



DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

CEPOD-PDC

27 JUN 2014

MEMORANDUM FOR COMMANDER ALASKA ENGINEER DISTRICT (CEPOA-EN/TATTON SUTER), P.O. BOX 6898, JBER, AK 99506-0898

SUBJECT: Review Plan Approval for the Valdez Harbor Navigation Improvements Plans and Specifications.

1. References:

a. Engineer Circular 1165-2-214, Civil Works Review, 15 December 2012.


b. Review Plan for the Valdez Harbor Navigation Improvements Plans and Specifications, Alaska District, U.S. Army Corps of Engineers.

2. This memorandum constitutes approval of the Review Plan, Valdez Harbor Navigation Improvements Plans and Specifications, Alaska District, U.S. Army Corps of Engineers.

3. The approved Review Plan is subject to change as circumstances require, consistent with project development under the Project Management Business Process. Subsequent significant revision to this Review Plan requires my written approval.

4. For further information or clarification about the review process, please contact the Pacific Ocean Division Civil Works Integration Division. POC is Mr. Russell Iwamura, Senior Economist, (808) 835-4625, or email, Russell.K.Iwamura@usace.army.mil.

Encl


RICHARD L. STEVENS
Major General, USA
Commanding

REVIEW PLAN

**VALDEZ HARBOR NAVIGATION IMPROVEMENT
VALDEZ, ALASKA
Plans and Specifications**

Alaska District

**MSC Approval Date: 27 June 2014
Last Revision Date: 22 Aug 2014**



**US Army Corps
of Engineers ®**

REVIEW PLAN
VALDEZ HARBOR NAVIGATION IMPROVEMENT
VALDEZ, ALASKA
Plans and Specifications

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Valdez Harbor navigation improvement Plans and Specifications Valdez, Alaska. This plan also discusses the environmental component of the project to reflect changes in the harbor footprint, dredged material disposal area, and other project features.

b. References

- Engineer Circular (EC) 1165-2-214, Civil Works Review, 15 December 2012.
- EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011.
- Engineer Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006.
- Civil Works Project Management Plan (PMP) Design Agreement Navigation Improvement, Valdez, Alaska, 1, August 2011.
- Pacific Ocean Division (POD) Quality Management Plan, October 2013.
- Alaska District (POA) Quality Management Plan, CEPOA-QMP-001, January 2010.

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, implementation documents are subject to cost engineering review and certification (per EC 1165-2-214) and the Value Management Plan requirements in the Project Management Business Process (PMBP) Reference 8023G and ER 11-1-321 Change 1.

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 plans and specifications is typically POD, but may also be the Risk Management Center (RMC), depending on the primary purpose of the plans and specifications and the level review. The RMO for the peer review effort described in this Review Plan is POD.

POD will coordinate with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (MCX) to ensure the appropriate expertise is

included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. PROJECT INFORMATION

a. Authority. The Valdez Harbor navigation improvement Valdez, Alaska, project is authorized by Section 4012 of the Water Resources Development Act of 2007, PL 110-114, which contained the following language:

The Secretary shall conduct a study to determine the feasibility of carrying out a project for navigation, Valdez, Alaska, and if the Secretary determines that the project is feasible, shall carry out the project at a total cost of \$20,000,000.

b. Implementation Document. Valdez Navigation Improvement, Valdez, Alaska. This Review Plan is for the preparation and implementation of the Plans and Specifications, to be approved by POD.

Project Activity	Date
Complete Plans and Specifications	Aug 2014
Construction Contract Award	Oct 2014

c. Project Sponsor. The City of Valdez is the project sponsor and Non-Federal Sponsor for the Valdez Harbor Navigation Improvement project.

d. Project Description. Valdez is at the north end of a 22-km-long fjord (Port Valdez) that opens into Valdez Arm of Prince William Sound. Valdez is about 193 km due east of Anchorage, but is about 500 km from Anchorage by highway. See Figure 1.

Multiple alternative sites and plans, to provide additional protected moorage capacity were investigated through the course of the feasibility study, with a detailed focus on five final plans. The East Site Rubblemound 320-Vessel alternative was selected as the recommended plan. The plan is supported by the local sponsor and was carried forward as the recommended plan.

