

**U.S. Department of Energy**  
**Washington, D.C.**

**ORDER**

**DOE O 430.1A**

Approved: 10-14-98

**This directive was reviewed and certified as current and necessary by (Enter Name), (Enter Title) Director, Office of Management, Budget and Evaluation/Chief Financial Officer, XX-XX-XXXX.**

**SUBJECT: LIFE CYCLE ASSET MANAGEMENT**

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1. OBJECTIVES. The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. The management of physical assets from acquisition through operations and disposition shall be integrated and seamless process linking the various life cycle phases. Stewardship of these physical assets shall be accomplished in a safe and cost-effective manner to meet the DOE mission, and to ensure protection of workers, the public, and the environment. This shall incorporate industry standards, a graded approach, and performance objectives.
2. IMPLEMENTATION. This Order shall be implemented on a site-by-site basis through the establishment, by contract or financial assistance agreements, of site-specific performance criteria and a performance measurement system. The orders listed below and already implemented in current contracts remain in effect until such incorporation takes place. Additionally, for specific facilities under the purview of the Defense Nuclear Facilities Safety Board, DOE 4330.4B, MAINTENANCE MANAGEMENT PROGRAM, remains in effect until 10 CFR 830.340, MAINTENANCE MANAGEMENT, for defense nuclear facilities is issued as finals by the Assistant Secretary for Environment, Safety and Health. For sites not managed by a contractor, implementation shall occur when the responsible DOE organization has completed the development of appropriate performance measures.
3. CANCELLATION. The following directives are deleted or consolidated into this Order and shall be phased out as noted in Paragraph 2:

DOE O 430.1	LIFE CYCLE ASSET MANAGEMENT
DOE 1332.1A	UNIFORM REPORTING SYSTEM
DOE 4010.1A	VALUE ENGINEERING
DOE 4300.1C	REAL PROPERTY MANAGEMENT
DOE 4320.1B	SITE DEVELOPMENT PLANNING
DOE 4320.2A	CAPITAL ASSET MANAGEMENT PROCESS
DOE 4330.4B	MAINTENANCE MANAGEMENT PROGRAM
DOE 4330.5	SURPLUS FACILITY TRANSFER
DOE 4540.1C	UTILITY ACQUISITION AND MANAGEMENT
DOE 4700.1	PROJECT MANAGEMENT SYSTEM

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**DISTRIBUTION:**  
All Departmental Elements

**INITIATED BY:**  
Office of Field Management

DOE 4700.3	GENERAL PLANT PROJECTS
DOE 4700.4	PROJECT MANAGER CERTIFICATION
DOE 5700.2D	COST ESTIMATING, ANALYSIS, AND STANDARDIZATION
DOE 5820.2A	RADIOLOGICAL WASTE MANAGEMENT, Chapter V
DOE 6430.1A	GENERAL DESIGN CRITERIA

4. DEFINITIONS. See Attachment 1.

5. APPLICABILITY.

- a. DOE Elements. This Order applies to all DOE elements except the Naval Reactors/ Naval Nuclear Propulsion Program. This Order does not preclude issuance of program directions unrelated to asset management systems. While this Order applies to all the physical assets in the DOE, there are additional requirements for special and nuclear facilities that are the responsibility of the Assistant Secretary for Environment, Safety, and Health to develop and maintain.
- b. Contractors. Attachment 2, Contractor Requirements Document (CRD), sets forth requirements of this Order that can be applied to contractors and subcontractors responsible for managing and operating Departmental facilities, as adapted to meet site-specific needs. Contractor compliance with the CRD will be required to the extent set forth in a contract.

6. REQUIREMENTS.

- a. DOE elements shall use a value-added, quality driven, graded approach to life-cycle asset management.
- b. Every site shall be supported by a Headquarters Program Office that functions as the Landlord. Landlords shall coordinate their facilities management activities to provide a consistent corporate approach to facilities management, especially at multi-program sites. At single program sites, the responsible Program Office shall perform the landlord responsibilities.
- c. Assets management performance measures shall be based upon best industry practice and shall be commensurate with the value and importance of the asset using a graded approach.
- d. Asset management performance measures shall ensure formal, comprehensive, integrated, documented planning, and control methods for the acquisition, use, maintenance, leasing and disposal of physical assets, including real estate and energy and utilities. This shall address, but shall not be limited to, the following:

