



**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER  
CORPS OF ENGINEERS  
550 MAIN STREET  
CINCINNATI, OH 45202-3222

CELRD-PD-G

26 FEB 13

MEMORANDUM FOR Commander, U.S. Army Engineer District, Chicago (Susanne Davis/CELRC-PM-PL), 111 N. Canal, Suite 600, Chicago, IL, 60606-7206

SUBJECT: Operations & Maintenance Review Plan for Indiana Harbor, IN

1. The attached Review Plan (RP) for Indiana Harbor was presented to the Great Lakes and Ohio River Division for approval in accordance with EC 1165-2-214 "Civil Works Review" dated 15 December 2012.
2. The Indiana Harbor and Canal (IHC) was constructed beginning in 1911 and is maintained by the federal government, as authorized by the Rivers and Harbors Act of 1910, 1930, 1935, 1937 and 1960. A Confined Disposal Facility (CDF) was constructed on a USEPA Resource Conservation and Recovery Act (RCRA) site in East Chicago, Ind., located on the Lake George Branch of the IHC. The CDF was authorized by WRDA 1986 and 1996, and the Emergency Supplemental Act of 2005. The CDF is currently operating, and sediment is being placed into the facility.
3. The following project activities are expected to occur throughout the current FY:
  - a. Conduct standard harbor operations throughout the FY which include the following: Federal channel condition surveys; coastal structure and project safety signage inspection; stakeholder coordination; and annual budget formulation/justification/MS support.
  - b. Mechanically dredge and hydraulically off-load approximately 200,000 CY of heavily contaminated sediment, increasing up to 400,000 CY of sediment if funding is available.
  - c. Operate and maintain the Confined Disposal Facility throughout the FY. Activities include: operations and maintenance of a groundwater pumping system to maintain an inward groundwater gradient on the site; treatment of groundwater using a package plant; performance of ambient air-monitoring throughout the FY, and real time air monitoring during the dredging period providing regulatory reporting as required by facility/project permits and agreements; periodic inspection and maintenance of all CDF facility features.
  - d. Repairs to the East Breakwater by LRE marine floating plant forces. Work includes removal of toppled catwalk structure, and laid-up stone stabilization efforts. No design efforts are necessary in FY13.

CELRD-PD-G

SUBJECT: Operations & Maintenance Review Plan for Indiana Harbor, IN

4. The RP defines the scope and level of peer review for the activities to be performed for the subject project. The USACE LRD Review Management Organization (RMO) has reviewed the attached RP and concurs that it describes the scope of review for work phases and addresses all appropriate levels of review consistent with the requirements described in EC 1165-2-214.
5. I concur with the recommendations of the RMO and approve the enclosed RP for the Indiana Harbor project.
6. The District is requested to post the RP to its website. Prior to posting, the names of all individuals identified in the RP and the dollar values of all project costs should be removed.
7. If you have any questions please contact Dr. Hank Jarboe, CELRD-PDP, at (513) 684-6050.



ROBERT D. PETERSON  
Colonel, USA  
Acting Commander

Encl  
Review Plan

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

1. **Applicability.** This review plan is based on National Programmatic review plan for Operations and Maintenance (O&M) project decision documents, as promulgated by EC in the Water Resources Development Act of 2007 (P.L.110-114) and Engineering Circular 1165-2-214 (Civil Works Review Policy). The purpose of this Review Plan is to define the requirements, procedures, and specific details of how District Quality Control (DQC) will be conducted for all activities associated with the Indiana Harbor O&M project. This document includes both the harbor features as well as the Indiana Confined Disposal Facility (CDF). The document applies only to Indiana Harbor O&M products/activities, and does not apply to any decision or implementation documents that require Agency Technical Review or Independent External Peer Review.
  
2. **References.**
  - (1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012
  - (2) Engineering Circular (EC) 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
  - (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
  
3. **Requirements.** This programmatic review plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-214) and planning model certification/approval (per EC 1105-2-412).
  - a) District Quality Control/Quality Assurance (DQC). All **decision documents** (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home Major Subordinate Command (MSC).
  