The project includes the construction of a new basin east of the Ship Escort Response Vessel Systems (SERVS) dock south of the existing harbor. The new 14 acre basin includes an entrance channel dredged to a depth of -19 feet MLLW and a mooring basin with areas dredged to -14 and -19 feet MLLW which could provide moorage for up to 320 vessels. The basin is protected by a rubblemound breakwater to the south approximately 1786 feet long, a breakwater to the east 910 feet in length with a stub breakwater 349 feet long starting at shore to allow for near shore fish passage.

The General Navigation Features (GNF) of the project were authorized in WRDA 2007 for an estimated total project cost of \$20,000,000. The current estimate for the GNF is \$24,434,000 which is well within the project's 902 limit.

The National Environmental Protection Act (NEPA) requirements were completed in 2010, with the development of an Environmental Assessment/Finding Of No Significant Impact (EA/FONSI). The environmental compliance requirements during the Plans and Specifications phase will consist of updating and coordination with pertinent environmental agencies. There is no requirement for another NEPA decision document.

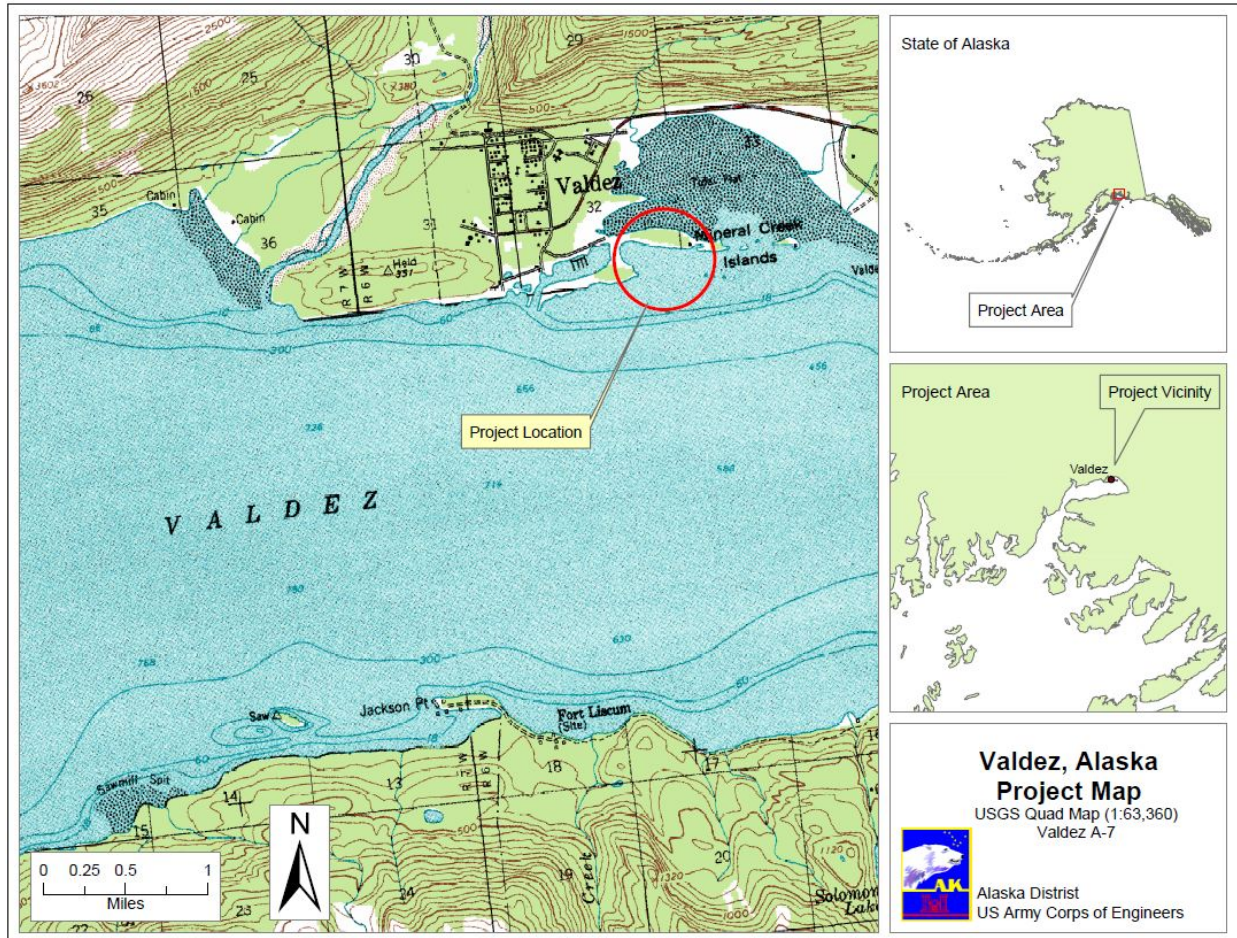


Figure 1: Valdez Project Location Map

4. FACTORS AFFECTING THE SCOPE AND LEVEL OF REVIEW

A DQC review and ATR are mandatory for plans and specifications. A Type II IEPR is required if there is a significant threat to human life should the project fail. There are also a number of other factors that should be considered including the following:

- Novel methods will not be used during construction.
- The plans and specifications will not be unusually complex.

- Precedent setting models will not be used in the development of the plans and specifications.
- Innovative materials/techniques will not be involved in the construction of the project.
- The design will have redundancy, resiliency, and robustness.
- The plans and specifications do not include a unique construction sequence or acquisition plan or reduced/overlapping design construction schedules.
- A deliberate, risk informed recommendation whether to undertake a Type II IEPR based on these factors shall be made and documented later in this Review Plan.

a. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The in-kind contributions expected from the sponsor are detailed the project PMP.

5. DISTRICT QUALITY CONTROL (DQC)

