# Peer Review Plan
# for
# Anchorage Harbor Deepening
# Anchorage, Alaska

## Project Management Plan
**Attachment 4**

***This information is distributed solely for the purpose of pre-dissemination peer review under applicable information quality guidelines. It has not been formally disseminated by the Corps. It does not represent and should not be construed to represent any agency determination or policy.***

**US ARMY CORPS OF ENGINEERS**

**ALASKA DISTRICT**

## 1.0 PURPOSE

This Attachment presents the process that assures quality products for the Anchorage Harbor Deepening Integrated Engineering Documentation Report and Environmental Assessment. Quality control is governed by HQUSACE ER 1110-1-12, U.S. Army Corps of Engineers, Engineering and Design Quality Management (CEMP-ES/CECQ-EP, 1993), Pacific Ocean Division (POD) regulation PODR 1110—1-7, Quality Management Plan, and by Alaska District (CEPOA) ISO section CEPOA-7.1-11, Study Quality Management. Independent Technical Review (ITR) is further governed by Appendix H of ER 1105-2-100, Planning Guidance Notebook, Engineering Circular (EC) 1105-2-408, Peer Review of Decision Documents, and CEPOA ISO section 7.3-4, Independent Technical Review/Design Review. These documents can be reviewed at the HQUSACE Publications Site, and the POD and POA Quality Management Portals at: www.usace.army.mil/usace-docs; www.pod.usace.army.mil; and www.poa.usace.army.mil respectively.

The product to be reviewed by the ITR team is the Integrated Engineering Documentation Report and Environmental Analysis (EDR/EA). Under the provisions of Corps of Engineers policy, as detailed in EC1105-2-408 dated May 31, 2005, the ITR will be conducted by specialists from organizations outside of the district responsible for the study. Independent Technical Review will be conducted for all decision documents and will be independent of the technical production of the project. This Peer Review Plan is, by reference, a part of the PMP for this EDR/EA.

## 2.0 APPLICABILITY

This document provides the Peer Review Plan for the Feasibility Study. It identifies independent technical review for all work to be conducted under this study authority, including in-house, sponsor and contract work.

**References:**

a) EC1105-2-408 “Peer Review of Decision Documents” dated May 31, 2005;
b) ER 1105-2-100 “Planning Guidance Notebook & Appendices D, F, G & H”;
c) PODR 1110-1-7, Pacific Ocean Division Quality Management Plan;
d) CEPOA-7.1-11, Alaska District Study Quality Management; and
e) CEPOA-7.3-4, Independent Technical Review/Design Review

## 3.0 GENERAL

The Anchorage Harbor Deepening Project is directed by Section 118 of Public Law (P.L.) 108-447 to provide navigation improvements associated with the Port of Anchorage Expansion Project which is being constructed by the U.S. Maritime Administration (MARAD) and the Port of Anchorage. The applicable text of the authorization is as follows:

*(a) ANCHORAGE HARBOR*

*(1) HARBOR DEPTH.--The project for navigation improvements, Cook Inlet, Alaska (Anchorage Harbor, Alaska), authorized by section 101 of the River and Harbor Act of 1958 (72 Stat. 299) and modified by section 199 of the Water Resources Development Act of 1976 (90 Stat. 2944), is further modified to direct the Secretary of the Army to construct a harbor depth of minus 45 feet mean lower low water for a length of 10,860 feet at the modified Port of Anchorage*

*intermodal marine facility at each phase of facility modification as such phases are completed and thereafter as the entire project is completed.*

*(2) COST-SHARING.--If the Secretary determines that the modified Port of Anchorage will be used by vessels operated by the Department of Defense that have a draft of greater than 35 feet, the modification referred to in paragraph (1) shall be at full federal expense.*

*(5) MAINTENANCE.--Federal maintenance shall continue for the existing project until the modified intermodal marine facility is completed. Federal maintenance of the modified project shall be in accordance with section 101 of the River and Harbor Act of 1958; except that the project shall be maintained at a depth of minus 45 feet mean lower low water for 10,860 feet referred to in paragraph (1).*

