

CHANGE MANAGEMENT PLAN

Dover Dam Safety Assurance

Activity Preface

This Plan supplements PMBP Change Management – PROC3010 and the local procedure Change Management – PROC301H1. This practice is performed whenever changes occur on the project. Change management is one of the most critical activities undertaken by the PDT. It is the process by which changes in the project are identified, addressed and documented. Approved changes become the basis for adjusting baseline performance measures, and thus impact the performance metrics and quality objectives established for project success. The PDT must reach agreement on all proposed changes, or resolve conflicts per the PMBP Change Management – PROC3010, the local Change Management Procedure PROC301H1 and this Plan.

Project Delivery Team (PDT)

When change occurs the PDT will follow the processes and procedures set in PMBP Change Management – PROC3010 and the local procedure Change Management – PROC301H1. PDTs are free however to use other methods to manage change within the team so long as it is in concert with those processes and procedures and documented in this PMP Change Management Plan.

The PDT is responsible for notifying the PM as soon as they become aware of any potential changes to the project, including those changes identified by Resource Providers. The PM is responsible for overall project change control.

All changes which affect a project's scope, schedule, Key District Milestones, costs or fiscal execution require that the PDT prepare a Project Change Request (PCR) and follow the PCR Process outlined in the local Change Management Procedure - PROC301H1.

If project changes are required, the lead engineer will prepare PCRs limited solely to engineering functions and the PM will prepare PCRs involving disciplines outside of engineering. The PM will approve all PCRs not requiring PRB approval. The PM and the PDT will coordinate all changes with resource providers in engineering and construction through communication at the E-1 meetings. The PM and the PDT will coordinate all changes with resource providers in planning through communication at the P-1 meetings. The PM and the PDT will coordinate all changes with resource providers in real estate through communication at the R-1 meetings.

The PM will communicate project changes to the customers and stakeholders.

Unless immediately necessary, the PCRs will be prepared monthly in accordance with the district's schedule for reporting schedule updates. If an immediate need arises, the PDT will prepare PCRs as soon as need for change is known and it has been determined that the change is unavoidable.

Project Changes - Schedule and Cost Change Procedure

Each month, in accordance with the district's schedule for reporting schedule updates, the PDT will assess project fiscal and schedule performance. If necessary, the PDT will prepare PCRs as documented above in this change management plan. Following that meeting, the PM will provide schedule updates to the Project Controls Group (PCG). The PCG will provide a Project Variance Report to the PM delineating any schedule changes resulting from the update by the next working day. The PDT will review the changes, determine whether the changes can be minimized or avoided, and if necessary, submit a PCR.

The District Milestones are as follows:

A2370M Submit Evaluation Report to LRD

A2540M DDR Complete

END5730M P&S Complete

CON640M Construction Contract Complete

The PDT Milestones are as follows:

A2000 Start PMP

A2030 Approve PMP

A2390 Approved Report/Record of Decision

DDR3860 Start DDR

DDR4500 DDR VE/VM Complete

END5650 Start Plans & Specs

END5730 Certify BCOE Review

END6060 Construction E&D VE/VM Complete

CON550 Open Bids

CON590 Contract Award

CON610 Issue NTP

CON620 Construction NTP Acknowledged

CON660 Physical Completion

CON700 Contract Fiscal Completion

CON650 Contract Required Completion

END6650 Notice of Project Completion/Assumption of OMRR&R

END6480 Project Fiscally Complete

Deletion of Key District Milestones that the PDT feels are inappropriate to the project must be approved during the initial PMP approval process. See PMP/PgMP Approval Procedures - PRO207H1. Conversely, the PDT, the customer or the PRB may require additional milestones to ensure efficient and effective project execution and management.

**Dover Dam Safety Assurance (DSA)
Communication Plan**

Project Manager: Rodney Cremeans

PAO PDT Member: Kathy Rea

Community Relations Objective: To communicate the goals and objectives of the project to the affected public to include a mechanism and measurement for feedback. The plan will provide guidelines for inclusion of Public Affairs, as part of the Project Delivery Team (PDT) to assist communicating with news media, community organizations, schools, public, and government agencies. The Public Affairs Office is the district's official release authority for public information. All press releases will be staffed through public affairs prior to release to media. Public Affairs Office will be notified of any contact with media. Provide citizens of the Dover and New Philadelphia, Ohio area complete information throughout the life of the dam safety assurance project. The project consists of stabilizing the dam and environmental mitigation. The sources of information will come from the U. S. Army Corps of Engineers, the Muskingum Watershed Conservancy District (MWCD) and Corps' contractors. In the event emergency evacuation of the public in the Dover and New Philadelphia, OH areas is necessary, please reference the "red sheet" and "yellow sheet" in the Emergency Action Plan for the Dover and Bolivar projects. The "red sheet" and "yellow sheet" in the Emergency Action Plan contains contact information for emergency events that are either considered a dam failure in progress or a possible dam failure condition. The "red sheet" and "yellow sheet" also identify responsible personnel, alternates and their telephone numbers and specific action for gathering data and information and responsibilities for communication.

Program

At the Program level, the primary lines of communication will flow through the District Engineer, the Deputy for Programs and Project Management, the Chief of Programs and Project Management Branch and the Program Manager. Communications, both internal and external, focus on long term planning and the identification of out-year priorities, scheduling and capabilities.

Project

The PDT member that is the Subject Matter Expert is the individual that has the lead responsibility for communication on each topic. This will change from PM to individual PDT depending on the project and the subject.

Internal Relations Objectives: To provide the District Management pertinent and timely information concerning all aspects of the project. This will then flow into

consistency and commitment to the Community Relations Objective. The frequency and forum for this communication will be determined by the relevance and feedback provided by the PDT and the District Management. Effective and timely communication within the PDT is essential to the success of the PDT and ultimately the project.

PDT Communication Requirements

- **Provide information concerning changes in project scope, schedule, Key District Milestones and fiscal execution to the PDT and the PM through the Project Change Request (PCR) process as soon as the need for change is known. Early identification of changes to the project will enable the PM and District Management to more effectively address the proposed or anticipated change.**
- **Communicate all project related issues with the Resource Provider and their PRB representative prior to communication with the PM.**
- **Communicate with the team in person during regularly scheduled team meetings or any other means as appropriate (phone, fax or e-mail) as the need arises to keep all PDT situationally aware of project status and change.**
- **When a written Congressional inquiry is received, the PM will determine which office has the responsibility for preparation of the response and have that office assigned that responsibility on the Congressional notification system.**
- **When requests for programmatic information are received from the PM, the response back to the PM should be both timely and accurate to ensure proper upward reporting of project information.**

Project Manager Communication Requirements

- **Prior to the beginning of the each Fiscal Year, actively seek input from sponsors, customers and stakeholders regarding short-term goals and long-term strategic planning in order to find win-win solutions with local and regional interests whenever practicable**
- **Communicate with partners and sponsors through Partnering Meetings and Project Coordination Team (PCT) meetings. The schedule for these meetings to occur must be documented upon agreement by the parties on the specific dates.**
- **Elevate issues to the Project Review Board as soon as they are identified.**
- **Communicate all proposed changes to the PMP with all parties and provide opportunity for input and feedback.**
- **Review PCRs and act upon those requests in a timely manner in accordance with the PCR process.**
- **Provide quality information to the PRB and Corporate Board (CB) in all PCRs forwarded for approval to ensure effective understanding of the issue.**
- **Initiate regular communication within the team through monthly PDT meetings as well as by other means of effective communication (phone, fax or by e-mail) as the need arises to keep all PDT members situationally aware.**
- **Coordinate all funding changes that require reprogramming actions or affect out-year funding with the Chief, Programs Section and the Chief, Programs and**

Project Management Branch before submitting the PCR for PRB action. Approved changes should be reflected in the Current 2101. P2 and associated out-year plans should be updated as necessary and the PDT should be made aware of those revisions.