All implementation 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 PMP. POA shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manuals of POA and POD.

a. Documentation of DQC. Documentation of DQC activities is required and shall be in accordance with the Quality Management plans of POA and POD.

b. Products to Undergo DQC.

- Supporting Data.
- Environmental Compliance Documents.
- Final Plans and Specifications Documents.

c. Required DQC Expertise. The following expertise is needed for DQC. Once identified, the DQC team members for this study and a brief description of their credentials will be added in Attachment 1.

Table 1: DQC Required Expertise

DQC Team Members/Disciplines	Expertise Required
DQC Lead	The DQC lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting DQC. The lead should also have the necessary skills and experience to lead a virtual team through the DQC process. The DQC lead may also serve as a reviewer for a specific discipline (such as Hydraulic or Geotechnical Engineering, etc).
Specifications	The representative of specification should have a thorough understanding of developing specification packages for rip rap construction of breakwaters and revetments in coastal environments.
Hydraulic Engineering	The hydraulic engineering reviewer will be an expert in the field of coastal hydraulics and have thorough understanding of analyses of winds, waves, currents, hydrodynamic-salinity, small boat harbor design, and breakwater construction. A registered professional engineer is recommended
Geotechnical Engineering	The geotechnical reviewer should be a senior engineer with experience in developing geotechnical examinations and foundation analysis for navigation projects specifically related to small boat harbors.
Environmental Planner	The environmental reviewer should be a senior biologist or NEPA Planner with experience in coordinating environmental reviews for complex construction projects on small boat harbors in marine waters in Alaska

DQC reviewers should have a minimum of 4 years experience in developing Small Boat Harbors.

6. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all plans and specifications (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 U.S. Army Corps of Engineers (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 POD and is conducted by a qualified team from outside POA 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 POD.