*(b) NAVIGATION CHANNEL.--The Secretary shall modify the channel in the exiting Cook Inlet Navigation Channel approach to Anchorage Harbor, Alaska, to run the entire length of Fire Island Range and Point Woronzof Range and shall modify the depth of that channel to minus 45 feet mean lower low water. The channel shall be maintained at a depth of minus 45 feet mean lower low water.*

*(d) ALTERNATIVES ANALYSIS.--No alternative other than the alternative authorized in this section shall be considered in any analysis of the modified project to be carried out by the Secretary in accordance with this section.*

The study area is located in Kink Arm at the Port of Anchorage, Anchorage Alaska. The current port facility consists of about a 3,500 foot long pile supported dock structure which was constructed in the 1960's. The Port of Anchorage is the portal for goods and supplies which will be consumed by almost 90% of Alaska residents, and practically all Alaska military installations' supplies and equipment shipments. The Port of Anchorage has been designated as a National Critical Port. Current and expected future activities include cargos of containerized goods, crude and refined petroleum products, bulk dry goods (primarily cement) and cruise ships. The container and petroleum cargos account for over 90 percent of the total cargo movement. The cruise ship industry at Anchorage is limited and may or may not expand in future years due to additional travel time required to reach Anchorage from originating ports.

The Ports' expansion project will move the existing dock face 400 feet waterward creating an additional storage capacity of 135 acres. The dock structure will be to 8,800 feet in length, providing dedicated berths for container, petroleum, and dry bulk cargos that currently share the existing dock space. In addition, military cargos will be less subject to interruption by commercial activities.

Federal maintenance was authorized by Section 101 of the Rivers and Harbors Act of 1958, as amended. The current authorization provides for a deeper authorized harbor, but does not change any other aspects of the original authorization. A more detailed discussion of the Port's project and the proposed Corps study is contained in the "Expedited Reconnaissance Study, Section 905(b) Analysis, Navigation Improvements, Channel and Harbor Deepening, Cook Inlet and

Anchorage Harbor, Alaska", which can be found on the Alaska District public home page at: www.poa.usace.army.mil. Details about the Corps dredging activities during the phased port construction can be found in the report titled "Transitional Dredging Operations during the Port of Anchorage Expansion, Anchorage Harbor, Alaska", which will also be available on the District website as soon as the report has been reviewed and approved by Pacific Ocean Division and Headquarters, U.S. Army Corps of Engineers.

Missing sections of the authorizing legislation are not pertinent to the Anchorage Harbor Deepening Project. The scope of the study is limited by paragraph (d) above which restricts the project to only the plan which is in accordance with the Port of Anchorage Expansion project. Therefore, the study will not involve plan formulation and alternative development and analysis, nor will it involve an economic analysis. The scope is limited to the technical design aspects of deepening the harbor from the current maintained depth of -35 feet mean lower low water (MLLW) to the new authorized depth of -45 feet MLLW. Sedimentation at the Port of Anchorage Harbor is a significant contributor to the annual dredging operation, and the study will involve both numerical and physical modeling to determine if, and by what amount, the sedimentation will change as a result of the port expansion project. As with any modeling, the value of the results are dependant on the assumptions incorporated into the model, and the skill of the modelers in constructing and calibrating the model. Also, the proposed model will incorporate some state-of-the-art equipment. This analysis will define the cost and equipment requirements for both transitional dredging, to be performed through the operations and maintenance program, and post construction dredging requirements. The modeling will be constructed and operated by the Coastal Hydraulics Laboratory (CHL) in Vicksburg Mississippi, part of the Corps' world-class Engineering Research and Design Center (ERDC). With the exception of the modeling effort, the design is expected to be uncomplicated.

MARAD has issued a final EA and FONSI which addressed the Corps dredging and disposal. The EDR/EA will review that document, and incorporate it extensively, and update or supply any information which the Corps believes to be pertinent to the Corps dredging effort. Material testing has determined that the dredged material is uncontaminated and suitable for open water disposal. The potential issues to be addressed are the quantity of dredged material, and the use of the existing disposal site, which has been assumed.

