



Department of Energy

Washington, DC 20585

August 26, 2010

MEMORANDUM FOR DISTRIBUTION

FROM: DAE Y. CHUNG
PRINCIPAL DEPUTY ASSISTANT SECRETARY
FOR ENVIRONMENTAL MANAGEMENT

SUBJECT: Implementation of the Office of Environmental Management Corporate Work Breakdown Structure

The Office of Environmental Management (EM) is implementing a Corporate Work Breakdown Structure (CWBS). The CWBS standardizes the structure used to categorize like scopes of work, facilitate Analytical Building Blocks (ABBs) and comparative analyses and simplify budget preparation. The CWBS follows the American National Standards Institute Standard 748-A, Section 3, for organization and definition of work. It will also allow EM to interface with site-specific work breakdown structures at Level 4, maintain historical costs by Program Baseline Summary (PBS), and analyze the program using multiple attributes. The CWBS includes the current project realignments required as the EM Recovery Act Protocol is applied to the EM Base Operations Program and the most recent approved capital and operations project splits.

The CWBS contains four levels described below:

Level 1

Level 1 is comprised of a single element. This element is the EM Program Level and represents the entirety of EM work across the Department of Energy (DOE) complex.

Level 2

Level 2 represents the site level. There is one element at this level for each operations office, field office, and/or project office. All EM scope at each of the geographically separate offices is accumulated in each of the respective elements at this level. Although Richland and River Protection are geographically on the same site, they will be two separate elements at Level 2.

Level 3

Level 3 represents the program level. The elements at this level align to program area such as high level waste, spent nuclear fuel, decontamination and decommissioning, etc. Level 3 will be the reporting level to Headquarters for Operations Programs. The Environmental Management Acquisition Advisory Board process will be used to establish and define Level 3 activities. Operations Programs will be managed according to the Office of Environmental Management's Operations Programs Protocol.



Level 4

This level contains each site's ABBs. Each ABB must be identified as either a capital asset project or a subdivision of operations programs. The ABBs also represent the elements of the Integrated Priority List which are used to formulate annual budget submissions to Congress. Each element at this level will be a strategic planning element for EM. This level also represents the interface of project management and budget development. Each element at this level must have a scope description, life-cycle cost profile, a defined end state, a beginning and end date, costs identified by "maintenance" and "progress", described by only one of the twelve mission categories, and receive funding from only one PBS. Level 4 (ABBs) will be maintained under configuration control, which includes the addition, deletion, or modification of ABB definitions. ABB change control will follow the process established in the Office of Environmental Management's Operations Programs Protocol, dated April 21, 2010.

Line item construction projects will represent one ABB for construction and one ABB for operation. Each cleanup Capital Asset Project will be assigned to a single ABB. Level 4 will be the reporting level for all Capital Asset Projects managed in accordance with DOE Order 413.3A. Operations activities will be divided according to the ABB structure at Level 4 for budgeting (Integrated Priority List) and analysis purposes. A new ABB or CWBS element will be created as new capital asset projects are identified and move from the larger operations activities at Critical Decision 2.

Concurrently with the implementation of the CWBS, the Office of Strategic Planning and Analysis (EM-62) will be developing a CWBS dictionary based on Level 4 scope descriptions provided by each site. Level 4 functions as the interface between the site-specific and contractor work breakdown structures and the CWBS. The initial submission of site-specific information is due to EM-62 on September 30, 2010.

Draft site specific CWBS dictionary sheets were provided to the sites by EM-62 in June 2010. The sheets are to be used to populate the CWBS dictionary for the Level 4 elements. Any changes to the CWBS dictionary sheets must be coordinated with the appropriate EM-62 point-of-contact for each site. These points-of-contact will be provided with the dictionary sheets.

Attached for your use is a copy of the CWBS, example dictionary sheets, and the current EM Program Mission Categories. Should you or your staff have questions or comments, please contact Mr. Jay Rhoderick, Director, Office of Strategic Planning and Analysis, at (301) 903-7211.