- (1) A comprehensive land-use planning process with stakeholder involvement.
  - (2) The efficient and effective acquisition, management, and use of energy and utilities.
  - (3) The management of backlogs associated with maintenance, repair, and capital improvements.
  - (4) A method for the prioritization of infrastructure requirements.
  - (5) A method to declare assets excess.
- e. The process for physical asset acquisition shall be an integrated, systematic approach that shall ensure, but shall not be limited to, the following:
- (1) Use of a comprehensive land-use process with stakeholder involvement.
  - (2) Use of a process tool, such as value engineering, to improve efficiency and cost-effectiveness when analyzing physical asset acquisition.
  - (3) Specification of the appropriate state, regional, or national building codes to which physical assets shall be designed and constructed.
  - (4) Consideration of maintainability, operability, disposition, life-cycle costs, and configuration integrity in designs and acquisitions.
  - (5) Consideration of current mission needs and an appropriate scope.
  - (6) Use of a DOE-certified real estate specialist for the execution of real estate acquisitions.
  - (7) A project management system based on effective management practices that is sufficiently flexible to allow for the size and complexity of the project. For line item projects, the following requirements are considered minimal:
    - (a) Prior to the commencement of conceptual design, include the following in Project Planning for approval:
      - 1 mission need,
      - 2 minimum technical functional requirements,
      - 3 proposed cost and schedule ranges,
      - 4 preliminary environmental strategy,

- 5 identification of project technical and organizational interfaces, and
    - 6 integration with other projects and activities.
  - (b) Prior to the commencement of execution, include the following in project planning for approval:
    - 1 project objectives,
    - 2 scope, schedule, and cost baselines, including contingencies,
    - 3 life-cycle cost analysis,
    - 4 preliminary safety assessment,
    - 5 project controls, including baseline change control, change control thresholds, and statusing,
    - 6 completion of National Environmental Policy Act documentation prior to detailed design and final commitment to an alternative,
    - 7 verification of performance criteria through test and evaluation, and
    - 8 design alternatives.
  - (c) Prior to operation, a plan for turnover of a facility shall be prepared; verification of performance criteria through test and evaluation shall be accomplished; and operational readiness shall be verified.
- f. The process for the operation and maintenance of physical assets shall ensure, as a minimum, the following:
  - (1) The identification, inventory, and periodic assessment of the condition of physical assets in the maintenance program.
  - (2) The establishment of requirements, budgets, and a work management system to maintain physical assets in a condition suitable for their intended use.
  - (3) The preventive, predictive, and corrective maintenance to ensure physical asset availability for planned use and/or proper disposition.
  - (4) A configuration management process to ensure the integrity of physical assets and system.
  - (5) The efficient and effective management and use of energy and utilities.
  - (6) A method for the prioritization of infrastructure requirements.

- (7) The management of backlogs associated with maintenance, repair, and capital improvements.
- (8) A method to ensure that prior to the completion of mission activities (e.g., production, research, etc.) actions are implemented to place the facility, systems and materials in stable and known conditions, and to ensure hazards are identified and known, pending transfer or disposition. For facilities that have already completed mission activities and are awaiting transfer or disposition, ensure that actions are taken to eliminate or mitigate hazards and provide adequate protection to workers, the public and the environment. In both cases, actions shall be based on an assessment of the remaining hazards at the time when mission activities are completed, or prior to transfer or disposition for facilities that have already completed mission activities. These actions shall include but not be limited to:
  - (a) Identifying and characterizing hazardous and radioactive materials and wastes remaining in systems/facilities and providing for their stabilization (if necessary), adequate storage until they are removed from the facility, and (unless otherwise agreed to prior to facility transfer) removal.
  - (b) Assessment and adjustment (if necessary) of the facility authorization basis to ensure it continues to reflect conditions in the facility pending disposition.
  - (c) Conducting surveillance and maintenance activities required to maintain the facility and remaining hazardous and radioactive materials, wastes, and contamination in a stable and known condition pending facility disposition.
  - (d) Identifying and allocating resources needed to maintain stable and known conditions pending disposition.
- g. The process for the disposition of physical assets shall ensure, as a minimum, the following:
  - (1) Application, as appropriate, of guidelines contained or referenced in DOE-STD-1120-98, INTEGRATION OF ENVIRONMENT, SAFETY AND HEALTH INTO FACILITY DISPOSITION ACTIVITIES.