The study will be an Engineering Documentation Report which is defined by ER 1110-2-1150 as a report which supports the development of a Project Cooperation Agreement (PCA) where only technical issues remain to be resolved. The EDR is also a document which may be used where Congress has authorized a project without a decision document.

## 4.0 REVIEW REQUIREMENTS

The EDR is an implementation document, and as such, is not normally subject to the requirements of EC1105-2-408. Never-the-less, Corps Quality Management guidelines require that independent technical review will still be necessary to assure that project quality is maintained. Therefore, this study will adopt the procedure defined in the EC1105-2-408. Initial Quality Control (QC) review will be handled within the Section or Branch performing the work. Additional QC will be performed by the PDT during the course of completing the EDR. The

detailed checks of computations and methodology should be performed at the District level, and the processes for this level of review are well established, see reference d.

This EDR anticipates that the Planning Center of Expertise (PCX) for Deep Draft Navigation Projects will assign and coordinate the efforts of a Corps ITR team. The responsible employee for the Deep Draft Navigation PCX is Mr. Kenneth G. Claseman of Mobile District (CESAM-PD-FE). The Alaska District recommends that the ITR be conducted locally by Corps and private sector experts, but the determination whether the review is conducted locally or by another Corps district will be made by the PCX. It is further recommended that the ITR be handled within the Corps, as the scope and technical complexity do not warrant an External Peer Review (EPR). Modeling products will be reviewed internally by CHL staff, and will be further reviewed by the ITR and Value Engineering/Value Management (VE/VM) teams. CHL will publish a paper on the purpose and scope, procedures, and findings of the modeling effort which will be distributed for peer review. It is anticipated that while this study will be challenging and beneficial, it will not be novel, controversial or precedent setting, nor have significant national importance. The ITR will focus on:

- Review of the assumptions and criteria applied;
- Review of the methods of analysis and design; and,
- Compliance with client, program and NEPA requirements.

## 5.0 REVIEW PROCESS

It is anticipated that the ITR Team Review Process will begin after the ITR Team has been assigned. The modeling developed by CHL will not require review or certification; however the output from those models will be reviewed as part of the ITR for the Technical Review Conference.

## 6.0 REVIEW COST

The cost of the ITR is estimated to be about $20,000 based on similar reviews conducted by Alaska District, however, due to the overhead imposed by the PCX oversight both the cost and schedule may be underestimated.

## 7.0 REVIEW SCHEDULE

| TASK | START | FINISH |
|---|---|---|
| • Develop ITR Plan & post to Web Site, PCX | 14-Feb-07 | 20-Feb-07 |
| • Recommend ITR Plan to PCX | | 20-Feb-07 |
| • PCX Approves or Assigns ITR Team | 21-Feb-07 | 16-May-07 |
| • Scoping Meeting | | 19-May-07 |
| • ITR Review of Technical Review Conference (TRC) Documents | 08-Jan-09 | 04-Feb-09 |
| • VE/VM Review | 08-Jan-09 | 22-Jan-09 |
| • Technical Review Conference | | 27-Mar-09 |
| • Public Review of Draft EDR/EA | 31-Mar-09 | 09-May-09 |

## 8.0 PEER REVIEW PLAN

The components of the Peer Review Plan were developed pursuant to the requirements of EC 1105-2-408.

### 8.1 BASIC INFORMATION

The documents that will be the subject of the peer review process are the Engineering Documentation Report and Environmental Assessment, Division Commander's Public Notice and the Finding of No Significant Impact (assumed) for the Anchorage Harbor Deepening study. The purpose of the engineering documentation report will be to resolve issues concerning sedimentation and dredging practices and to begin Plans & Specifications.