- **Provide accurate and timely information on all data calls throughout the fiscal year to include quarterly updates of the status of non-Federal funds, input to the District's acquisition plan, PRB charts and updates, 2101 updates , etc.**

Plan Purpose: This plan will provide guidelines for communicating with news media, community organizations, schools, public, and government agencies.

Key Messages:

Key messages will be defined and developed for each objective and audience as the need arises. This need can be a reaction to certain events or proactive in anticipation of events. Goals for these messages will be defined and developed as well as the communication avenue. A few key messages that will not change are:

- **Since the 1930s, dams in the Muskingum basin have prevented over \$3.9 billion in flood damages.**
- **A Screening Portfolio Risk Assessment (SPRA) was performed in 2005 and 2006 that included approximately 20% of all USACE dams in the United States and the dams were placed in five classes. Dover is in dam safety action class II, which means that Dover is not currently in an active failure but events that can be reasonably expected could lead to failure.**
- **The risk assessment places Dover in dam safety action class II. This means that interim risk reduction measures should be implemented, it should be ensured that the emergency action plan is current and tested, investigations should be expedited and very high priority will be given to funding design and construction.**
- **The Dover Dam is operated, maintained and inspected daily by U.S. Army Corps of Engineers project personnel. Additionally, as a part of the Periodic Inspection Program, the dam is inspected annually by U.S. Army Corps of Engineers' dam safety specialists and by a multi-disciplined team of specialists from the U.S. Army Corps of Engineers every five years. The frequency of the Periodic Inspections can be modified if deemed appropriate. This frequency has not been modified by the U.S. Army Corps of Engineers for the Dover Dam. The Dover Dam was last inspected in June 2006.**
- **The daily operation, maintenance and inspection by U.S. Army Corps of Engineers personnel as well as the inspections conducted annually and every five years occurs at all U.S. Army Corps of Engineers flood control reservoirs and dams.**
- **For flood events exceeding a pool elevation of 900, it is standard procedure for U.S. Army Corps of Engineers personnel to monitor the condition of the project 24 hours per day, every day for the duration of the flood event (i.e. until the pool returns to an acceptable level). A pool elevation of 900 corresponds to approximately a 15-year event.**

- The frequency of the highest pool at Dover Dam, which occurred during the January 2005 event, was approximately a 72-year event. There were no signs of distress or movement during the flood event of January 2005.
- The Dover project is currently being evaluated under the Corps' Dam Safety Assurance (DSA) program. A DSA Evaluation Report will be prepared as a result of these studies. During this phase, the stability of the dam will be evaluated for a range of flood events. An estimate of property damages resulting from both failure and no failure scenarios will be determined for an extreme flooding event. The number of structures downstream of the Dover Dam that will be inundated for both failure and no failure scenarios will be determined. An array of alternatives will be developed for stabilizing the dam. From this list, a recommended plan will be selected for implementation.
- Most of the project is founded on limestone, and most of the valley floor monoliths (7 thru 19) have a concrete "key" that extends into an underlying siltstone unit. This key was added during the design due to faults observed in the limestone. Some of the monoliths were actually founded below the limestone due to the severity of the faulting observed after excavation of the project bedrock during initial construction. The primary concern regarding the dam's structural stability is that there potentially are horizontal planes of weakness (which are common in horizontally bedded sedimentary rock) in the bedrock below the dam along which sliding could occur during rare flooding events. These planes, in association with the angled faults (which were documented in the foundation reports downstream of the dam could potentially provide a surface along which the dam, and a portion of the foundation, could slide if loaded by pools higher than the pool of record.
- The most recent analyses have not been in-depth rigorous analyses using the latest rock strength values, or the latest structural stability analysis techniques. As funding and time allows, these analyses will be refined, and we will better understand the nature of the dam's stability at various pool elevations.

Concerns:

In all aspects of communication, the public concerns of life safety and property will be kept in mind. The U.S. Army Corps of Engineers' responsibilities of environmental stewardship will also be kept in mind during communication activities.

Significant Media Events:

Public involvement workshops will be conducted in concert with the public review process. Public meetings will be conducted as the need arises. A groundbreaking will be coordinated with elected officials and Corps' representatives. A ribbon-cutting ceremony will be coordinated with elected officials and Corps' representatives.

Media Relations:

- **Contact with the news media is limited only by the concept of staying in your agency or organization's lane. For example, Corps contractors should answer questions regarding employment, employee relations, and other specific questions related to the company. Likewise the Corps should communicate information relevant to their area of responsibility.**
- **If other than a routine news media inquiry or interview is made, the person contacted or interviewed should inform the Corps, the MWCD and Contractor points of contact.**
- **The district policy is that our employees can and should speak to the news media when asked as long as they discuss issues within their area of expertise. District employees should not respond by saying "no comment" or "you'll have to talk to the public affairs office (PAO)". The ideal scenario for an interview with the media is to include a subject matter expert and public affairs office person. This works well because members of the public affairs staff are accustomed to knowing what the media wants and how to ensure reporters understand what our people say. Too often Corps people use "governmentese" by using technical language and acronyms which are confusing and frustrating to media members.**
- **The point of contact list is included in Appendix A.**
- **Media listing of newspapers, radio stations and television stations with telephone numbers and contact names is included as Appendix B.**

Elected and appointed government official liaison:

- **The Muskingum Watershed Conservancy District (MWCD) is the project sponsor and will be kept fully informed about project progress.**
- **Congressional representatives and staffs should be provided project updates on a regular basis by the Corps' Project Manager.**
- **Corps representatives should attend relevant local, county and state meetings to update officials on project progress.**
- **PAO will assist Corps representatives with presentations and displays for presentations to government officials and meetings.**
- **Listing of elected officials is included as Appendix C.**

Public meetings and workshops:

- **Public Information Meetings should be scheduled as needed.**
- **Assistance for presentations and displays will be available from the Corps' PAO.**

Speaker's Bureau, project tours and school presentations:

- **Appropriate representatives of the Corps and contractors are encouraged to individually or jointly speak to service groups and local organizations about the project.**
- **School presentations and project tours are encouraged and will be supported as needed by the Corps' PAO.**
- **A list of suggested groups and schools is included as Appendix D (still being developed).**

Public Domain Web site:

- **Developing and maintaining a project web site is the responsibility of the Project Manager, Resident Engineer when construction contracts are awarded, and Lead Engineer, with assistance from PAO and should be updated monthly or more frequently, as needed.**
- **Corps will add live camera feed to serve respective web pages during construction.**