- (2) The use of a DOE-certified real estate specialist to execute the disposal of real estate, including the disposal of Departmental improvements without the underlying land.
- (3) A method whereby land and facilities (Candidates for Transfer) are either transferred to other Program Offices, or are determined excess, available for disposal, and disposal procedures are initiated.
- (4) To match the Departmental budget cycle, the normal date of transfer for a facility shall be the first October 1 after the two year anniversary of the date the receiving organization is notified, unless the parties reach another agreement. As land and facilities are transferred from one Program Office to another, the appropriate funding and budget target are transferred with it.
- (5) In addition, for the transfer of contaminated facilities, as a minimum the following apply:
  - (a) Completion of a Pre-Transfer Review, with participation by the Office of Environment, Safety and Health when requested or directed, for transfer of facilities for disposition whose scope shall be commensurate with the existing hazards.
  - (b) Development of a signed agreement by relevant Secretarial Officers to document scope, conditions, state of readiness, and associated funding, when transferring facilities between Program Offices. This includes a budget resources plan to manage the facility until funding is provided to the receiving program through the normal budgeting process.
- (6) In addition, for execution of contaminated facility disposition, as a minimum the following apply:
  - (a) A method to ensure that deactivation, surveillance and maintenance, and decommissioning activities are appropriately planned, conducted, and documented in a manner consistent with the guiding principles and core functions of the Department's integrated safety management and facility disposition policies. The disposition process shall provide for:
    - (i) The collection of baseline data to support a physical, chemical, and radiological characterization, updated as necessary to reflect changes in facility conditions during the disposition process.

- (ii) Surveillance and maintenance activities that correspond with facility conditions, including changes resulting from disposition activities.
    - (iii) A method for identifying, assessing, and evaluating alternatives for deactivating and/or decommissioning and for selecting and documenting a preferred alternative.
    - (iv) An end-point process in deactivation and decommissioning planning that identifies specific facility end-points and activities needed to achieve those end-points.
    - (v) A method for detailed engineering planning and for plan documentation to execute the preferred deactivation and/or decommissioning alternative.
  - (b) The use of Non-Time-Critical Removal Action as the approach for decommissioning, using the tailored process negotiated with the Environmental Protection Agency, with continued Defense Nuclear Facilities Safety Board oversight to the extent authorized by law.
  - (c) The development of a final report, or equivalent document, for each deactivation and/or decommissioning project. Where deactivation and decommissioning are conducted as a single, uninterrupted activity, only one final report, or equivalent, is required.
- h. Utility services shall be acquired and disposed of through a DOE prime contract.
  - i. DOE corporate physical assets databases shall be maintained as complete, current inventories of the DOE physical assets. For real property, the corporate database is Facilities Information Management System (FIMS).
  - j. In the acquisition, operation, maintenance, leasing and disposition of physical assets, DOE elements shall ensure that all applicable Federal, state, and local laws, regulations, and negotiated agreements are followed, and that safeguards and security as well as integrated safety management requirements and policies are followed.

7. RESPONSIBILITIES.a. Secretary.

- (1) Authorizes actions to acquire title to or interest in real property by condemnation.
- (2) Accepts donations of physical assets from outside DOE.
- (3) Approves critical decisions on strategic systems.
- (4) Decides issues that cannot be resolved by the Program Offices concerning the transfer of facilities.

b. Office of Field Management

- (1) With General Counsel and participation of Field Elements, jointly represents DOE consumer interests by intervening, or otherwise participating in, hearings or proceedings before utility regulating bodies, when these proceedings affect DOE operations.
- (2) With General Counsel and the Office of Business Clearance, jointly reviews and approves documents for the acquisition and sale of utility services.
- (3) Is the Department's principal point of contact relating to real estate. With DOE elements, coordinates the possible reuse of facilities that Field Elements report as excess. In addition, provides management direction and coordination for the disposal of excess Departmental real property assets.
- (4) In coordination with Program Offices and Program Offices with landlord responsibilities, takes the lead in verifying that Field Elements have the asset management performance criteria and measures in place to effectively oversee the contractors.
- (5) Provides technical assistance to the Program Offices, Landlords, and Field Elements.
- (6) Coordinates among Program Offices and Field Elements to support an efficient, economic approach to physical asset management.
- (7) Manages the certification program for DOE real estate specialists.



- (8) Supports the planning and budgeting process for physical assets.
- (9) Sponsors and coordinates the Life-Cycle Asset Management Planning and Analysis Group.
- (10) Acts as the DOE point-of-contact for external activities and issues relating to life-cycle asset management.
- (11) Supports the Secretary in the strategic systems critical decision process.
- (12) Supports the development of Departmental performance objectives.
- (13) Facilitates the assignment of the landlord Program Office responsibility.
- (14) Conducts independent cost assessments on strategic systems (or on other projects, as requested) to verify a sound basis for critical decision making that commits large expenditures of DOE resources.

c. Program Office.