The District PDT is listed as follows. This list provides the names and points of contact of team members that are available to answer specific technical questions as part of the Peer Review Process:

### 8.2 DISTRICT PDT

| *Name* | *Position* | *Affiliation* | *Phone (907)* | *E-Mail* |
|---|---|---|---|---|
| Andrea Elconin | Project Manager | CEPOA-PM-C | (907) 753-5680 | andrea.b.elconin@poa02.usace.army.mil |
| Larry Scudder | Study Coordinator | CEPOA-EN-CW-PF | (907) 753-5710 | j.larry.scudder@poa02.usace.army.mil |
| | Hydraulic Engineer | CEPOA-EN-CW-HH | | |
| | Biologist | CEPOA-EN-CW-ER | | |
| | Archaeologist | CEPOA-EN-CW-ER | | |
| | Native Liaison | CEPOA-EN-CW-ER | | |
| | Cost Engineer | CEPOA-EN-CE | | |
| | Realty Specialist | CEPOA-RE-PC | | |
| | Geotechnical Engineer | CEPOA-EN-ES-SG | | |
| | Operations | CEPOA-CO-O | | |
| | Value Specialist | CEPOA-EN-ES | | |

### 8.3 ITR TEAM (TO BE ASSIGNED BY THE PCX)

| *Name* | *Position* | *Affiliation* | *Phone ((907)* | *E-Mail* |
|---|---|---|---|---|
| | | | | |
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### 8.4 SCIENTIFIC INFORMATION

Based upon the evaluation by the PDT, it is highly unlikely that the Corps report to be disseminated will contain influential scientific information.

### 8.5 TIMING

The Peer Review process will begin formulation meeting anticipated for mid March 2007. The formulation meeting will review assumptions and recommended procedures contained in the Project Management Plan, which is currently under review at POD. No ITR of the PMP was determined to be necessary due to the nature of the document. The schedule of anticipated reviews is listed in Section 7.0 above.

### 8.6 EPR PROCESS

No External Peer Review process is envisioned at this time. There are no controversial or complex issues associated with this study, nor will the study recommend any procedure that would be precedent setting or change prevailing practices. The Project Complexity Analysis was used in making this determination.

**Project Complexity Analysis**

| Factor / Discipline | Unique Methodology | Technical Complexity | Precedent Setting Methods/Models | Potential Change Current Practice | Significant Policy Impact | Score |
|---|---|---|---|---|---|---|
| **Plan Formulation** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Economic** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Environmental** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Technical** | 3 | 1 | 1 | 1 | 1 | 1.4 |
| | | | | | | |
| | | | | | | |
| **Score** | 1 | .5 | .5 | .5 | .5 | |

**Scoring:**

| | |
|---|---|
| **NA** | **0** |
| **Low** | **1 – 2** |
| **Medium** | **3 – 4** |
| **High** | **5** |

### 8.7 PUBLIC COMMENT

Public interest in this project is anticipated to be minimal. The District anticipates meeting with interested groups including the port readiness committee, the shippers, the pilots, resource

agencies, and any other group that expresses an interest. However, the port expansion project is likely to overshadow the Corps dredging project in the publics mind. A public meeting will be conducted during the public review period.

### 8.8 DISSEMINATION OF PUBLIC COMMENT

Minutes of meetings with public organizations and/or individual will be prepared and distributed to the PDT, participants, and any individuals or organizations that are identified to have an interest in the project.

### 8.9 REVIEWERS

It is anticipated that four to five reviewers total should be available in the following disciplines: Hydraulic Engineering; Environmental; Dredging Procedures; and Cost Estimating.

### 8.10 REVIEW DISCIPLINES

The expertise that should be brought to the review team includes the following:

#### 8.10.1 Hydraulic Engineering

The reviewer(s) should have extensive knowledge of coastal hydraulics and numerical and physical flow modeling.

#### 8.10.2 Environmental

The reviewer should have a through knowledge of dredging operations and open water disposal issues. The reviewer should be familiar with NEPA requirements and process, and consultation requirements.

#### 8.10.3 Cost Engineering

The reviewer should be familiar with dredging equipment and procedures, and be familiar with cost estimating process for dredging operations.

### 8.11 EPR SELECTION

An External Peer Review is not anticipated for this study.