**Dover Dam Safety Assurance Project
Communications Plan
Other Communication Opportunities**

- **Project Partnership Agreement between Corps, Muskingum Watershed Conservancy District (MWCD) Department of Environmental Protection, Department of Natural Resources, construction contractor, local community and county judge executive**
- **Biannual partnering sessions**
- **Monthly executive partnering meetings with timely issue resolution**
- **Regular briefings for MWCD and residents of Dover and New Philadelphia, Ohio**
- **Specific notices to Ohio Department of Natural Resources to identify impacts to recreation opportunities during construction**
- **Quarterly construction newsletters: issued jointly by Corps and construction contractor.**
- **Open Door Policy at onsite construction field office**
- **Scheduled office hours by Project Manager**
- **Periodic openhouse meetings**
- **Speaking opportunities at local civic organizations**
- **Timely press releases to local media**
- **Coordination of project progress and issues with congressional offices**
- **Public domain website**

Appendix A
Dover Dam Safety Assurance Project
Partners' Media Points of Contact

Muskingum Watershed Conservancy District

Darrin Lautenschleger

330-343-6647 ext. 226

U.S. Army Corps of Engineers

Rodney Cremeans, Project Manager

304 399-5170

Jim Twohig, Chief, Programs and Project Management

304 399-5029

Kathy Rea, Public Affairs Officer

304 399-5771

Scott Wheeler, Lead Engineer

304-399-5929

Jonathan Ayaay, Planning

304-399-5872

Elizabeth Cooper, Real Estate

304-399-6935

Nick Krupa, Area Manager

330-364-2279

John Jaeger, District Dam Safety Officer

304-399-5254

Carl Miller, District Emergency Management

304-399-5383

David Meadows, Chief Water Resources Eng Branch

304-399-5243

Appendix B
Dover Dam Safety Assurance Communications Plan

Media Listing

Newspapers

Ohio:

The Times Reporter (Dover-New Philadelphia)	330-364-8414	Daily
The Canton Repository	330-580-8300	Daily
The Cleveland Plain Dealer	216-999-4800	Daily
Ohio Associated Press (Columbus)	614-885-2727	
(Cleveland)	216-771-2172	

Radio

WHBC 94.1 FM	Canton	330-456-7166
WTAM/WMVX 1100 AM	Cleveland	216-520-2600
WCLV 1420 AM/104.9 FM	Cleveland	216-464-0900
WMJI 105.7 FM	Cleveland	216-623-1105
WJER 101.7 FM	Dover	330-343-7755
WTUZ 99.9 FM	New Philadelphia	330-339-2222

Television

WKYC (NBC)	Cleveland	330-535-4105
WEWS (ABC)	Cleveland	216-361-1762
WJW (Fox)	Cleveland	216-432-4282

Other Contacts

Ohio State Police	Delaware	740-548-6011
	Muskingum	740-453-0541
	Tuscarawas	330-339-1103
		800-222-5555

Tuscarawas Co. Sheriff (Ohio)	Walt Wilson	330-339-2000
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Tuscarawas County Homeland Security & Emergency Management Agency		
Patty Levengood		330-308-6670

OH Emergency Services	911	
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Appendix C
Dover Dam Safety Assurance Project Communications Plan

Elected Officials

Tuscarawas County Judge Executive

Judge Edward E. O'Farrell 330-365-3213

Tuscarawas County Commissioners

Chris Abbuhl 330-365-3200

Jim Seldenright 330-365-3200

Kerry Metzger 330-365-3200

Mayor of Dover

Richard P. Homrighausen 330-343-6726

Ohio House of Delegates

Senate

Charlie Wilson District 30 614-466-6508

John Boccieri District 33 614-466-8285

House

Mark D. Okey District 61 614-466-1464

Allen R. Sayre District 96 614-466-8135

US Congress

Ohio

Representative Zack Space Washington 202-225-6265
18th Congressional District Dover 330-364-4300

Senator Sherrod Brown Washington 202-224-2315
Columbus 614-469-6774

Senator George Voinovich Washington 202-224-3353
Columbus 614-469-6697

Governor

Ted Strickland State of Ohio 614-466-3555

**Dover Dam Safety Assurance Project
Project Closeout Plan - PROC400H1**

1. **Introduction.** The Standard Operating Procedure (SOP) documented herein is adopted by the Huntington District, Corps of Engineers, to ensure that the execution of District's projects are completed by phase or in total following these guidelines and to that the General Ledger Accounts properly reflect projects as complete or under construction. This SOP replaces the District's previous SOP dated September 26, 2003.

2. **Purpose.** The purpose of this SOP is to establish responsibility and procedures for closing phases (interim or complete) of projects and transferring costs for acquisition or construction of assets which accumulate in the Construction-in-Progress (CIP) general ledger to Plant-in-Service.

3. **Applicability.** This SOP is applicable to all district elements that are responsible for managing and executing projects and (a) managing assets through the construction phase, (b) reporting the physical and fiscal completion of assets, (c) acquiring or constructing assets, and (d) requesting or accomplishing cost transfers to the appropriate general ledger accounts. These elements include Programs and Project Management Division, Planning Division, Engineering and Construction Division, Operations & Readiness Division, Real Estate Division, Logistics Management Office, and Resource Management Office.

4. **Reference:**

- a. ER 37-2-10
- b. CERM-F Memorandum 29 January 1996, "Capitalization of Civil Works Property" (Enclosure 2).
- c. CECW-OM/CERM-F(1125-2-301a) Memorandum, "Unimplemented Audit Recommendations" (Enclosure 3)
- d. Program/Project/Activity Closeout-PROC4000

5. **Definitions.**

ASSET - all personal and real property valued at \$25,000 or more, that are constructed or acquired by the Corps and remain as Corps property. Items now that will be transferred to local sponsor are no longer CIP. Assets include physical structures for initial construction projects, additions, betterments (A&Bs now have to meet the \$25k threshold as well), including: improvements, rehabilitations, renovations and replacements which extend the useful life, increase the capacity, or increase the operating

efficiency/usefulness of an existing asset and also increase the fair market value of the asset. All cost associated with the creation of the asset becomes part of the asset's value. These include direct construction costs, hired labor work, contractors' earnings, land payments, relocations costs, engineering and design, supervision and administration, materials and applied construction facilities during construction. See enclosure 2 for further information regarding what other types of items fall into the asset category.

Types of Corps projects that usually create assets are: PED projects, CAP projects, Dam Safety Assurance, construction projects, and rehab projects. Feasibility studies are considered as assets ONLY in rare instances where allocation of the study cost to the permanent construction feature of a project is legislatively directed. Contributed funds projects are coded in the same manner as the matching Federal account.

CONSTRUCTION-IN-PROGRESS (CIP) - an asset for which construction or acquisition is not yet completed.

EXPENSE - cost incurred that does not contribute to the creation of an asset. Types of Corps projects that are normally considered expense are: operation and maintenance of existing projects, reconnaissance and feasibility studies, construction-type related activities which DO NOT result in creation of assets including excavation and dredging of channels, harbors, or ports in existing waterways; removal of trees, brush, accumulated snags, drift, debris, and aquatic growths; and special project reports. Contributed funds projects are coded in the same manner as the matching Federal account.

LOCAL INTEREST - entity receiving completed project, including operations and maintenance responsibilities. In most cases, "local interest" is also the project's cost sharing sponsor.