- (1) Leads in defining, planning, and budgeting for program needs, including operations, facilities, and projects.
- (2) Leads in verifying that program objectives are met and is accountable to the Secretary for program direction and execution through the Field Element.
- (3) Notifies Field Elements of plans to close program facilities.
- (4) Coordinates with the Office of Field Management and Field Elements to support an efficient, economic approach to physical asset management.
- (5) Develops, documents, and maintains a system to prioritize the acquisition of programmatic physical assets, including upgrades.
- (6) Participates in the Life-Cycle Asset Management Planning and Analysis Group.
- (7) Supports or, if delegated, leads the critical decision process for strategic systems funded by the program.
- (8) Conducts reviews of Field Element performance, including design, scope, and cost peer reviews for program elements under their programmatic authority.

- (9) Issues policy relative to its programmatic planning, budgeting, and execution activities.
  - (10) Leads in establishing and clearly stating expected program performance objectives and program performance criteria and supports the contracting officer in implementation of performance criteria for stated objectives.
  - (11) Supports the Office of Field Management to verify that Field Elements have the asset management performance criteria and measures in place to effectively oversee programmatic facilities.
  - (12) Supports, including funding, the Field Elements in the management of inactive and excess program facilities that have not been transferred to the appropriate organization for deactivation and decommissioning. Ensures that radioactive and hazardous materials and waste are removed unless otherwise agreed to prior to facility transfer, and completes a Pre-Transfer Review prior to the transfer of a facility unless otherwise agreed to by the Program Office to which the facility will be transferred.
  - (13) For single program sites, performs responsibilities of the landlord.
  - (14) For multi-program sites, provides support, including resources, to the program performing the responsibilities of the landlord.
  - (15) Leads oversight of Field Elements to ensure that performance criteria and measures are in place to effectively achieve program and project objectives related to the Program Office's programmatic authority.
  - (16) Assumes the responsibilities of the Field Element for project management and physical asset management not delegated to the Field Element.
- d. Program Office Designated as Landlord.
- (1) Supports DOE Field Element's management of site infrastructure by prioritizing and budgeting for real property needs in a manner consistent with current and planned site mission activities. For multi-program sites these responsibilities include coordination of funding requirements with other Program Offices.
  - (2) Issues policy relative to its infrastructure planning and budgeting activities.

- (3) Leads in establishing infrastructure performance objectives and supports the contracting officer in developing performance criteria for the site.
  - (4) Supports the Office of Field Management in verifying that Field Elements have asset management performance criteria and measures in place to effectively oversee nonprogrammatic facilities.
  - (5) Leads reviews of Field Elements infrastructure activities, in coordination with the Program Offices and the Office of Field Management.
  - (6) Develops, documents, and maintains a system to prioritize the acquisition of nonprogrammatic physical assets.
  - (7) Supports, including funding, Field Elements in the management of inactive and excess landlord facilities that have not been transferred to another Program Office.
  - (8) Supports or, if delegated, leads the critical decision process for strategic systems funded by the landlord.
  - (9) Leads issue resolution between Program Offices regarding possible conflicts in planned infrastructure uses at multi-program sites.
  - (10) Supports Field Elements in site-wide and external facilities management and infrastructure issues requiring Headquarters involvement.
  - (11) Coordinates landlord facilities management activities with other DOE landlord programs to provide a consistent approach to landlord facilities management.
- e. Field Elements.
- (1) Serve as contracting officers for site contracts and all other contracts and financial assistance agreements executed by Field Elements. The contracting officer shall ensure that applicable requirements found in this Order are included in contracts and subcontracts. Attachment 2 is a Contractor Requirements Document for use by contracting officers, as adapted to meet site-specific needs. The contracting officer shall work with each contractor to document in a formal agreement and/or contract the establishment and use of agreed upon performance-based objectives, measures and expectations for these requirements.
  - (2) Prepare initial budget requests and planning for physical assets.