Attachments

Distribution

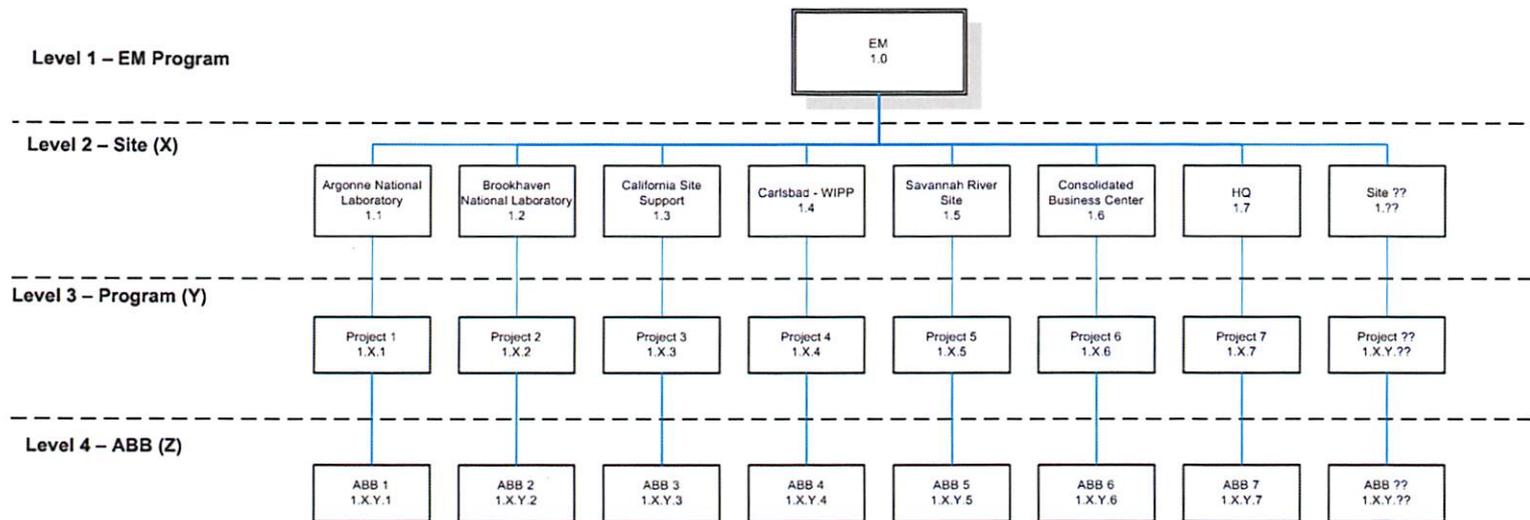
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EM Corporate WBS

EM Program Work Breakdown Structure



The ABBs will be defined by the site/FPD to align with the way the projects are being managed.
The ABBs will be classified as Operating, Capital Asset, or Line Item

Attributes that will be tracked as activity coding:

- Project Type (Operating, Capital Asset, or Line Item)
- Program Mission Category (PMC)
- Project Baseline Summary (PBS)
- Environmental Cost Element Structure (ECES)
- Congressional Budget Request
- Budget and Reporting (B&R) Codes
- EM Min-Safe category
- State
- Compliance Related



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

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Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1

WBS Title: U.S. Department of Energy - Office of Environmental Management (DOE-EM)

Parent WBS: 0

Parent Title: Not Applicable

WBS Level: 1

WBS Level Title: Office Level

Reference Number: EM

Reference Description: DOE Office Designation

WBS Element Scope Description:

The Office of Environmental Management (EM) is responsible for the risk reduction and cleanup of the environmental legacy of the Nation's nuclear weapons program, one of the largest, most diverse, and technically complex environmental programs in the world. EM will successfully achieve this strategic goal by ensuring the safety of DOE employees and U.S. citizens, acquiring the best resources to complete the complex tasks, and by managing projects throughout the United States in the most efficient and effective manner. EM has made significant progress in the last four years in shifting away from risk management to embracing a mission completion philosophy based on cleanup and reducing risk. EM continues to demonstrate the importance of remaining steadfast to operating principles while staying focused on the mission. EM has made progress in recent years in cleanup and/or closure of sites. In addition to its emphasis on site cleanup and closures, EM is also focusing on longer-term activities required for the completion of the cleanup program. These include:

- Constructing and operating facilities to treat radioactive liquid tank waste into a safe, stable form to enable ultimate disposition.
- Securing and storing nuclear material in a stable, safe configuration in secure locations to protect national security.
- Transporting and disposing of transuranic and low-level wastes in a safe and cost-effective manner to reduce risk.

Sub WBS Elements:

WBS No:	WBS Title:
1.AL	Argonne National Laboratory - East
1.BC	Consolidated Business Center
1.BL	Brookhaven National Laboratory
1.CL	Columbus
1.CS	California Site Support
1.ET	Energy Technology Engineering Center
1.FN	Fernald
1.HQ	Headquarters
1.ID	Idaho National Laboratory
1.IT	Inhalation Toxicology Laboratory
1.KC	Kansas City Plant
1.LA	Los Alamos National Laboratory
1.LB	Lawrence Berkley Laboratory
1.LL	Lawrence Livermore National Laboratory
1.MB	Miamisburg Mound
1.MO	Moab UMTRA Project
1.NA	NNSA Service Center
1.NO	Nevada Offsites
1.NT	Nevada Test Site
1.OR	Oak Ridge Reservation
1.PA	Paducah Gaseous Diffusion Plant
1.PO	Portsmouth Gaseous Diffusion Plant
1.PX	Pantex Plant
1.RF	Rocky Flats
1.RL	Hanford Site - Richland Operations
1.RP	Hanford Site - Office of River Protection
1.SL	Stanford Linear Accelerators Center
1.SN	Sandia National Laboratories
1.SP	Separations Process Research Unit
1.SR	Savannah River Site
1.WP	Carlsbad - Waste Isolation Pilot Plant
1.WV	West Valley Demonstration Project

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR

Parent WBS: 1

WBS Level: 2

Reference Number: 21

WBS Title: Oak Ridge Reservation

Parent Title: U.S. Department of Energy - Office of Environmental Management (DOE-EM)

WBS Level Title: Complex Level

Reference Description: Oak Ridge Reservation

WBS Element Scope Description:

The Oak Ridge Reservation is located in east Tennessee and is comprised of three major facilities: the East Tennessee Technology Park (ETTP); the Oak Ridge National Laboratory (ORNL); and the Y-12 National Security Complex. There are also some private properties that are not located on the Oak Ridge Reservation (the Atomic City Auto Parts Site and the David Witherspoon Sites) that are being cleaned up under the auspices of the Oak Ridge program.

The cleanup program mission in Oak Ridge will be complete when risks to the public, workers, and the environment at these sites have been safely reduced. These risks include potential exposure to chemical and radiological contamination and industrial hazards resulting from decades of uranium enrichment, research, and nuclear weapons-related operations.

The Oak Ridge cleanup strategy is risk-based and is organized around watersheds that feed the Clinch River. Key Records of Decision under CERCLA been signed for these watersheds. Final Records of Decision will be necessary for all watersheds to deal with the remaining ecological and groundwater concerns.

Cleanup of the Oak Ridge Reservation is primarily governed by three regulatory agreements/compliance orders; the Federal Facility Agreement for the Oak Ridge Reservation, the Oak Ridge Reservation Site Treatment Plan, and the Oak Ridge Reservation Polychlorinated Biphenyl Federal Facilities Compliance Agreement.