MANAGER - the individual designated as the primary project or asset owner (responsible employee), whose district job title may be project manager, engineering manager, study manager, or operations manager. For purpose of this SOP, the term "manager" will be used for individuals bearing any of the previously mentioned manager titles.

PHYSICAL COMPLETION - considered accomplished when the construction contractor completes all work required by the plans and specifications, as well as any modifications, finishes all punch lists, and provides contractual required documents (equipment lists, O&M manuals, closure reports), and training to

the user, or when Engineering/Construction Division accepts the project for beneficial occupancy.

PLANT IN SERVICE (PIS) - administrative action to change CIP costs to Corps-owned asset cost once the asset is complete.

UNFEASIBLE/ABANDONED - project stage reached when either the government or sponsor determines no further efforts will continue.

WORK IN PROGRESS (WIP) - reimbursable work that may involve construction but would not result in a Corps' asset or be transferred to local interest. Projects such as DERP and SFO are in this category.

WORK ITEM (WI) - P2 creates ALL non-revolving fund work items (except emergency work items)

6. Basic Requirements.

After each phase of a project is completed, the PDT evaluates what funds, if any, are unexpended so that they can be redistributed to fund other activities. This is done by scrubbing all completed PR&Cs (labor & non-labor) to determine if any funds can be deobligated/decommitted.

a. Assets Constructed, Operated and Maintained By the Corps.
In general, assets or separable elements of assets, that are constructed, operated and maintained by the Corps do not require both physical and financial completion before transfer. Paragraph 8-4h (1) of reference 4.a. requires that construction costs be transferred from CIP to the applicable general ledger Plant in Service account, usually when the entire project or separately authorized modification is completed. However, some flood control and navigation projects, because of the nature of work involved, consist of a number of separable physical assets. When such physical assets are completed, the costs of each will be transferred to the applicable Plant in Service account. For example, when dams and appurtenances essential to the operation of the project (e.g. spillways and outlet works for dams) are 100 percent physically complete and begin to serve the purpose for which they are intended, they will be transferred to Plant in Service regardless of whether or not they are considered a separable physical unit.

b. Environmental Infrastructure (reimbursable work by cost share sponsor), guidance from LRD and HQ as of 19 March 2001

should be coded expense, includes the following.

(1) Design costs should be expensed if the asset is going to be constructed by the Sponsor

(2) Construction costs, if the sponsor is constructing the asset and we are only reimbursing them for their construction costs (i.e., the asset is not on our books), should be expensed.

c. Documentation of Transfers. Paragraph 6-10d (8) of reference 4.a requires that a Work Order Completion Report, ENG 3013 (sample at enclosure 1) detailing the asset work item number, will be finalized by reporting the actual quantities and cost of physically completed items. The preparation of this report is the joint responsibility of the asset owner and RM-F. The manager will complete total quantities, sign the statement as to physical completion of the work, and forward the form to the Finance and Accounting Branch (RM-F) for completion of the actual cost and unit data and accomplishment of the transfer.

While the Resource Management Office may be responsible for the retention of the ENG 3013 Form and initially obtaining the necessary supporting documentation to validate amounts shown on the ENG 3013, Project Managers have bottom line responsibility to report and initiate transfers. The Project Managers will coordinate with RM-F to retain all supporting documentation for audit purposes.

Permanent documentation for capitalized property, plant and equipment must include multiple documents that will be reviewed during an audit. Documents to support project amounts shall be collected as the item is recorded on the general ledger and then retained indefinitely. Examples of project documentation would include the following related items: project authorization documents (both initial and supplemental), Work Order Completion Report, ENG 3013 (sample at enclosure 1), GSA Form 1166, Annual Report of Real Property Owned by or leased to the United States, deeds/titles, easements, obligation document, pay estimates or invoices for contracts and receipts for Misc. purchases. The Resource Manager is the responsible keeper of the permanent fiscal records that support the items capitalized amount. Items such as authorizing documents, GDM/DM, and funding documents can be retained by the Project Manager. Real Estate would retain the property documentation such as the deed/title and validate cost for Project Manager/ Resource Management on the ENG 3013. All relative documents held outside of Resource Management must be readily available for audit purposes.

7. District Operating Procedures.

a. General. The process for ensuring compliance with the above requirements begins in the early project planning stages. The transfer of completed work from CIP to Plant-In-Service will be scheduled during the preparation of the Project Management Plan (PMP) or similar fiscal planning and scheduling document for each project. During the preparation of the PMP, all assets must be identified and the PMP cost estimate developed in a manner that insures the total cost of each asset can be identified. This will require that each asset have its own design and construction schedule, as well as discrete E&D and S&A costs.

In P2 each asset has to have a separate WBS element which includes Project Management costs for that asset, construction, design, S&A and E&D. RM has to "reset the WBS" in CEFMS on all CG direct funded projects. All efforts undertaken to support creation of that asset are created as "asset children" work items (screen 2.1). Asset children are linked in CEFMS to assets, as supported by the project's work breakdown hierarchy, and become part of the asset's value. In this manner, when the transfer from CIP occurs, costs of the asset and all linked "asset children" work items are transferred together.

The schedule for each asset must include a milestone for the transfer of the completed asset from CIP. For completed assets or separable elements of an asset all documents pertaining to completed CIP costs are provided to RM-F not later than 30 days after the last Receiving Report or Labor has been processed. For active work items the supporting cost documents (as above) are required to be submitted quarterly to RM-F to ensure that support documents exists for all CIP balances.

If the asset is transferred to plant-in-service, additional costs incurred once the initial transfer of the project or separable element has been made are transferred daily by a CEFMS program titled "distcost" and no further manager transfer request is required.

Acquisition or construction of assets at O&M projects which are not tracked in the district's master schedule will be reviewed during the CIP Query Review for compliance with this SOP.

b. District Quality Control. The CIP transfer schedule for each project, and any separable assets as noted in the PMP will be included and tracked in the Huntington District Master

Schedule. The schedule will be reviewed monthly by the PRB to ensure that the scheduled transfers are executed. Transfers that were accomplished since the previous PRB will be reported in the minutes of the PRB meeting by RM-F. In addition, a quarterly CIP transaction report will be prepared by RM-F for the Program Management Branch for the District quarterly data call.

Program Management will conduct quarterly reviews of CIP cost and status of all CIP accounts. Each Project Manager will be given a query of his project to review and validate. Reviews will be done the second month of each quarter.

