

ENVIRONMENTAL WORK INSTRUCTION 3EN2.5

From: Chief Environmental Engineer

To: All Environmental Personnel and Contractors

Subj: IDENTIFYING TASK HEADINGS FOR ENVIRONMENTAL PROJECTS USING
COMPREHENSIVE WORK BREAKDOWN STRUCTURES (WBS)

Ref: (a) EC², "Environmental Cost Element Structure", Sept. 2000

www.em.doe.gov/aceteam/eces.html

(b) HTRW – ICEG, "HTRW Remedial Action Work Breakdown Structure", February 1996

(c) HTRW – ICEG, "Final Draft Studies and Design Work Breakdown Structure", September 1994.

(d) HTRW-ICEG, "HTRW Operation and Maintenance Work Breakdown Structure", February 1996.

1. PURPOSE: The intent of this work instruction is to inform SWDIV personnel and DoN contractors of the importance of Work Breakdown Structures (WBS). A WBS is a logical hierarchy that relates the elements of work to be accomplished to each other and to the performance objectives of the project or program. A properly constructed WBS facilitates the development of project schedules, budgets, and the project team. Cost estimates and reports use the WBS task headings as standard descriptive terminology.

WBSs are program- and contract-specific (i.e., no one WBS can be applied to all situations). A number of comprehensive WBSs have been developed to serve as the framework for generating project specific WBSs. The WBSs listed as references for this environmental work instruction are currently in use for various SWDIV environmental contracts. This work instruction will assist RPMs and DoN contractors in the identification and use of the appropriate comprehensive WBS for their environmental projects.

2. CANCELLATION: This work instruction hereby cancels and supersedes SOUTHWESTDIVNAVFACENGCOM Environmental Department Code 18, Policy Memorandum #7 dated Nov.6,1995 and the Environmental Work Instruction 4EN.5 dated 7 Dec. 1999.

3. BACKGROUND: Each IR project has a unique set of environmental concerns, and program management must match these concerns with the appropriate level of resources, both in time and money. The WBSs are intended to help project personnel accomplish this using standardized terminology and codes.

In the last 10 years, several comprehensive WBSs have been developed and used for environmental projects. The three WBSs used for environmental contracts at SWDIV include the "Environmental Cost Element Structure", "HTRW Remedial Action Work Breakdown Structure", and "Final Draft Studies and Design Work Breakdown Structure".

All of these WBSs are based on a hierarchical tree structure with multiple levels. Level 1 is the most general, and each successive level contains additional details concerning the tasks or resources needed to achieve project goals. Level 3 is typically used to develop

Independent Government Estimates (IGEs) and Revised Independent Government Estimates (RIGEs), but some types of contracts (e.g. fixed price contracts) should identify tasks to Level 4 to insure that critical tasks are included in the contract.

Each of the WBSs referenced in this work instruction has an associated dictionary that helps clarify the task headings and their appropriate use during various phases of an environmental project.

The current WBS recommended by SWDIV for new contracts is the “Environmental Cost Element Structure” (ECES) referenced above. The ECES is a comprehensive, phase-based, hierarchical list of the work activities that may be required to accomplish environmental goals. It covers all phases of environmental work, including: Preliminary Assessment/Site Investigation (PA/SI), Remedial Investigation/Feasibility Study (RI/FS), Remedial Design (RD), Remedial Action (RA), Operation and Maintenance (O&M), post closure surveillance and long term monitoring (SLTM), as well as, Program Management and Infrastructure. The structure of the ECES provides a consistent and visible cost management framework, with sufficient detail and coverage of project types, so that it can be used to track project costs during all phases of environmental projects. While primarily designed to be a cost structure, the ECES also serves as a model for developing a project specific WBS, which provides a framework for managing the cost, schedule, and performance objectives of an environmental project. Each element provides logical summary points for assessing technical accomplishments and for measuring cost and schedule performance.

The ECES is being phased in as SWDIV’s primary source of task headings to be used in IGEs, contract negotiations, and RIGEs. RPMs and Navy contractors are advised to use the ECES to develop their project specific WBS unless a pre-existing contract calls for the use of one of the earlier, less comprehensive WBSs (References b, c, and d above). For example when developing task headings for PA/SI, RI/FS, or RD work, the CLEAN contracts call for project specific WBSs based on the “Interagency Studies and Design Work Breakdown Structure”. In another legacy situation, the RAC contracts call for the development of project specific WBSs based on the task headings found in the “HTRW Remedial Action Work Breakdown Structure”. These older WBSs are not as comprehensive as the ECES, but they are still useful if applied correctly.

The primary purpose of using any of these work breakdown structures is to develop a uniform structure and nomenclature for the standardization of estimates, but these environmental WBSs can be used to support additional program and project functions.

These functions include:

- bid solicitation, collection, and evaluation
- communicating project data between installations, complexes, agencies, and industry
- developing a project checklist
- cost and schedule estimating
- collecting historical cost/schedule data
- collecting historical project data (e.g., technology deployments)

- validating and calibrating cost estimates and software tools
- establishing and disseminating best practices and lessons learned.

4. APPLICABILITY: RPMs should use the appropriate WBS format to prepare the IGE and the RIGE for environmental projects. In order to allow direct comparison of government estimates, the contractor's proposal should use the same WBS format as the RPM uses in the IGE and RIGE. This will facilitate the pre-proposal conference and contract negotiations. The ECES phase-based WBS shall be included in all future environmental contract awards for Cost Plus and CERCLA/RCRA/UST Architecture-Engineering Indefinite Quantity (A-E IDQ) contracts. The ECES WBS may also be used on selected EMAC and other Fixed-Price contract awards.

5. PROCEDURE:

a. For RPMs:

- i. Identify the correct comprehensive WBS for the project based on contract requirements. Note: some contracts do not require the use of a specific WBS. In these cases, the ECES can still be used to develop the IGE and RIGE.
- ii. Determine which WBS Level will adequately define project task headings for the IGE and the RIGE. This Level may or may not be stipulated in the contract. If not specifically defined in the contract or RFP, then the appropriate Level should be agreed upon by DoN representatives and the DoN contractor prior to the development of the IGE or contractor proposal.
- iii. Use the hierarchical structure of the selected WBS to identify appropriate task headings and their associated codes for use in the IGE and RIGE

b. For DoN Contractors:

- iv. Identify the correct comprehensive WBS for the project based on contract requirements. Note: some contracts do not require the use of a specific WBS. In these cases the ECES can still be used to develop the proposal.
- v. Determine which WBS Level will adequately define project task headings for the proposal. This Level may or may not be stipulated in the contract. If not specifically defined in the contract or RFP, then the appropriate Level should be agreed upon by DoN representatives and the DoN contractor prior to the development of the proposal.
- vi. Use the hierarchical structure of the selected WBS to identify appropriate task headings and their associated codes for use in the proposal.

POC for additional information: F. Ramirez, Environmental Cost Analyst, X2-2532

(signed)
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