  - b) 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

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published US 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 a designated Review Management Organization (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.

For decision documents prepared under the model GLFER Programmatic Review Plan, the leader of the ATR team shall be from outside the home district, but may be from within the home MSC.

- c) 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 1165-2-214, 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 is generally for decision documents and Type II is generally for implementation products.
- i. Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.
- ii. 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

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

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.

For decision documents prepared under the model GLFER Programmatic Review Plan, Type II IEPR is not required except where public safety issues are present.

- d) Policy and Legal Compliance Review. All **decision documents** will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.
- e) Cost Engineering DX Review and Certification. All **decision documents** shall be coordinated with the Cost Engineering Directory of Expertise (DX), located in the Walla Walla District.
- f) Model Certification/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

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

will be followed. The use of engineering models is also subject to DQC, ATR, and IEPR (if required).

For decision documents prepared under the model GLFER Programmatic Review Plan, use of existing certified or approved planning models is encouraged. Where uncertified or unapproved model are used, approval of the model for use will be accomplished through the ATR process. The ATR team will apply the principles of EC 1105-2-412 during the ATR to ensure the model is theoretically and computationally sound, consistent with USACE policies, and adequately documented. If specific uncertified models are identified for repetitive use within a specific district or region, the appropriate PCX, MSC(s), and home District(s) will identify a unified approach to seek certification of these models.

4. **Project History**. The Indiana Harbor and Canal (IHC) was constructed beginning in 1911 and is maintained by the federal government, as authorized by the Rivers and Harbors Act of 1910, 1930, 1935, 1937 and 1960. A Confined Disposal Facility (CDF) was constructed on a USEPA Resource Conservation and Recovery Act (RCRA) site in East Chicago, Ind., located on the Lake George Branch of the IHC. The CDF was authorized by WRDA 1986 and 1996, and the Emergency Supplemental Act of 2005. The CDF is currently operating, and sediment is being placed into the facility.
5. **Current FY Activities**. The following project activities are expected to occur throughout the current FY:
  - A. Conduct standard harbor operations throughout the FY which include the following: Federal channel condition surveys; coastal structure and project safety signage inspection; stakeholder coordination; and annual budget formulation/justification/MSX support.
  - B. Mechanically dredge and hydraulically off-load approximately 200,000 CY of heavily contaminated sediment, increasing up to 400,000 CY of sediment if funding is available.
  - C. Operate and maintain the Confined Disposal Facility throughout the FY. Activities include: operations and maintenance of a groundwater pumping system to maintain an inward groundwater gradient on the site; treatment of groundwater using a package plant; performance of ambient air-monitoring throughout the FY, and real time air monitoring during the dredging period providing regulatory reporting as required by facility/project permits and agreements; periodic inspection and maintenance of all CDF facility features.

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

D. Repairs to the East Breakwater by LRE marine floating plant forces. Work includes removal of toppled catwalk structure, and laid-up stone stabilization efforts. No design efforts are necessary in FY13.

6. **Product Review Responsibilities.** At LRC, PDTs are assembled for individual contracted maintenance products for O&M. When these maintenance products are required, LRC conforms to all the District Quality Control/Quality Assurance requirements set forth in EC 1165-2-214, Paragraph 8, and prepares appropriate Quality Control Plans along with any necessary Project Management Plan updates.

7. **Risk Informed Decisions Process Implementation.**

During FY13, no new decision or implementation documents will be prepared in association with this O&M project. As established by the project review plan process, only decision or implementation documents necessitate the need for Agency Technical Review (ATR). Independent External Peer Review (IEPR) is only performed if ATR is first employed.

In accordance with paragraph 15a of EC1165-2-214, the District Indiana Harbor PDT considered the following questions for the four major harbor activities identified in paragraph 5, documented the answers presented looking to recommend whether ATR and/or IEPR levels of review were required. Paragraph 9.below gives the rationale for the decision reached on each activity.