8. Division of Responsibilities.

a. Programs and Project Management Division (PM). The Chief, Programs and Project Management Division, is the official responsible for ensuring that the district complies with this SOP.

b. Manager/Responsible Employee. The manager is responsible for identifying, in cooperation with the project team and the project sponsor when applicable, the CIP transfer strategy and developing the schedule, work tasks and associated cost accounts needed to properly identify the costs for transfer. This includes scheduling preparation of an O&M manual for each segment to be transferred. The manager shall document these requirements in the PMP and on the district schedule. The manager shall report the status of each scheduled transfer to the PRB, and upon completion prepare ENG 3013 and provide documentation of cost to RM-F and request for the actual cost transfer. If a project is found to be unfeasible, the manager will submit a memorandum to RM-F stating the status, and request that all costs of the asset be transferred to expense. Each project manager will certify upon loading a project in the P2 data base that they have read and understand this SOP and its applicability to their project.

c. Real Estate Division (RE). Real Estate Division is responsible for creation of Real Property Improvement Records in REMIS, after being notified of completion of construction or acquisition of real property assets either by the individual project's responsible employee (hand receipt holder) for existing projects or by the manager for new construction. The Real Property Improvement Record will automatically create a Property ID Code. RE furnishes RM-F the Property ID Code which is used to place in service any completed construction or additions or betterments. When RM-F completes the action, it notifies RE of the capitalized cost. If RM-F should receive notification of completion of work by other Corps elements, it must notify RE for

creation of Improvement Record and Property ID Code before improvement can be placed in service.

d. Engineering/Construction Division (EC). Construction Branch will provide monthly updates at the PRB meetings of contracts that have been physically completed (accepted for beneficial occupancy) and a projected listing of projects to be completed within the next three months. This action serves as a reminder that a CIP transfer should have been requested, or that the request is due.

e. Resource Management Office (RM). The Chief of RM-F serves as the district's point of contact for resolution of questions pertaining to categorization of a work item as asset or expense.

RM-F processes all requests to remove completed assets from CIP, by receiving requests to place in service, transfer to local interest completed CIP assets, or to transfer unfeasible CIP accounts to expense. RM-F processes requests to place in service real property in concert with Real Estate Division, or place in service personal property in concert with Logistics Management Office. These requests are processed immediately upon receipt. RM-F prepares a monthly report of CIP transfers to the PRB and a quarterly report to Programs Management Section in order to meet the division data call.

f. Programs Management Section (PM-PP-P). Programs Management Section will assemble CIP status reports to meet the division data call, and serves as the district's POC on CIP matters with the division office. This office is responsible to conduct scheduled reviews of the CIP.

g. Logistics Management Office (LM). Once a personal property asset is acquired and the receiving report is complete, LM enters the bar code and any other identification material as a permanent record in APPMS (Automated Personal Property Management System) which supports the district's property book. LM notifies RM-F that the record is updated. RM-F links the bar code with the work item and places the property in service.

9. **Effective Date.** This SOP is effective immediately.

Quality Management Plan
Dover Dam Safety Assurance Project
Tuscarawas River, Ohio

- 1.0 PURPOSE**
- 2.0 APPLICABILITY**
- 3.0 IDENTIFICATION OF CUSTOMERS**
- 4.0 PROJECT GOALS AND OBJECTIVES**
- 5.0 QUALITY ACTION PLAN**
- 6.0 REFERENCES**
- 7.0 RELATED PROCEDURES**
- 8.0 RESPONSIBILITIES**
- 9.0 DEFINITIONS**
- 10.0 PROCEDURES**
 - 10.1 FLOW DIAGRAM**
 - 10.2 QUALITY PLANS**
 - 10.3 QUALITY CONTROL FOR IN-HOUSE PRODUCTS & SERVICES**
 - 10.4 QUALITY ASSURANCE FOR CONTRACTOR'S PRODUCTS & SERVICES**
- 11.0 RECORDS**
 - 11.1 IN-HOUSE PRODUCTS**
 - 11.2 CONTRACTOR PRODUCTS**
- 12.0 CONTRACTOR QUALITY CONTROL PLANS**

1.0 PURPOSE

This plan identifies the customers, identifies the goals and objectives of the project, identifies specific actions to be taken and identifies who will take the action to facilitate quality management.

2.0 APPLICABILITY

This plan applies to all aspects of implementation of the Dover Dam Safety Assurance project.

3.0 IDENTIFICATION OF CUSTOMERS

Customers

Internal Customers	External Customers
<ul style="list-style-type: none">▪ USACE HQ*▪ Operations*▪ PRB▪ LRD▪ ITR Team▪ District Commander▪ Coy Miller, Deputy District Engineer for PM▪ John Jaeger, District Dam Safety Officer	<ul style="list-style-type: none">▪ Muskingum Watershed Conservancy District (MWCD)*▪ U.S. Citizens*▪ Recreating Users of Dover Dam*▪ Resource Agencies▪ State of Ohio

* Primary customers

4.0 PROJECT GOALS AND OBJECTIVES

Project Goals

The following were identified as the project goals, listed approximately in order of importance. Those shown in bold italics were identified as the primary goals.

1. ***Stabilize Dover Dam and safely pass the Probable Maximum Flood (PMF)***
2. ***Reasonable first and life-cycle costs***
3. ***Minimize impacts to environment and disruptions to recreating public during construction***
4. Fiscal management
5. Effective communication with all customers

Project Objectives

The following objectives were defined for each of the three primary goals:

Goals	Objectives
1. Stabilize Dover Dam and safely pass the PMF	<ul style="list-style-type: none"> ▪ Well designed, effective, reliable, durable & environmentally sound project ▪ Increased resistance to sliding ▪ Prevent failure of non-overflow sections during PMF
2. Reasonable first and life-cycle costs	<ul style="list-style-type: none"> ▪ Design and Construction costs within 10% of the Feasibility cost estimate (considering inflation) ▪ Minimize increase of O&M costs (considering inflation) ▪ Minimize modifications and cost growth during construction, <10%
3. Minimize impacts to environment and disruptions to recreating public during construction	<ul style="list-style-type: none"> ▪ Construction of the dam stabilization should be accomplished while minimizing impacts to the environment and disruptions to recreating public ▪ Identify and quantify environmental impacts during the evaluation report phase ▪ During the evaluation report phase, identify potential to minimize disruptions to recreating public during construction

* Primary objectives

5.0 QUALITY ACTION PLAN

Customer-Based Quality Action Plan

Goals	Objectives	Actions	Responsibility	Target Date
1. Stabilize Dover Dam and safely pass the PMF	<ul style="list-style-type: none"> ▪ Well designed, effective, reliable, durable & environmentally sound project ▪ Increased resistance to sliding 	<ol style="list-style-type: none"> a. PDT to review the Evaluation Report, P&S for other dam stabilization projects, EM 385-1-1 b. PDT to coordinate with Operations, Dam Safety and resource agencies to determine current operations of project and potential environmental impacts of implementation of project c. PDT to perform physical hydraulic modeling to determine potential for scour and to determine uplift pressures d. Additional drilling and testing to finalize rock strengths and design anchors 	<p>Scott Wheeler</p> <p>Rodney Cremeans</p> <p>Ted Hamb</p>	<p>Continual</p> <p>Continual</p> <p>2007-2008</p>
2. Reasonable first and life-cycle costs	<ul style="list-style-type: none"> ▪ Design and Construction costs within 10% of the Feasibility cost estimate (considering inflation) ▪ Reduction of O&M costs (considering inflation) ▪ Minimize modifications and cost growth during construction, <10% 	<ol style="list-style-type: none"> a. PDT to coordinate VE studies b. PDT to assess existing O&M costs and causes of significant expenditures c. PDT to effectively communicate during development of the baseline cost estimate d. PDT to review contract modifications for Bluestone DSA 	<p>Scott Wheeler</p> <p>Scott Wheeler</p> <p>EC-DS & EC-TC</p> <p>Scott Wheeler</p>	<p>DDR & P&S</p> <p>DDR phase</p> <p>Report phase</p> <p>DDR & P&S</p>