The environmental updates to the project will not undergo ATR but will undergo a DQC with a QA from POD. The rationale for foregoing ATR on the environmental update involves several considerations based on a review of EC 1165-2-214. The changes to the project are minor in scope. The slight shift in the harbor basin is due to real estate concerns and to avoid a buried fiber optic cable. These changes are typical in the PED phase as the project moves toward a detailed design. The change in the footprint is a shift to the existing plan covered in the EA and is not a new location and the habitat impacted in the shift is similar to the habitat in the original footprint. The change in the dredged material disposal location is necessary due to natural recovery at the planned disposal site (Two Moon Bay) based on recent monitoring conducted in cooperation with the National Marine Fisheries Service. The deep water disposal location that would be used for this project was already considered in the 2010 EA, although it was not selected due to the planned beneficial use of dredged material at Two Moon Bay. The final change in the project is the addition of a conservation easement. This easement is not considered mitigation and is land owned by the City of Valdez that will remain owned by the City of Valdez, albeit with a change in status. The changes to the project are supported by letters from National Marine Fisheries Service and the U.S. Fish and Wildlife Service. The Fish and Wildlife Coordination Act Report will be reviewed by the USFWS and updated as necessary and discussed in their updated coordination letter. A large portion of the FWCAR dealt with Two Moon Bay, which is no longer an issue. SHPO coordination was not reinitiated since the original cultural resources survey encompassed the area where the project footprint would be shifted and the only listed sites were several miles away. The Section 404(b)(1) has been updated to reflect the changes to the project and a FONSI will be reissued to cover the small changes to the overall project. The original FONSI for the project was signed in 2010.

ATR for the rest of the project was initiated on 15 July 2014.

a. Products to Undergo ATR. The products for review are the geotechnical analysis and detailed plans and specifications for the Valdez Harbor improvements, Valdez, Alaska

b. Required ATR Team Expertise. The following ATR expertise is required for this project and reflects the expertise of DQC members.

Table 2: ATR Required Expertise

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should 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 Hydraulic or Geotechnical Engineering, etc).
Hydraulic Engineering	The hydraulic engineering reviewer will be an expert in the field of coastal hydraulics and have thorough understanding of analyses of winds, waves, currents, hydrodynamic-salinity, small boat harbor design, and breakwater construction. A registered professional engineer is recommended
Geotechnical Engineering	The geotechnical reviewer should be a senior engineer with experience in developing geotechnical examinations and foundation analysis for navigation projects specifically related to small boat harbors.

POD, as the RMO, identified the make-up of the ATR team and identified the ATR team lead in coordination with the Project Manager (PM), vertical team, and other appropriate centers of expertise. Members of the ATR team are from outside POA, with the ATR Lead from outside POD. The ATR team members for this project and brief descriptions of their credentials are provided in Attachment 1.

b. Documentation of ATR. DrCheckssm 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 DrCheckssm will include the text of each ATR concern, the Project Delivery Team (PDT) response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes POA, POD, and Headquarters U.S. Army Corps of Engineers (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 DrCheckssm 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 draft report. A sample Statement of Technical Review is included in Attachment 2.

7. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for implementation 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:

- **Type I IEPR.** Type I IEPR reviews are managed by an Outside Eligible Organization (OEO) external to USACE and are conducted on project planning studies and decision documents prior to design and construction activities.

- **Type II IEPR.** Type II IEPR, or Safety Assurance Reviews (SARs), are managed by the RMC 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 Type II IEPR. Type II IEPR will not be conducted for these plans and specifications. This decision was based on the discussions in Para 4 – Factors Affecting the Scope and Level of Review and the criteria in EC 1165-2-214. The reasoning for this decision is as follows:

- The Director's Report was signed September 27, 2011
- A Type I IEPR exclusion was granted on 26 April 2011. The conditions which were the basis for that exclusion have not changed significantly.
- No novel methods will be used during construction.
- The plans and specifications will not be unusually complex.
- No precedent setting models will be used during the development of the plans and specifications.
- No innovative materials or techniques will be involved in the construction of this project.
- The design will include redundancy, resiliency, and robustness.

- The plans and specifications will not include a unique construction sequence, acquisition plan or reduced/overlapping design construction schedule.

b. Products to Undergo Type II IEPR. Not Applicable.

c. Required Type II IEPR Panel Expertise. Not Applicable.

d. Documentation of Type II IEPR. Not Applicable.

8. POLICY AND LEGAL COMPLIANCE REVIEW

All implementation documents will be reviewed throughout the development process for their compliance with law and policy. 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 POD Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published USACE policies, particularly policies on analytical methods and the presentation of findings in implementation documents.

9. COST ENGINEERING AND ATR MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION

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

10. MODEL USAGE

Well known and proven USACE developed and commercial engineering software should be used whenever appropriate during the development of implementation documents. The professional practice of documenting the application of the software and modeling results will also 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 possible. 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). The engineering models in Table 3 were used in the development of the plans and specifications.