(1) Does it include any design (structural, mechanical, hydraulic, etc)?

A: No

B: No – multi-year dredging contract already in place. Task orders issued as funds allow.

C: No – multi-year CDF operations contract already in place. Task orders are employed to order operational needs.

D: No

(2) Does it evaluate alternatives?

A: No

B: No

C: No

D: No

(3) Does it include a recommendation?

A: No

B: No

C: No

D: No

(4) Does it have a formal cost estimate?

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

- A: Nothing aside from associated O&M budgetary work package.  
B: Nothing aside from associated O&M budgetary work package.  
C: Nothing aside from associated O&M budgetary work package.  
D: Nothing aside from associated O&M budgetary work package.
- (5) Does it have or will it require a NEPA document?  
A: All Federal harbors have NEPA documentation, although there are no NEPA requirements associated with completing and reporting condition assessments, stakeholder coordination, or any other USACE internal project support actions.  
B: Yes – completed as part of CG project authorization for CDF construction. DEIS (maintenance dredging, disposal) released July 1973, FEIS released August 1974 and January 1976  
C: Yes – completed as part of CG project authorization for CDF construction. DEIS dated November 1989; DEIS dated October 1995; FEIS released September 1998, revised January 1999, ROD signed February 1999; wildlife exclusion plan required in 2006  
D: No
- (6) Does it impact a structure or feature of a structure whose performance involves potential life safety risks?  
A: No  
B: No  
C: No  
D: No
- (7) What are the consequences of non-performance?  
A: USACE fails to perform any of the activities described. USACE fails at basic infrastructure stewardship mission in high-use harbor.  
B: Deep-draft commercial vessels continue to light load. Polluted sediment continues to harm Lake Michigan water quality.  
C: Pollutants in soil from future RCRA site escape into groundwater. Air quality in local community is harmed. USACE violates regulatory agreements with federal and state agencies.  
D: Damaged structure continues to degrade, providing poorer protection to vessels at high-use ArcelorMittal material dock.
- (8) Does it support a significant investment of public monies?  
A: No  
B: The definition of “significant” is unclear – work package amount exceeds \$4.M, but this amount covers the minimum dredging need of 200,000 cubic yards for navigation.  
C: The definition of “significant” is unclear – work package amount exceeds \$4.M, but this amount is the projected annual cost of current CDF operations.  
D: No



PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

- (9) Does it support a budget request?  
A: Product is an O&M budget work package request in the Navigation BL.  
B: Product is an O&M budget work package request in the Navigation BL.  
C: Product is an O&M budget work package request in the Navigation BL.  
D: Product is an O&M budget work package request in the Navigation BL.
- (10) Does it change the operation of the project?  
A: No  
B: No  
C: No  
D: No
- (11) Does it involve ground disturbances?  
A: No  
B: Dredging is a ground disturbance.  
C: No  
D: No
- (12) Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided?  
A: No  
B: No  
C: No  
D: No
- (13) Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?  
A: No  
B: Dredging always triggers regulatory permitting with the affected State.  
C: Yes, however all regulatory activities were completed as part of CG project authorization for CDF construction. A Memorandum of Understanding establishes the regulatory basis for the CDF operation.  
D: No
- (14) Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos?  
A: No  
B: No  
C: No  
D: No

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

- (15) Does it reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playground equipment, etc?  
A: No  
B: No  
C: No  
D: No
- (16) Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc?  
A: No  
B: No  
C: No  
D: No
- (17) Is there or is there expected to be any controversy surrounding the Federal action associated with the work product?  
A: No  
B: No  
C: No  
D: No

Indiana Harbor will not require any new competitive construction contracts during FY13. At the end of FY11, the Indiana CDF Operations and Dredging contract was awarded. The base year for this service contract was during FY12, and there are four option years available. During FY13, LRC will issue task orders to the existing contract for CDF Operation and dredging services. No new contract assembly for CDF Operations or dredging services will occur in FY13. Similarly, breakwater repairs will be performed by Detroit District crane-barge fleet personnel. No design documents are being assembled by Chicago District design branch personnel.