<p>3. Minimize impacts to environment and disruptions to recreating public during construction</p>	<ul style="list-style-type: none"> ▪ Construction of the dam stabilization should be accomplished while minimizing impacts to the environment and disruptions to recreating public <ul style="list-style-type: none"> ▪ Identify and quantify environmental impacts during the evaluation report phase ▪ During the evaluation report phase, identify potential to minimize disruptions to recreating public during construction 	<p>a. During the evaluation report phase and design phase, construction methods will be identified by the PDT that minimize impacts to the environment and recreating public</p> <p>b. During the evaluation report phase and design phase, the PDT will determine anticipated access to various areas and anticipated means of delivery of materials and supplies</p> <p>c. The PM will communicate the anticipated impacts from construction to the recreating public and general public in the vicinity of the dam</p> <p>d. Develop and Implement Interim Risk Reduction Measures</p>	<p>PDT</p> <p>PDT</p> <p>Rodney Cremeans</p> <p>PDT</p>	<p>Report Phase, DDR & P&S</p> <p>Report Phase, DDR & P&S</p> <p>DDR & P&S</p> <p>Report Phase, DDR & P&S</p>
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6.0 REFERENCES

ER 1110-1-12 Engineering and Design - Quality Management

7.0 RELATED PROCEDURES

- a. ECP 3.2 Quality Control / Quality Assurance
- b. WI 3.46.2 Construction Contract Quality Assurance and Quality Control
- c. ECP 3.21 ETA, DDR and P&S
- d. ECP 3.31 Cost Engineering
- e. ECP 3.35 Early Release of Design Product
- f. ECP 3.23 BCOE

8.0 RESPONSIBILITIES

See ECP 3.2 Quality Control / Quality Assurance Paragraph 5.0 and WI 3.46.2 Construction Contract Quality Assurance and Quality Control

9.0 DEFINITIONS

See ECP 5.1 Preparation and Administration of Procedures Appendix C.

10.0 PROCEDURES

10.1 Flow Diagram

10.2 Quality Plans

See ECP 3.2 Quality Control / Quality Assurance Para. 7.2

10.3 Quality Control for In – House Products & Services

See ECP 3.2 Quality Control / Quality Assurance Para. 7.3

10.4 Quality Assurance for Contractor's Products & Services

See ECP 3.2 Quality Control / Quality Assurance Para. 7.4

11.0 RECORDS

11.1 In – House Products

See ECP 3.2 Quality Control / Quality Assurance Para. 8.1

11.2 Contractor Products

See ECP 3.2 Quality Control / Quality Assurance Para. 8.2

12.0 Contractor Quality Control Plans

See ECP 3.2 Quality Control / Quality Assurance Appendix B

Risk Analysis

Dover Dam Safety Assurance, OH

ID: 01	Date Identified: October 2006.	
Severity: Critical	Risk Statement: Non-federal sponsor delay <input type="checkbox"/> Impact to the project due to delays by the non-federal sponsor. This can result from the sponsor not providing technical input in a timely manner or sufficient funding.	
Probability: Seldom		
Owner: PgM		
Context: PDT is assessing risks to the project.	Sponsor (Muskingum Watershed Conservancy District) has a history of good cooperation and technical input to the project. Sponsor also has a history of providing adequate funding. However, if the MWCD assessment is delayed and the Corps' capability cost share is not provided, the project could be delayed.	
Trigger: What is the root cause associated with this risk? The Corps would be progressing at a faster rate than the sponsor is capable.		
Risk Response: Accept The PM will communicate the life-cycle funding needs for the project to the sponsor. The PM will also communicate the needs for technical information from the sponsor.		
Risk Control: The PDT should work closely with the sponsor and allow sufficient time for the sponsor to provide necessary technical information. The PM should also work with LRD and HQ for planning of federal funding and with the sponsor for necessary sponsor funding.		
Status: The PDT discussed this risk November 2006. The importance of adhering to the project schedule is discussed at each PDT meeting. The PM attends semi-annual meetings with the non-federal sponsor and communicates via e-mail and telephone on an as-needed basis.		
Lesson(s) Learned: The ability of the sponsor to meet the obligations of the PMP should be assessed during the early stages of project development and accurately reflected in the agreed upon PMP.		
Approved by:		
	Closing Date: Will continue to be a risk until project completion.	Closing Rationale: Project complete.

ID: 02	Date Identified: October 2006.
	Risk Statement: Contractor delay
Severity: Critical	<ul style="list-style-type: none"> □ Impacts to the project due to delays by the construction contractor(s). This could result from adverse weather, problems with subcontractors and suppliers, unexpected or differing site conditions or insufficient funding.
Probability: Likely	
Owner: DPM	
<p>Context: The PDT is assessing risk for the project.</p>	<p>Potential causes of delays by the construction contractor(s) are weather conditions that are wetter or colder than the historical average, insufficient funding made available by the government to match the contractor's schedule, subcontractors and suppliers not furnishing materials or fabricated items to match the prime contractor's schedule, the site conditions being different than represented by the contract plans and specifications (such as top of rock not being where anticipated or of a different characterization than anticipated) or the contractor encountering something unexpectedly such as an underground utility not previously identified.</p>
<p>Trigger: What is the root cause associated with this risk? Extended periods of cold weather prevent the contractor from placing concrete. These requirements will be stated in the specifications. The contractor may not be able to work during periods of rain. Poor performance by suppliers and subcontractors sometimes impacts the prime contractor's schedule. The contractors sometimes encounter site conditions that are different than represented by the contract plans and specifications. Due to the requirement to eliminate all continuing contract clauses, if sufficient funding is unavailable, the contractor must notify the government and either alter production to be congruent with available funding or stop.</p>	
<p>Risk Response and Control: Mitigate The contractor is entitled to a fixed number of days of delays per month due to adverse weather based on an historical average. Beyond this, it appears nothing can be done to reduce this risk. There is not typically a contractual relationship between the government and subcontractors and suppliers. Contractors experienced with large civil works construction projects typically use suppliers and subcontractors with experience on large, civil works construction projects. This area of risk can be mitigated by a Request For Proposal (RFP) process for awarding the construction contract(s). The risk of unexpected or differing site conditions will be mitigated by an appropriate level of site investigation, drilling and testing and research of historical documents related to the project area commensurate with an acceptable level of risk. The risk of exhaustion of funding will be mitigated by working closely with the construction contractor in reviewing the construction schedule and communicating with LRD, HQ and the congress regarding project funding needs. The PDT should work closely with the contractor to insure that</p>	

progress is being made in accordance with the construction schedule and the PMP. Assessment of potential risk conditions during construction that could impact scope, schedule, cost and quality should be addressed on a regular basis with the contractor.

Status:

The PDT reviewed and discussed this risk November 2006. The importance of meeting the obligations as outlined in the contractor's schedule and the PMP will be discussed with the contractor(s) on a regular basis.

Lesson(s) Learned:

Potential for impacts to project implementation should be recognized early during plan development and addressed accordingly in the PMP. Project completion delays result in reduction of project benefits and impacts to the non-federal sponsor.