- (3) Obtain necessary approvals for projects from the sponsoring Program Offices including mission need and project baselines, as appropriate.
- (4) Oversee projects delegated to them and oversee those projects executed by contractors to verify requirements are met.
- (5) Notify the Office of Field Management of excess real property that has a significant remaining useful life.
- (6) Verify adequate management of inactive and excess facilities until a reuse is found or the real property is disposed of.
- (7) Lead the verification of an efficient, economic approach to physical asset management in coordination with Program Offices and the Office of Field Management.
- (8) Participate in the DOE certification program for real estate specialists.
- (9) Participate in the Life-Cycle Asset Management Planning and Analysis Group.
- (10) Support the strategic systems critical decision process.
- (11) Support the Program Offices in development of performance criteria for program performance objectives and lead in implementing program criteria.
- (12) Lead in negotiating the performance criteria and measures with the contractor to meet the defined performance objectives.
- (13) Lead in evaluating the performance of the contractor against the performance measures in the contract.
- (14) Are accountable to the Program Offices and the landlord Program Office for contractor performance.
- (15) Coordinate all review and external oversight activities of the contractors.
- (16) With General Counsel and the Office of Field Management, participate in the DOE's utility intervention process.
- (17) When project size and complexity warrants, conduct independent design, scope, and cost reviews.

- (18) Develop a clear definition of roles, responsibilities and liabilities for all stakeholders for leased facilities, to ensure safety and protection of workers, the public and the environment.
8. ASSISTANCE. For answers to questions, contact the Office of Field Management at (202) 586-9157.

BY ORDER OF THE SECRETARY OF ENERGY:



ELIZABETH A. MOLER  
Deputy Secretary

CANCELLED

## DEFINITIONS

1. Assets. See Physical Assets.
2. Asset Management Systems. Processes and/or procedures that are employed for non-programmatic management of a facility or physical asset.
3. Baseline. A quantitative expression of projected costs, schedule, and technical requirements; the established plan against which the status of resources and the progress of a project can be measured.
4. Candidates for Transfer. Land and facilities that include: (a) contaminated facilities for which DOE has responsibility or owns; (b) contaminated portions of facilities, if structurally independent and with separate utilities and support systems; (c) real property or related personal property that is ancillary to a candidate facility; and (d) facilities otherwise agreed to by the DOE parties involved.
5. Certified Realty Specialist. A DOE employee that is certified in one or more of the four specialty realty areas; acquisition, non-GSA leasing, GSA leasing, and land management and disposal. Employees so certified may authorize or contract for real estate actions within certified specialty area(s).
6. Commencement of Execution. The beginning of the project phase that accomplishes development and remedial action/construction. This project phase advances the project from conceptual design to turnover to operations, through the execution of the design, construct/build/remediation and acceptance of the project. During this project phase, preliminary design, detailed design and construction / remedial design and remedial actions take place.
7. Conceptual Design. The activities required to evaluate project design alternatives and to develop sufficient detail to baseline the scope, cost and schedule for project authorization.
8. Contaminated Facilities. DOE facilities that have structural components and/or systems contaminated with hazardous chemical and/or radioactive substances, including radionuclides. This definition excludes facilities that contain no residual hazardous substances other than those present in building materials and components, such as asbestos-containing material, lead-based paint, or PCB-containing equipment. This definition excludes facilities in which bulk or containerized hazardous substances, including radionuclides, have been used or managed if no contaminants remain in or on the structural components and/or systems.
9. Corporate Facilities. See DOE Facilities.

10. Corrective Maintenance. See Repair.
11. Critical Decision. A formal determination at a specific point in a project that allows the project to proceed. Critical decisions occur in the course of a project, for example: prior to commencement of conceptual design, commencement of execution and prior to turnover.
12. Deactivation. The process of placing a facility in a stable and known condition including the removal of hazardous and radioactive materials to ensure adequate protection of the worker, public health and safety, and the environment, thereby limiting the long-term cost of surveillance and maintenance. Actions include the removal of fuel, draining and/or de-energizing nonessential systems, removal of stored radioactive and hazardous materials, and related actions. Deactivation does not include all decontamination necessary for the dismantlement and demolition phase of decommissioning, e.g., removal of contamination remaining in the fixed structures and equipment after deactivation.
13. Deactivation Project Final Report. The document prepared after the technical work has been performed and verified and that describes the deactivation project activities, accomplishments, final facility status, and cost and performance information.
14. Decommissioning. Takes place after deactivation and includes surveillance and maintenance, decontamination, and/or dismantlement. These actions are taken at the end of the life of a facility to retire it from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted release or restricted use of the site.
15. Decommissioning Project Final Report. The document prepared after the technical work has been performed and verified and that describes the decommissioning project activities, accomplishments, final facility status, and cost and performance information.
16. Decontamination. The removal or reduction of residual radioactive and hazardous materials by mechanical, chemical or other techniques to achieve a stated objective or end condition.
17. Disposal. Permanent or temporary transfer of DOE control and custody of real property to a third party who thereby acquires rights to control, use, or relinquish the property.
18. Disposition. Those activities that follow completion of program mission, including, but not limited to, surveillance and maintenance, deactivation, and decommissioning.

