This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: E2150 – 17

Standard Classification for Life-Cycle Environmental Work Elements—Environmental Cost Element Structure[1]

This standard is issued under the fixed designation E2150; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This standard establishes a classification of the comprehensive hierarchical list of elements for life-cycle environmental work. The classification is based on the Interagency Environmental Cost Element Structure (ECES).[2] Elements, as defined here, are major components common to environmental projects.[3] The elements represent the life-cycle activities for environmental projects regardless of the project design specification, construction method, technology type, or materials used. The classification serves as a consistent reference for cost estimating, analysis, and monitoring during the various phases of the project life cycle. Using ECES ensures consistency, over time and from project to project, in the cost management and performance measurement of environmental projects. It also enhances reporting at all phases of a project, from assessment and studies through design, construction, operations and maintenance (O&M), and surveillance and long-term monitoring (SLTM).

1.2 This classification applies to all environmental work, including environmental restoration, waste management, decontamination and decommissioning (D&D), surveillance and long-term monitoring, and technology development.

1.3 The use of this classification increases the level of standardization, uniformity, and consistency of collected environmental project costs. Such uniformity and standardization allows for ease of understanding project costs, provides a common "cost language" for sharing and comparing cost information, and allows for easier analysis and calibration of cost data. This standard classification can be used as a checklist of activities to be completed in environmental projects.

1.4 Guide E2637 is intended to facilitate the application of the ECES to any environmental remediation project, without regard to project size.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[4]

E631 Terminology of Building Constructions

E833 Terminology of Building Economics

E917 Practice for Measuring Life-Cycle Costs of Buildings and Building Systems

E2637 Guide for Utilizing the Environmental Cost Element Structure Presented by Classification E2150

2.2 *ASTM Adjunct:*[5]

Adjunct E2150 Adjunct to Classification E2150: Environmental Cost Element Structure at Levels 3, 4, and 5 and Definitions

3. Terminology

3.1 *Definitions*—For definitions of general terms used in this classification, refer to Terminology E631, and for general terms related to building economics, refer to Terminology E833.

3.1.1 *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*—Also known as "Superfund," CERCLA prescribes actions, and regulatory requirements for reducing risks to human health and the environment resulting from releases or threatened releases of hazardous substances into the environment.

[1] This classification is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.81 on Building Economics.

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[2] ECES was developed by the Interagency Environmental Cost Engineering Committee to increase effectiveness of cost management for federal environmental projects.

[3] The use of the term "cost element" in Classification E2150 differs from that within the UNIFORMAT II family of standards.

[4] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[5] Available from ASTM International Headquarters. Order Adjunct No. ADJE2150A. Original adjunct produced in 2002. Adjunct last revised in 2009.

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