Approved by:

	Closing Date: This will continue to be a risk until project completion.	Closing Rationale: Project completion.
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ID: 03	Date Identified: October 2006.	
Severity: Critical	Risk Statement: Delay due to federal resources	
Probability: Unlikely	<ul style="list-style-type: none"> □ Impact to the project due to delays associated with changed resources. This could result from insufficient project funding, resources provided in response to natural disasters or support to the armed forces, commitments to other Corps' missions, or resources provided to support others. 	
Owner: PgM		
Context: PDT is assessing risks to project.	Commitments to other Corps' missions, changing District priorities, requests by sponsors, stakeholders and Congressional interests often affect resources that directly impact project specific resources.	
Trigger: What is the root cause associated with this risk? This could result from insufficient project funding, resources provided in response to natural disasters or support to the armed forces, commitments to other Corps' missions, or resources provided to support others. Continuing Resolution Authority (CRA) is becoming more frequent and the determination of each fiscal year's budget usually is not made until part of that given fiscal year is already complete.		
Risk Response: Mitigate If changes to committed resources impact project scope, schedule, cost or quality, the Resource Providers will work closely with the PM to identify qualified, replacement resources prior to those changes impacting project implementation. The PRB and CB will evaluate and set District priorities as necessary with input from the PDT and the Resource Providers.		
Risk Control: The Resource Providers will coordinate with the PM prior to the resource being reassigned and provide a qualified, replacement resource to support and maintain the continued mission of the project.		
Status: This risk was last reviewed by the PDT November 2006. Assessment of potential resource changes will be made on a regular basis throughout the life of the project by the Resource Providers. P2 and the PCR process will be used as tools for assisting in the identification of competing resources and resource constraints.		
Lesson(s) Learned: Potential for impacts to project implementation should be recognized early during plan development and reflected accordingly in the PMP.		
Approved by:		
	Closing Date: Risk is valid until project completion.	Closing Rationale: Project complete.

ID: 04	Date Identified: April 2007	
Severity: Catastrophic	Risk Statement: Dam failure <input type="checkbox"/> Impact to the project due to dam failure. Although the focus of the PDT is on risks to implementing the corrective measures, the PDT is also aware of the risk of dam failure. This can result from significant precipitation and the risk is increased with extensive delays without implementing interim risk-reduction measures.	
Probability: Seldom		
Owner: PgM		
Context: PDT is assessing risks to the project.	The PDT is developing interim risk-reduction measures to be incorporated in the project prior to implementation of the recommended plan resulting from the study document. Dam failure could threaten lives and property. Dam failure would increase costs to the project and would delay implementation of the corrective measures.	
Trigger: What is the root cause associated with this risk? Storm events generating more precipitation than the project can withstand.		
Risk Response: Accept and mitigate. The PDT will incorporate interim risk-reduction measures and will expedite the recommended plan as much as possible.		
Risk Control: The Huntington District is working with Tuscarawas County Department of Homeland Security and Emergency Management as the county develops its Emergency Action Plan. The Corps Emergency Action Plan, which is referenced in the communications plan, contains a "red sheet" and a "yellow sheet". The "red sheet" and "yellow sheet" in the Corps Emergency Action Plan contains contact information for emergency events that are either considered a dam failure in progress or a possible dam failure condition. The "red sheet" and "yellow sheet" also identify responsible personnel, alternates and their telephone numbers and specific action for gathering data and information and responsibilities for communication.		
Status: The PDT discussed this risk April 2007. The importance of adhering to the project schedule is discussed at each PDT meeting. The PM attends meetings with Tuscarawas County officials and communicates via e-mail and telephone on an as-needed basis.		
Lesson(s) Learned: The PDT reflects on the January 2005 storm event and collaborates with PDTs on other dam safety projects in other districts.		
Approved by:		
	Closing Date: Will continue to be a risk until project completion.	Closing Rationale: Project complete.

RISK PROBABILITY TABLE – DOVER DAM SAFETY ASSURANCE, OH

	Scope Risk Probability					
		Frequent	Occasional	Likely	Seldom	Unlikely
SEVERITY	Catastrophic					
	Critical					Low
	Marginal					
	Negligible					
	Schedule Risk Probability					
		Frequent	Occasional	Likely	Seldom	Unlikely
SEVERITY	Catastrophic					
	Critical			Moderate		
	Marginal					
	Negligible					
	Cost Risk Probability					
		Frequent	Occasional	Likely	Seldom	Unlikely
SEVERITY	Catastrophic					
	Critical			Moderate		
	Marginal					
	Negligible					
	Quality Risk Probability					
		Frequent	Occasional	Likely	Seldom	Unlikely
SEVERITY	Catastrophic					
	Critical					Low
	Marginal					
	Negligible					

Dover Dam Safety Assurance Project
Tuscarawas River
Dover, OH
SAFETY PLAN

General. It is the policy of the U.S. Army Corps of Engineers to provide a safe and healthful environment for all Project Delivery Team (PDT) members and to eliminate or minimize occupational hazards which may endanger personnel, the general public, or property.

Safety and health awareness is critical to all activities performed in accomplishing the tasks associated with project implementation. It is imperative that a commitment be made by each PDT member to recognize the importance of safety and be constantly aware of potential hazards and accident prevention. It is the responsibility of each individual PDT member to conduct their daily work effort in a manner that ensures safety for themselves as well as others.

Purpose of Safety Plan. The purpose of the Safety Plan is to promote safety and a safe and healthy work environment. The plan is a tool to aid in the enforcement of safety requirements and implementation of safety procedures. The main goal of the plan is to promote safety awareness in order to have an accident-free project from the point that the study is initiated through completion of project construction.

Applicable Regulations and References

- (1) EM 385-1-1, Safety and Health Requirements Manual, current edition.
- (2) CEORH-SO MEMORANDUM dated 23 April 90, SUBJECT: Implementation of New Safety Inspection and Pre-operation Checklist Forms.
- (3) CEORH-SO DF dated 14 Dec 89, SUBJECT: Safety Policy for Drilling Operations
- (4) CEORH Form 2825 and 2825-1, Safety Inspection and Preoperational Checklists for Core Drill Rigs.
- (5) CEORH Form 2824 and 2824-1, Safety Inspection and Preoperational Checklists for Heavy Construction Equipment.
- (6) CEORH Form 2826 and 2826-1, Safety Inspection and Preoperational Checklist for Cranes.
- (7) All Contractor Safety Plans.
- (8) All safety-related contract clauses.
- (9) PDT Member Position Hazard Analysis

Safety Guidelines. Most tasks associated with projects during the study stage are performed in an office environment with occasional visits to the project area. Certain hazards are unique as well as common to both work environments. Generally, tasks associated with activities performed in the field necessitate a higher degree of safety awareness. Additionally, team members frequently travel to various locations for field investigations, meetings and presentations facing hazards inherent to transportation itself.

The following summarizes the key factors associated with health and safety awareness and consistent with the District's safety program established to meet the guidelines for the Seven Castle safety designation.

1. Safety Attitude. Safety must come first. No task is so urgent that it shall not be done safely. Each PDT member must take control to avoid situations that could result in injuries.

2. Standard Job Procedures

a. Office Work. Duties performed in an office environment generally involve less safety risk than field work but opportunities for injury do exist. In addition to specific hazards inherent to the office environment awareness of the use of ergonomically designed office equipment and proper lighting shall be consistently reviewed. Other specific hazards inherent to working in the office are identified in the PDT Position Hazard Analysis (Reference 9).