19. DOE Elements. First tier organizations at Headquarters and in the field. Field Elements include all operations offices, field offices, energy technology centers, and power marketing administrations.
20. DOE Facilities. Any of the DOE-owned, -leased, or -controlled facilities.
21. End Points. The detailed specification of conditions to be achieved for a facility's spaces, systems and major equipment. Fundamental to the determination of end points is risk reduction through elimination or stabilization of hazards, effective facility containment and facility monitoring and control.
22. Excess. Physical assets that are not required for DOE needs and the discharge of its responsibilities.
23. Facilities. Land, buildings, and other structures, their functional systems and equipment, and other fixed systems and equipment installed therein, including site development features outside the plant, such as landscaping, roads, walks, and parking areas; outside lighting and communication systems; central utility plants; utilities supply and distribution systems; and other physical plant features.
24. Facilities Management. A documented process by which facilities are operated and maintained.
25. Facility. The buildings, utilities, structures, and other land improvements associated with an operation or service and dedicated to a common function.
26. Graded Approach. The depth of detail required and the magnitude of resources expended for a particular management element to be tailored to be commensurate with the element's relative importance to safety, environmental compliance, safeguards and security, programmatic importance, magnitude of the hazard, financial impact, and/or other facility-specific requirements.
27. Infrastructure. All real property and installed equipment and personal property that is not solely supporting a single program mission.
28. Landlord Program Office. (Landlord) The Headquarters Program Office responsible for the support, planning, acquisition, operation, maintenance, and disposition of physical assets related to infrastructure.
29. Life-Cycle. The life of an asset from planning through acquisition, maintenance, operation, and disposition.



30. Line Item Project. Those separately identified project activities that are submitted for funding and are specifically reviewed and approved by Congress.
31. Maintenance. Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.
32. Maintenance Backlog. The amount of maintenance and repair work not accomplished at the end of the fiscal year that is needed or planned to sustain the assigned mission.
33. Non-Time-Critical Removal. This is a type of response action recognized by the Environmental Protection Agency as appropriate for addressing hazardous substance threats where a planning horizon of six months or more is appropriate. Removal responses, including non-time-critical removals, are the subject of 40 CFR 300.410 and 300.415. Under a signed agreement with EPA, the Department uses a non-time-critical removal approach tailored for DOE's decommissioning of contaminated facilities. That approach comprises threat assessment; identification, analysis, and documentation of decommissioning alternatives; opportunities for public participation in the decommissioning decision; and planning and performance of decommissioning activities. Under the DOE/EPA agreement, regulator involvement in decommissioning is determined locally.
34. Partnership. A process in which individual stakeholders create a team approach to achieve mutual goals and objectives or to resolve problems.
35. Performance Criteria. A condition or set of conditions that, when satisfied, indicate successful completion of the performance objective.
36. Performance Measures. Any evaluation, comparison, or judgement toward meeting the performance objective.
37. Performance Objective. A statement of wants, needs, and expectations of customers that sets the direction for all contract effort.
38. Personal Property. See Physical Assets.
39. Physical Assets. All DOE-owned or DOE-used and -controlled land, land improvements, structures, utilities, motor vehicles, equipment, and components are included.
  - a. Real Property or Real Estate. Real property includes land, improvements on the land, or both, including interests therein. All equipment or fixtures (such as plumbing, electrical, heating, built-in cabinets, and elevators) that are installed in a building in a more or less permanent manner or that are essential to its primary purpose are usually held to be part of real property.

