns. All documents and decisions are expected to comply with the "Polluter Pays" principle of CERCLA and no project costs are expended that are the responsibility of other parties. 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 DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Cost Engineering DX, located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The DX will also provide the Cost Engineering DX certification. The RMO is responsible for coordination with the Cost Engineering DX.

9. MODEL CERTIFICATION AND APPROVAL

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).

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).

a. **Planning Models.** Because this is not a Civil Works Planning process, Civil Works planning models will not be used. The models used for decision making process in the overall CERCLA project are EPA's and reviewed in their process. This project does not use models.

b. **Engineering Models.** No engineering models are anticipated to be used in the development of the decision documents:

10. REVIEW SCHEDULES AND COSTS

a. **ATR Schedule and Cost.** Initial ATR study needs for the Action Memorandum are included in this plan. Additional reviews will be scheduled and estimated as they are proposed.

The Action Memorandum initial ATR will be for \$4,000 and is scheduled for completion by 15 January 2013.

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

c. **Model Certification/Approval Schedule and Cost.** Models proposed for use on this project are already approved.

11. PUBLIC PARTICIPATION

The Engineering Evaluation and Cost Analysis was completed for the proposed upland soil cleanup action and was subject to a 30 day public review. Public comments and responses are documented in the Action Memorandum. In addition to public review, state federal and tribal regulatory agencies have been given the opportunity for review on the Action Memorandum and preceding technical documents.

Other decision documents will be subject to public review as required and this document will be amended to address those reviews as they are identified.

12. REVIEW PLAN APPROVAL AND UPDATES

The Northwestern Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan will be attached to this plan as they occur. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

- Portland District Point of Contact, Christine Budai, Project Manager, 503-808-4725
- Northwest Division Point of Contact, Tim Dykstra, 503-808-3726
- Environmental and Munitions Center of Expertise Point of Contact, Sam Bass, 402-697-2654

ATTACHMENT 1: TEAM ROSTERS

PROJECT DELIVERY TEAM ROSTER

Discipline	Name	Organization
Project Manager	Chris Budai	CENWP-PM-FP
Technical Lead/Env. Eng.	Michael Gross	CENWP-EC-DC
Cost Engineer	Ricky Russell	CENWP-EC-CC
Risk Assessor	Travis Shaw	CENWS-EN-GB
Operations – Facility	Mac Robison	CENWP-OD-NP
Environmental Specialist	Carolyn Schneider	CENWP-PM-E
Geologist	Sharon Gelinax	CENWS-EN-GB-GE
Real Estate	David Baker	CENWP-RE
Civil Engineer	Rebecca Weiss	CENWS-EN-GB-ET

A/E TEAM ROSTER

Discipline	Name	Organization
Project Manager/	Rick Moore	CH2MHill
Structural Engineer	Ken Green	CH2MHill
Economist	TBD	
Cost Estimator	TBD	
Hydraulic/Civil Engineer	TBD	
Real Estate Appraiser	TBD	
Senior Reviewer/QA/QC	TBD	
CADD Tech/GIS	TBD	

DQC TEAM ROSTER

Discipline	Name	Organization
Environmental Specialist	Jodi Marshall	CENWP-PM-E
Cost Engineer	Jeff Sedey	CENWP-EC-CC
Structural Engineer	Matt Hanson	CENWP-EC-DS
Geotechnical/Civil Engineer	Mark Brodesser	CENWP-EC-DC

AGENCY TECHNICAL REVIEW TEAM ROSTER

Discipline	Name	Organization	Years
ATR Lead/Geotechnical	Sam Bass	CEHNC-EM	30
Environmental	Sandy Frye	CEHNC-EM	30
Environmental Engineering	Carol Dona	CEHNC-EM	25

Hydraulics/Hydrology/Geomorphology	Paul Schroeder	ERDC-EL-MS	30

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 Action Memorandum for U.S. Government Moorings, Portland, Oregon. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. 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 DrCheckssm.

SIGNATURE

Sam Bass
ATR Team Leader
CEHNC-CX

Date

SIGNATURE

Christine Budai
Project Manager
CENWP-PM

Date

SIGNATURE

Carol Dona
Review Management Office Representative
CEHNC-CX

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: Describe the major technical concerns and their resolution.

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

SIGNATURE

Lance Helwig
Chief, Engineering Division
CENWP-EC

Date

SIGNATURE

Laura Hicks
Chief, Planning Division
CENWP-PM

Date

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph N u m b e r

NOTE: Revisions to the Review Plan since it was last approved by the MSC Commander should be documented in Attachment 3. Significant changes (such as a change in the level or scope of review) require re-approval by the MSC Commander following the process used for initially approving the plan. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

NOTE: This attachment is optional. If included, it should define the acronyms used in the Review Plan. Acronyms used in this template or that might typically be used in a review plan (to be modified as necessary for specific review plans) are provided in the table below. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act		
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home	The District or MSC responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>