Sub WBS Elements:

WBS No:	WBS Title:
1.OR.ETTP	East Tennessee Technology Park
1.OR.ORNL	Oak Ridge National Laboratory
1.OR.ORRO	Oak Ridge Reservation -other
1.OR.Y-12	Y-12 Plant

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR. ETPP
Parent WBS: 1. OR
WBS Level: 3
Reference Number: 01

WBS Title: Projects
Parent Title: Oak Ridge Reservation
WBS Level Title: Project Level
Reference Description: PBS, Line Item Projects, etc. Number

WBS Element Scope Description:

The East Tennessee Technology Park site occupies approximately 5,000 administrative acres adjacent to the Clinch River and located approximately 13 miles west of Oak Ridge, Tennessee. Approximately 2,200 of these acres are to be addressed under the Comprehensive Environmental Response, Compensation and Liability Act. It was originally built as a uranium enrichment facility for defense programs. The majority of the 125 major buildings on the site have been inactive since uranium enrichment production ceased in 1985.

Sub WBS Elements:

WBS No:	WBS Title:
1.OR.ETTP.0267	Safeguards and Security
1.OR.ETTP.0270	Remedial Actions
1.OR.ETTP.0273	ETTP Main Plant Area D&D
1.OR.ETTP.0274	K25 Building D&D
1.OR.ETTP.0275	K27 Building D&D
1.OR.ETTP.0288	Centrifuge Facility S&M and D&D
1.OR.ETTP.0291	Post Retirement Liabilities
1.OR.ETTP.0624	K27 Building D&D

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.ETTP.0267

Parent WBS: 1.OR.ETTP

WBS Level: 4

Reference Number: 0267

Program Mission: Safeguards and Security

WBS Title: Safeguards and Security

Parent Title: East Tennessee Technology Park

WBS Level Title: Subproject Level

Reference Description: 0267

PBS: OR-0020 - Safeguards and Security

WBS Element Scope Description:

TBD

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.ORNL

Parent WBS: 1. OR

WBS Level: 3

Reference Number: 02

WBS Title: Oak Ridge National Laboratory

Parent Title: Oak Ridge Reservation

WBS Level Title: Project Level

Reference Description: PBS, Line Item Projects, etc. Number

WBS Element Scope Description:

Activities carried out at the 3,300-acre Oak Ridge National Laboratory historically have supported both the defense production operations and civilian energy research effort. Cleanup addresses contamination from a variety of research and development activities, which were supported by multiple DOE programs over a long period of time. Significant waste management activities took place within the Melton Valley area of the Laboratory. The Oak Ridge National Laboratory currently conducts applied and basic research in energy technologies and the physical and life sciences. Cleanup includes environmental remediation, decontamination, decommissioning and demolition of hazardous and radioactively contaminated facilities, and disposition of legacy low, mixed low-level, and transuranic waste.

Sub WBS Elements:

WBS No:	WBS Title:
1.OR.ORNL.0259	U233 Construction
1.OR.ORNL.0260	U233 Operations
1.OR.ORNL.0281	Waste Management and S&M
1.OR.ORNL.283A	Bethel Valley Remedial Actions
1.OR.ORNL.283B	Melton Valley and Boundary Sites Remedial Actions
1.OR.ORNL.284A	Central Campus Area and Other Bethel Valley Facilities D&D
1.OR.ORNL.284B	Melton Valley and Melton Valley Reactors D&D
1.OR.ORNL.284C	Waste Treatment facilities D&D
1.OR.ORNL.284D	3019 Complex D&D
1.OR.ORNL.0836	Waste Treatment Facility Reconfiguration and Adaptive Reuse
1.OR.ORNL.0837	Technical and Administrative Support

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.ORNL.0259

Parent WBS: 1.OR.ORNL

WBS Level: 4

Reference Number: 0259

Program Mission: Excess Nuclear Material
Management & Disposition

WBS Title: U233 Construction

Parent Title: Oak Ridge National Laboratory

WBS Level Title: Subproject Level

Reference Description: 0259

PBS: OR-0011Z - Downblend of U-233 in Building 3019

WBS Element Scope Description:

TBD

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.ORRO

Parent WBS: 1. OR

WBS Level: 3

Reference Number: 03

WBS Title: Oak Ridge Reservation - Other

Parent Title: Oak Ridge Reservation

WBS Level Title: Project Level

Reference Description: PBS, Line Item Projects, etc. Number

WBS Element Scope Description:

Activities are associated with the collection, storage, treatment, and disposal of low-level, mixed low-level, and hazardous waste from the East Tennessee Technology Park and PCB FFCA mixed waste from Y-12 and Legacy Industrial Waste. It also includes the operation of the Toxic Substance Control Act Incinerator and the Central Neutralization Facility. Management of the Reservation's inventory of transuranic waste, acceptance, verification, collection, and transport of newly generated transuranic waste, transfer of transuranic wastes to the Waste Processing Facility, and the operation and decontamination & decommissioning of the Waste Processing Facility are also part of the scope. It partially includes East Tennessee Technology Park infrastructure services.

This project also reduces risk and accelerates cleanup of three privately owned properties that were contaminated due to the sale of contaminated materials from DOE to private companies. DOE is responsible for the cleanup of these sites under the TN Superfund law. The three sites are the Atomic City Auto Parts Site in Oak Ridge and the David Witherspoon, Inc. 901 and 1630 sites in Knoxville. The properties, which cover 64 acres combined, are in residential and commercial areas and are accessible to the public. Primary contaminants include uranium, PCBs, and heavy metals. The cleanup actions at these sites will consist of removing, treating, and disposing of contaminated materials, equipment, soil, and sediment; demolishing facilities; and groundwater actions. The scope also includes Offsite Program Site Evaluations, which are dependent on the results of a study schedule for release in FY 2004 by the Agency for Toxic Substances and Disease Registry (ASTDR). Actions taken to date include removal of highly contaminated items from the sites and preparation of remedial investigations and feasibility studies. Cleanup of the Atomic City Auto Parts Site has been completed. Work at the Witherspoon Sites will be completed by 2009. Upon completion, all three sites are expected to be suitable for future industrial use.

Sub WBS Elements:

WBS No:	WBS Title:
1.OR.ORRO.0261	RH TRU Debris
1.OR.ORRO.0265	Treat, Store, Dispose
1.OR.ORRO.0266	TSCAI
1.OR.ORRO.0290	Stakeholder Support
1.OR.ORRO.0623	Transuranic Waste Processing

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.ORRO.0261

Parent WBS: 1.OR.ORRO

WBS Level: 4

Reference Number: 0261

Program Mission: Transuranic (TRU) Waste
Management & Disposition

WBS Title: RH TRU Debris

Parent Title: Oak Ridge Reservation - Other

WBS Level Title: Subproject Level

Reference Description: 0261

PBS: OR-0013B - Solid Waste Stabilization and Disposition

WBS Element Scope Description:

TBD

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.Y-12
Parent WBS: 1. OR
WBS Level: 3
Reference Number: 04

WBS Title: Y-12 Plant
Parent Title: Oak Ridge Reservation
WBS Level Title: Project Level
Reference Description: PBS, Line Item Projects, etc. Number

WBS Element Scope Description:

The Y-12 site is approximately 811 acres and is located about two miles southwest of Oak Ridge, Tennessee. The Y-12 site originally was a uranium processing facility and now dismantles nuclear weapons components and serves as one of the nation's storehouses for special nuclear materials. The types of contamination include radioactive, hazardous, and mixed wastes. The sanitary landfills for all of the Oak Ridge Reservation are located at Y-12. The Environmental Management Waste Management Facility (a Comprehensive Environmental Response, Compensation and Liability Act disposal facility supporting the cleanup) is also located at Y-12.