- b. Related Personal Property. Related personal property means any personal property that, once installed, becomes an integral part of the real property in which it is installed or is related to, designed for, or specially adapted to the functional or productive capacity of the real property. The removal of related personal property will significantly diminish the economic value of the real property or the related personal property. Examples of related personal property are communications and telephone systems.
  - c. Personal Property. Generally, capitalizable property that can be moved, or that is not permanently affixed to and part of real estate. Generally, items remain personal property if they can be removed without seriously damaging or diminishing the functional value of either the capitalizable property or the real estate. Examples of personal property are shop equipment and automated data-processing and peripheral equipment.
40. Pre-Transfer Review. Serves to document the safety basis and physical and administrative characteristics of the facility subsequent to the cessation of operations, and prior to transferring the facility for the disposition phase. The objective of the review is to identify and evaluate, using a graded approach, the explicit boundaries of the facility(ies) being transferred; their physical condition; extent, nature and level of contamination (as appropriate on a case-by-case basis); inventories/estimates of types and quantities of special nuclear, fissionable, and toxic, hazardous, and radioactive materials; summary and evaluation of the safety basis and surveillance and maintenance requirements; and other elements to ensure that sufficient information is provided to facilitate an understanding of the facility and its surveillance and maintenance requirements.
41. Programmatic Management. Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.
42. Project. In general, a unique effort that supports a program mission with defined start and completion end points, undertaken to create a product, facility, or system with interdependent activities planned to meet a common objective/mission. Projects include planning and execution of construction / renovation / modification / environmental restoration or decontamination and decommissioning efforts, and large capital equipment or technology development activities. Tasks that do not include the above elements, such as basic research, grants, and operations and maintenance of facilities, are not considered projects.
43. Property. See Physical Assets.

44. Related Personal Property. See Physical Assets.
45. Repair. The restoration of failed or malfunctioning equipment, system, or facility to its intended function or design condition. Repair does not result in a significant extension of the expected useful life.
46. Site. A geographic entity comprising leased or owned land, buildings, and other structures required to perform program activities.
47. Stable. A state in which a facility and its contents are in a condition that eliminates or mitigates hazards and ensures adequate protection to workers, the public and the environment. Achieving and maintaining stability may require actions to prevent the alteration in the chemical makeup, physical state, and/or geometry (leading to increased reactivity) of a hazardous substance or radioactive material. Achieving and maintaining stability also involves actions taken with regard to physical structures (e.g., roofs), systems (e.g., ventilation), and components.
48. Strategic System. (formerly Major Systems Acquisition) A special type of line item project(s) that is a single, stand-alone effort within a program mission area that is a primary means to advance the Department's strategic goals. Designation of a strategic system is determined by the Secretary based on cost, risk factors, international implications, stakeholder interest, and/or national security.
49. Strategic System Critical Decision Process. See Critical Decision.
50. Surveillance and Maintenance. These activities are conducted through-out the facility life cycle phase including when a facility is not operating and is not expected to operate again and continues until phased out during decommissioning. Activities include providing in a cost effective manner periodic inspections and maintenance of structures, systems and equipment necessary for the satisfactory containment of contamination and protection of workers, the public and the environment.
51. Transfer of Facilities. The process of transferring programmatic and financial responsibility of land and/or facilities from one Program Office to another.
52. Utility. A system, or any of its components, that generates and/or distributes (via pipelines, wires, buses, or electromagnetic waves) a commodity or service to itself and/or to other facilities.
53. Utility Service. A service, such as the furnishing of electricity, natural gas, steam, water, and sewer service and the furnishing of appurtenant facilities and systems. Telecommunication services or the removal and disposal of garbage, rubbish, and trash are not included.

54. Value-added. A decision-making process that leads to an improvement in an operation or process, based on effectiveness, efficiency, cost-effectiveness, safety, etc.
  
55. Value Engineering. An organized effort, directed by a person trained in value engineering (VE) techniques, to analyze the functions of systems, equipment, facilities, services, and supplies to achieve the essential functions at the lowest life-cycle cost that is consistent with required performance, reliability, availability, quality, and safety. (Terms such as value analysis, value control, value improvement, value management, and functional analysis are synonymous).

CANCELED

## CONTRACTOR REQUIREMENTS DOCUMENT

1. The Contractor shall use a process for physical asset acquisition that is an integrated, systematic approach that shall ensure, but shall not be limited to, the following:
  - a. Use of a process tool, such as value engineering, to improve efficiency and cost-effectiveness when analyzing physical asset acquisition.
  - b. Specification of the appropriate state, regional, or national building codes to which physical assets shall be designed and constructed.
  - c. Consideration of maintainability, operability, disposition, life-cycle costs, and configuration integrity in designs and acquisitions.
  - d. A project management system based on effective management practices that is sufficiently flexible to allow for the size and complexity of the project. For line item projects, the following requirements are considered minimal:
    - (1) Prior to the commencement of conceptual design, include the following in Project Planning for approval:
      - (a) minimum technical functional requirements,
      - (b) proposed cost and schedule ranges,
      - (c) preliminary environmental strategy,
      - (d) identification of project technical and organizational interfaces, and
      - (e) integration with other projects and activities.
    - (2) Prior to the commencement of execution, include the following in project planning for approval:
      - (a) project objectives,
      - (b) scope, schedule, and cost baselines, including contingencies,
      - (c) life-cycle cost analysis,
      - (d) preliminary safety assessment,
      - (e) project controls, including baseline change control, change control thresholds, and statusing,
      - (f) verification of performance criteria through test and evaluation, and
      - (g) design alternatives.
    - (3) Prior to operation, a plan for turnover of a facility shall be prepared; verification of performance criteria through test and evaluation shall be accomplished; and operational readiness shall be verified.