Table 3. Engineering Models

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Project	Approval Status
STWAVE	Steady State spectral Wave (STWAVE) was used to determine the design wave conditions for each of the primary wave directions and breakwater design	HH&C CoP Preferred Model
STFATE	Short-Term Fate of Dredged Material (STFATE) was used to estimate the impact of the deep-water disposal on the seafloor. The model generated a disposal plume footprint and depth of sediment accumulation on the seafloor.	HH&C CoP Preferred Model
Microcomputer Aided Cost Engineering System (MCACES) 2 nd Generation (MII)	The MCACES MII construction cost estimating software is a tool used by cost engineers to develop and prepare all USACE Civil Works cost estimates. Using the features in this system, cost estimates are prepared uniformly allowing cost engineers throughout USACE to function as one virtual cost engineering team.	Cost Engineering MCX Required Model

11. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. The ATR for the Valdez plans and specifications will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the ATR is expected to be accomplished in July 2014 with an estimated cost of \$20,000 to perform the review.

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

12. PUBLIC PARTICIPATION

A facilitated meeting was held on November 4, 2005, to sort through the mitigation alternatives. Avoidance and minimization measures were an agreed part of the design to the extent practical. A fuel facility was determined to be necessary for efficient operation of a new harbor and would include best management practices.

The city of Valdez has conducted public meetings throughout the planning process. In February 2007, a city survey on capital project was mailed to Valdez citizens. Three out of four respondents favored a new harbor and said a harbor was a top priority.

The feasibility report and environmental assessment was distributed in February 2010 for the public and agency review as part of the NEPA process. A public meeting was held during the review period to discuss the project alternatives and solicit public views and opinions.

If future investigations identify information or issues necessitating public involvement then a public information meeting will be held.

13. REVIEW PLAN APPROVAL AND UPDATES

The POD Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving POA, POD, and HQUSACE members) as to the appropriate scope and level of review for the implementation document. Like the PMP, the Review Plan is a living document and may change as the project progresses. POA is responsible for keeping the Review Plan up to date. Minor changes to the Review Plan since the last POD Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will be re-approved by the POD Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commander's approval memorandum, will be posted on the POA webpage. The latest Review Plan should also be provided to POD.

14. REVIEW PLAN POINTS OF CONTACT

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

- David Martinson, Chief Project Management Civil Works, (907) 753-2668 is the Alaska District POC.
- Russell Iwamura, Senior Economist, (808) 835-4625 is the Pacific Ocean Division POC.

ATTACHMENT 1: TEAM ROSTERS

Table 4: Project Delivery Team

Team Member	Discipline	Office
Dave Martinson	Project Manager	Alaska District
Bruce Sexauer	Plan Formulation	Alaska District
Chris Hoffman	Environmental Resources	Alaska District
Merlin Peterson	Hydraulics/Hydrology/Coastal Engineering	Alaska District
Ike Pace	Cost Engineering	Tetra Tech
Al Arruda	Cost Engineering	Alaska District
John Smith	Real Estate	Alaska District
Coleman Chalup	Geotech	Alaska District
Diane Walters	Editor	Alaska District
Don Tybus	VE Officer	Alaska District

Table 5: DQC Review Team

Office (Alaska District)	Discipline
CEPOA-EN-G-GM	GeoTech
CEPOA-EN-ES-SP	Specifications
CEPOA-EN-CW-HH	Hydraulics/Hydrology/Coastal Engineering

Table 6: ATR Review Team

The ATR Review team has the demonstrated expertise for review of the Valdez plans and specifications.