Sub WBS Elements:

WBS No:	WBS Title:
1.OR.Y-12.0276	Landfill Closure - Waste Treatment Facility and Utility Reconfiguration
1.OR.Y-12.0277	Waste Management and S&M
1.OR.Y-12.278A	Bear Creek Valley Remedial Actions
1.OR.Y-12.278B	Chestnut Ridge and Off Site Remedial Actions
1.OR.Y-12.280A	Alpha Buildings D&D
1.OR.Y-12.280B	Beta Buildings D&D
1.OR.Y-12.280C	Biology and Lab Complexes D&D
1.OR.Y-12.280D	Process Facilities D&D
1.OR.Y-12.280E	Waste Treatment Facilities D&D
1.OR.Y-12.0817	Technical and Administrative Support

Corporate Work Breakdown Structure (WBS) Dictionary

WBS Information:

WBS No.: 1.OR.Y-12.0276

WBS Title: Landfill Closure - Waste Treatment Facility and Utility
Reconfiguration

Parent WBS: 1.OR.Y-12

Parent Title: Y-12 Plant

WBS Level: 4

WBS Level Title: Subproject Level

Reference Number: 0276

Reference Description: 0276

Program Mission: Site Infrastructure/Program
Support/Program Manage

PBS: OR-0041 - Nuclear Facility D&D-Y-12

WBS Element Scope Description:

TBD

EM Corporate Work Breakdown Structure

Office of Strategic Planning and Analysis



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Where We Came From

- The current PBS structure was implemented in FY2003
- Intended to define projects by program area (i.e. SNF, Tank Waste, D&D, etc) by site.
- EM Management was interested in analyzing costs by program area across the complex in order to take advantage of economies of scale and to unify program management.
- Initial direction was not widely followed by sites, PBSs contain scope from multiple program areas, negating the ability to perform complex wide analyses at the PBS level.



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EM Corporate Work Breakdown Structure

- Organizes work uniformly across the complex
- EM dictates first four levels, allows sites to complete lower levels according to their needs
- Integrates project management and budget planning
- Basis of EM Enterprise Architecture which will be used for project performance tracking and budgeting
- Follows ANSI standard 748-A, Section 3 for organization and definition of work



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WBS Level 4 is an ABB

- ABB's were created to allow EM to perform complex wide program analyses that were not possible with PBSs
- ABB's are the budget Integrated Priority List elements creating the link between project management and budget
- ABB's are discrete site-specific components of EM scope that can be managed, assessed, budgeted, executed, reprioritized and communicated as a whole.
- ABB's have all the components of a WBS element.



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Characteristics of an ABB

- Must reflect how work is accomplished, consistent with the site baseline
- Have a life cycle cost profile
- Have a beginning and an end date
- Dollars identified by “maintenance” and/or “progress”
- Report through only one PBS, thus maintaining historical costs back to FY 1997
- Represent work in one of twelve mission areas, allowing cost and performance analysis by more program areas than original PBSs



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Level 3 are Reportable Projects

- PBSs become budgeting mechanisms and not projects
- Projects are defined by the sites
- Projects are an accumulation of logically related ABBs
- All component ABBs must be either operating or capital and roll up to an operating project or capital project
- Better represent the way sites are organizing and performing their work (in many cases, by geographic area and not by program area)
- Allows EM to better comply with recent agreements with OECM on project definition and PARS reporting