2. The Contractor shall use a process for the operation and maintenance of physical assets that shall ensure, as a minimum, the following:
  - a. The identification, inventory, and periodic assessment of the condition of physical assets in the maintenance program.
  - b. The establishment of requirements, budgets, and a work management system to maintain physical assets in a condition suitable for their intended use.
  - c. The preventive, predictive, and corrective maintenance to ensure physical asset availability for planned use and/or proper disposition.
  - e. A configuration management process to ensure the integrity of physical assets and system.
  - f. The efficient and effective management and use of energy and utilities.
  - g. A method for the prioritization of infrastructure requirements.
  - h. The management of backlogs associated with maintenance, repair, and capital improvements.
  - i. A method to ensure that prior to the completion of mission activities (e.g., production, research, etc.) actions are implemented to place the facility, systems and materials in stable and known conditions and to ensure hazards are identified and known pending transfer or disposition. For facilities that have already completed mission activities and are awaiting transfer or disposition, ensure that actions are taken to eliminate or mitigate hazards and provide adequate protection to workers, the public and the environment. In both cases, actions shall be based on an assessment of the remaining hazards at the time when mission activities are completed, or prior to transfer or disposition for facilities that have already completed mission activities. These actions shall include but not be limited to:
    - (1) Identifying and characterizing hazardous and radioactive materials and wastes remaining in systems/facilities and providing for their stabilization (if necessary), adequate storage until they are removed from the facility, and (unless otherwise agreed to prior to facility transfer) removal.
    - (2) Assessment and adjustment (if necessary) of the facility authorization basis to ensure it continues to reflect conditions in the facility pending disposition.

- (3) Conducting surveillance and maintenance activities required to maintain the facility and remaining hazardous/radioactive materials and wastes in a stable and known condition pending facility disposition.
  - (4) Identifying and allocating resources needed to maintain stable and known conditions pending disposition.
3. The Contractor shall use a process for the disposition of physical assets that shall ensure, as a minimum, the following:
- a. Application, as appropriate, of guidelines contained or referenced in DOE-STD-1120-98, INTEGRATION OF ENVIRONMENT, SAFETY AND HEALTH INTO FACILITY DISPOSITION ACTIVITIES.
  - b. For execution of contaminated facility disposition, as a minimum the following apply:
    - (1) A method to ensure that deactivation, surveillance and maintenance, and decommissioning activities are appropriately planned, conducted, and documented in a manner consistent with the guiding principles and core functions of the Department's integrated safety management and facility disposition policies. The disposition process shall provide for:
      - (a) The collection of baseline data to support a physical, chemical, and radiological characterization, updated as necessary to reflect changes in facility conditions during the disposition process.
      - (b) Surveillance and maintenance activities that correspond with facility conditions, including changes resulting from disposition activities.
      - (c) A method for identifying, assessing, and evaluating alternatives for deactivating and/or decommissioning and for selecting and documenting a preferred alternative.
      - (d) An end-point process in deactivation and decommissioning planning that identifies specific facility end-points and activities needed to achieve those end-points.

- (e) A method for detailed engineering planning and for plan documentation to execute the preferred deactivation and/or decommissioning alternative.
  - (2) The use of Non-Time-Critical Removal Action as the approach for decommissioning, using the tailored process negotiated with the Environmental Protection Agency, with continued Defense Nuclear Facilities Safety Board oversight to the extent authorized by law.
  - (3) The development of a final report, or equivalent document, for each deactivation and/or decommissioning project. Where deactivation and decommissioning are conducted as a single, uninterrupted activity, only one final report, or equivalent, is required.
4. In the acquisition, operation, maintenance, leasing and disposition of physical assets, the Contractor shall ensure that all applicable Federal, state, and local laws, regulations, and negotiated agreements are followed, and that applicable safeguards and security as well as integrated safety management requirements and policies are followed.

CANCELLED