Discipline	Office	Description of Credentials
ATR Team Leader	CESPL-ED-DC	<p>-B.S. Civil Engineering, University of Hawaii at Manoa, Honolulu, Hawaii. (1976)</p> <p>-Moffatt and Nichol, Engineers, in Long Beach, CA: Coastal Engineer from 1977 – 1980 where he performed coastal engineering evaluations for port and marina development in southern California, including tidal circulation modeling for the Downtown Long Beach Marina.</p> <p>-Tetra Tech, Inc., Pasadena, CA. (1980 – 1988). He became the Senior Engineer and performed primarily coastal engineering and hydrodynamic modeling in support of transportation and shore</p>

		<p>protection projects for the government industry and private developers.</p> <p>-Army Corps of Engineers, (1989 – Present): Chief, Coastal Engineering Section, USACE, Los Angeles, District, Los Angeles, CA. Providing technical and administrative oversight for all coastal engineering projects within the Los Angeles District; Navigation and shore protection projects include the Ports of Los Angeles and the Port of Long Beach, beach nourishment of Surfside-Sunset, and dredging of small-craft harbors, and special studies like the Coast of California Storm and Tidal Wave Study. He also represents the District for coastal engineering activities with ERDC and academia.</p> <p>ATR Team Leader became a Registered Professional Engineer, California, in 1980.</p>
<p>Geotechnical Engineering</p>	<p>CENWS-EN-DB-SS</p>	<p>-Ph. D. West Virginia University, with emphasis on Geo-environmental engineering (1998).</p> <p>-Has 20 years of experience in Geotechnical Engineering with consulting firms and research institutions located in MD, OH, and WA.</p> <p>-Private Institution Experience: Seismic and liquefaction analysis; Slope stability; Deep foundations; Designing with Geosynthetics; Settlement and consolidation; Filter design; Seepage analysis; Soil behavior; and Pavement design.</p> <p>-Army Corps of Engineers Experience: Performing and supervising geotechnical design; Project management; Research & Development; Manufacturing quality control; Field work; and Teaching.</p> <p>- Projects worked on: Qwuloolt Levee, Centralia Chehalis Flood Reduction Levees, Stability of Right Abutment for the Howard Hanson Dam, Rock Erosion Study, Chief Joe Dam, and Air Traffic Control Tower at JBLM, Sitka</p>

		<p>Breakwater ATR Review. -Detail at ERDC in Vicksburg (Nov 2013 – Apr 2014)</p>
Hydraulics and Hydrology Engineering	CESPL-ED-DC	<p>Education:</p> <ul style="list-style-type: none"> - Bachelors of Civil Engineering, University of Long Beach, Long Beach, CA December 1982 - Masters of Coastal Engineering, University of Florida, Gainesville, Florida, May 1985 - Professional Engineering License, Civil, for California, April 1992. - Experience has encompassed a broad and diverse range of coastal engineering projects involving planning, design construction, and operation and maintenance phases of navigable waterways, harbor, ports, breakwaters, jetties, revetments, groins, beach fills, and wetlands restoration. Design experience includes extensive use of numerical modeling, physical modeling, complex coastal processes analysis, field data collection and instrumentation, field data analysis and interpretation, CADD, and development of plans and specifications. - Shoreline Erosion Control Project work experience: Imperial Beach General Reevaluation Study; Newport Beach; Orange County Beach Erosion Control Project (Surfside Sunset); San Clemente Shoreline Feasibility Study -Harbor Navigation and Operations and Maintenance Projects: Anaheim Bay Harbor, U.S. Naval Weapons Station, Seal Beach; Channel Islands Harbor; King Harbor (Redondo Beach); Los Angeles Harbor / Long Beach Harbor; Mission Bay; Morro Bay Harbor. - Wetlands Restoration Projects: Lower Santa Ana River Marsh; Ballona Wetlands Section 1135 Ecosystem Restoration Study, design, plans and specifications, and construction.

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR IMPLEMENTATION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the plans and specifications for the Valdez Harbor Navigation Improvements. 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 DrCheckssm.

SIGNATURE

Arthur T. Shak
ATR Team Leader
CESPL-ED-DC

Date

SIGNATURE

Dave Martinson
Project Manager
CEPOA-PM-CW

Date

SIGNATURE

Name
Architect Engineer Project Manager¹
Company, location

Date

SIGNATURE

Russell Iwamura
Review Management Office
Representative
CEPOD-PDC

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

[Name](#)

Chief, Engineering Division

[Office Symbol](#)

_____ Date

SIGNATURE

[Name](#)

Chief, Planning Division

[Office Symbol](#)

_____ Date

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
22 Aug 14	Updated environmental components	Pg 1/Para.1 Pg 5/Table 1 Pg 5/Sec 6

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<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
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 District/MSD	The District or MSD 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