(1) All PDT members shall follow established evacuation plans.

(2) All PDT members are responsible for accident reporting and recordkeeping which shall be in accordance with EM 385-1-1, current edition; CEORHR 383-2-3, Appendix C; and District Policy.

b. Field Work. Safety risks in a field environment are very significant. Identification of the site-specific hazards shall be the first job action taken on the site. Hazard identification may involve a formal Activity Hazard Analysis (AHA) and/or an informal review of the site for potentially dangerous conditions. Exposure to site conditions involving such situations as confined space, operation of equipment, work adjacent to highways, on embankments, and on the water and exposure to weather extremes, snakes, and insects increase the potential for injuries ranging from minor discomfort to death. Constant awareness of potential hazards is critical to accident prevention. Other specific hazards inherent to working in the field are identified in the PDT Position Hazard Analysis (Reference 9).

3. Personal Protective Equipment (PPE). EM 385-1-1 requires that personal protective devices be used as required under certain work conditions. Typical protective equipment includes lifejackets, hard hats, eye protection and hearing protection. Before wearing PPE, employee shall be trained in appropriate use.

4. Emergency Procedures. PDT members shall periodically review all emergency procedures including emergency evacuation procedures established for their offices and buildings as well as be aware of similarly established emergency evacuation procedures at other facilities while visiting. All project sites have similar procedures to follow in an emergency situation and project personnel shall be notified immediately if assistance is required or if there are questions regarding those procedures.

5. Motorized Vehicles. PDT members who drive while on official business must pass an initial defensive driving course as well as pass a refresher every three years. All occupants of a vehicle must wear a seatbelt and shall never drive in unsafe weather conditions to meet a job schedule. If hazardous travel conditions are encountered, travel shall be delayed and if possible, the situation discussed with a supervisor. Driving for more than 10 consecutive hours or more than 12 hours total in a 24-hour period shall be avoided. Other specific hazards inherent to working in the field are identified in the PDT Position Hazard Analysis (Reference 9).

6. Safety Meetings. The Collateral Duty Safety Office (CDSO) ensures quarterly safety meetings are held in accordance with the District's Safety Program. These meetings are essential to maintaining an awareness of safety concerns and shall be attended by all PDT members within their respective organizations.

7. Training. A wide variety of safety training is available through the District's Safety Program. Each PDT member shall ensure that the proper training has been received for the tasks being performed.

Project Specific Safety Concerns. Safety concerns are the successful performance of the dam during unusual storm events. Dam safety concerns are compounded by the presence of Bolivar Dam upstream, another project with significant dam safety concerns.

Contractor's Safety Plan. Safety receives high priority in the Huntington District and throughout the Corps of Engineers. The Corps takes great pride in its safety and occupational health performance as well as that of its contractors. No job is considered so urgent that time cannot be taken to assure a safe and healthful performance. The Corps expects its contractors to give safety and health the same high priority.

Following contract award but prior to issuance of the notice to proceed the contractor's Safety Plan (or Accident Prevention Plan) must be submitted in writing, signed by the Contractor, and accepted by the Contracting Officer. The plan must thoroughly document all safety aspects of the work to be performed. This plan will be reviewed at periodic PDT meetings throughout the life of the contract effort.

Dover Dam Safety Assurance Project
Value Management Plan

Value Management (VM) is a process to facilitate and encourage the understanding, consideration, and integration of the needs of all customers, PDT members, partners, and stakeholders. Value Management seeks the highest value for a project by balancing resources and quality. The VM process emphasizes the use of multi-disciplinary teams and their resulting synergy for decision making. Value Engineering uses brainstorming to come up with possible items to develop as proposals. After this, VE uses many different types of decision making tools to decide which proposals to develop (decision matrix, fishbone diagrams, etc.). It is a management tool that will be applied continuously throughout the life cycle of this project.

In order to ensure value, the project delivery team (PDT) is responsible for including Value Management methodology is included in all aspects of project development and delivery.

Value Management techniques will be integrated into the project delivery process and Value Engineering studies will be scheduled as needed and completed in a timely manner. A technical review will be performed by the District when a proposal that would save more than \$1 million is being rejected, which is done to validate rejection of the proposal. Once the proposal is accepted by the PDT, the VE proposal will be implemented.

VALUE MANAGEMENT/VALUE ENGINEERING PLAN.

a. **Goals:** The overall goal of the Value Management (VM) / Value Engineering (VE) effort is to comply with Federal Law and attempt to identify possible cost saving and project enhancement options.

VE is mandated by federal law and by Office of Management and Budget (OMB) policy as follows:

- Office of Federal Procurement policy act, as amended by Public law 104-106, Section 4306 dated February 10, 1996, requires each executive agency to establish and maintain a Value Engineering program.
- OMB Circular A-131 dated May 21, 1993 currently requires VE application on all federal projects/programs over \$1,000,000 total costs. OMB has allowed this amount to be \$2 million for Corps of Engineers construction projects/programs.
- Public Law 99-662, Water Resources Development Act of 1986 Section 911 requires a review of the cost effectiveness review on each water resources project which has a total cost of \$10,000.00. This review is known as VE.

b. **Objectives:** The objective of the VM/VE process is to facilitate and encourage the understanding, consideration, and integration of the needs of all customers, PDT members, partners, and stakeholders. VM/VE seeks the highest value for a project by balancing resources and quality.

The general objectives of VM/VE include but are not limited to:

- Validating current alternative strategies
- Identifying and addressing pertinent issues that may impact the implementation and effectiveness of the current alternatives strategies
- Provide recommendations for future needs

Project specific objectives:

- Continue to evaluate the recommended plan to expedite implementation.
- Continue to evaluate the recommended plan to reduce total project cost.
- Continue to evaluate the recommended plan to reduce risk to the public as quickly as possible.
- Continue to evaluate the recommended plan to minimize impacts to the environment.

c. **Execution:** The VM/VE effort will be implemented as follows:

VM/VE shall be performed during the design phase of project development as follows:

- Authorized (Design/Construction Phase). A VM/VE study shall be performed no later than the 35% completion of the design.

WORK BREAKDOWN STRUCTURE

- a. Organization Name: CELRH-EC-MQ
- b. Organization Code: H1L1013
- c. WBS Code: 30D00
- d. What: VE Study will be performed for entire project after the Evaluation Report is completed.
- e. Why: VE studies are used to take a critical look at the functions of a project as a whole and develop alternative ways to achieve the same function while increasing the value of the project. Hopefully, the project will realize a cost reduction, however adding value over reducing cost is the focus of VE studies.

- f. Who: OVEST (Office of the Chief of Engineers Value Engineering Study Team), In-house staff and subject matter experts from other districts will be part of the VE study team.
- g. When: A VE study will be conducted for the entire project. Please refer to schedule activity DDR4480.
- h. How: A team of individuals will be identified to conduct the VE study. The study starts with the team being briefed on the specific portion of the project. The team will then begin the speculation phase where ideas will be brainstormed. The team will then analyze the ideas and develop proposals on the ideas with the most promise. The study team will then brief the design team on their findings. The design team will then evaluate the proposals and determine which proposals, if any, to incorporate into the design.
- i. Cost: Reference P2
- j. Time: Refer to the project schedule, activity DDR4480