**8. DISTRICT QUALITY CONTROL (DQC)**

All major O&M work efforts in the harbor each year will undergo DQC. The product team PDT is responsible for producing quality services and/or products. The technical element formulating the various work products for the fiscal year is the Operations Technical Support Section based largely on an assessment of the projected needs of navigation throughout the project. Needs are further refined by examining condition surveys of channels and navigation structures. The extent of the work to be performed is largely driven by the annual O&M budget allocation to the project. Methodology, concurrence, technical adequacy and product quality are obtained through periodic internal reviews by the product team and technical supervisors. Within the Technical Services Division, section chiefs are largely responsible for product review and will document this internal review through certification of product development checklists. The checklists, to be followed by the product team and certified by the section or branch chiefs, are not

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

attached to this RP. Each PDT member is responsible for following current checklist, and coordinating review of document and checklist with their technical supervisor for signature.

9. **AGENCY TECHNICAL REVIEW (ATR)**

O&M products to undergo ATR or IEPR are determined each fiscal year by the Chief of Operations after assessing the current navigation need in the harbor, the available funding & resources and the responses to the 17 questions in paragraph 7 above.

In 2013, the following determinations are made as to whether O&M products will require an ATR or IEPR:

A. Conduct standard harbor operations throughout the FY which include the following: Federal channel condition surveys; coastal structure and project safety signage inspection; stakeholder coordination; and annual budget formulation/justification/MSA support.

**NEITHER ATR OR IEPR REQUIRED**

**Rationale:** The responses to the above-listed seventeen questions from paragraph 7 do not indicate the need for a more extensive review. In addition, this work effort is largely in house labor and brokered labor to Detroit District, and formal design documents are not needed for this work.

B. Mechanically dredge and hydraulically off-load approximately 200,000 CY of heavily contaminated sediment, increasing up to 400,000 CY of sediment if funding is available

**NEITHER ATR OR IEPR REQUIRED**

The responses to the above-listed seventeen questions from paragraph 7 do not indicate the need for a more extensive review. In addition, no contract assembly for maintenance dredging will occur in FY13. No design documents are being assembled by Chicago District design branch personnel.

C. Operate and maintain the Confined Disposal Facility throughout the FY. Activities include: operations and maintenance of a groundwater pumping system to maintain an inward groundwater gradient on the site; treatment of groundwater using a package plant; performance of ambient air-monitoring throughout the FY, and real time air monitoring during the dredging period; providing regulatory reporting as required by facility/project permits and agreements; periodic inspection and maintenance of all CDF facility features.

**NEITHER ATR OR IEPR REQUIRED**

**Rationale:** The responses to the above-listed seventeen questions from paragraph 7 do not indicate the need for a more extensive review. In addition, no contract assembly for CDF operations will occur in FY13. No design documents are being assembled by Chicago District design branch personnel.

PROJECT 115264  
Indiana Harbor, IN  
Individual O&M Review Plan

D. Repairs to the East Breakwater by LRE marine floating plant forces. Work includes removal of toppled catwalk structure, and laid-up stone stabilization efforts.

**NEITHER ATR OR IEPR REQUIRED**

**Rationale:** The responses to the above-listed seventeen questions from paragraph 7 do not indicate the need for a more extensive review. In addition, no contract assembly for breakwater repair work will occur in FY13. Breakwater repairs will be performed by Detroit District crane-barge fleet personnel. No design documents are being assembled by Chicago District design branch personnel.

**10. ROSTER PDT Members**

Discipline/Job	Name	Phone	Email
Operations Dredging Mgr.			
Project Management			
P&S Product Lead			
Contracting			
Real Estate			
Geotechnical			
Cost Engineer			
Calumet Area Office			
Environmental			
Environmental			
Construction			
Hydrographic Surveys			
CDF Facility Manager			

**11. District Quality Control Reviewers**

Discipline/Job	Name	Phone	E-mail
Operations PM			
Cost Engineer			
Operations			
Environmental			
Construction			
Design			