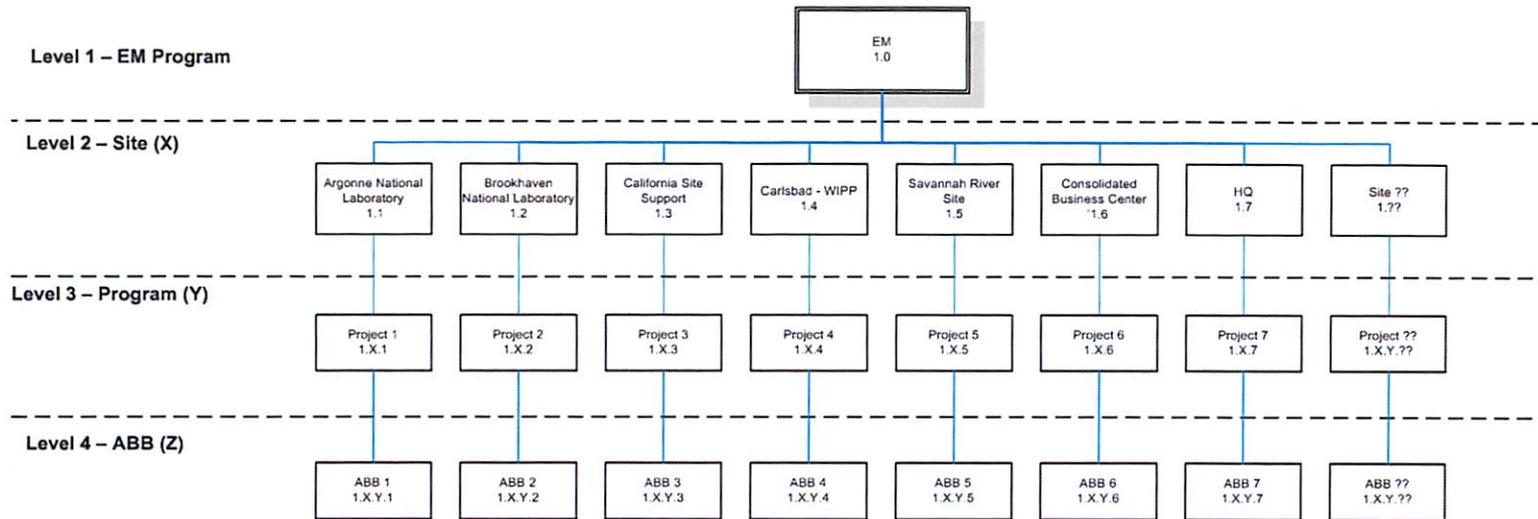
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EM Program Work Breakdown Structure



The ABBs will be defined by the site/FPD to align with the way the projects are being managed.
The ABBs will be classified as Operating, Capital Asset, or Line Item

Attributes that will be tracked as activity coding:

- Project Type (Operating, Capital Asset, or Line Item)
- Program Mission Category (PMC)
- Project Baseline Summary (PBS)
- Environmental Cost Element Structure (ECES)
- Congressional Budget Request
- Budget and Reporting (B&R) Codes
- EM Min-Safe category
- State
- Compliance Related



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Benefits of the Corporate WBS

- Will allow progress tracking by site, program, project, and sublevel components, which allows EM to better identify performance trends with multiple parameters
- Organizes the work uniformly across the complex allowing cost comparisons not currently available to EM
- Controls scope at a level lower than EM was previously able
- Maintains historical costs by PBS
- Mission categories will be attributes in which costs and performance can be isolated and analyzed



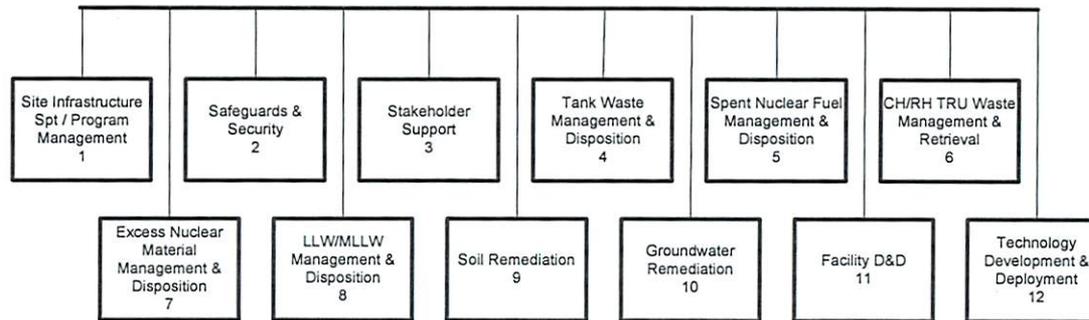
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EM Corporate Work Breakdown Structure

12 Program Mission Categories



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As of 31MAR09

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