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7. Abstract

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309 BUILDING DEACTIVATION

MISSION ANALYSIS REPORT

March 30, 1995

WESTINGHOUSE HANFORD COMPANY
P. O. Box 1970
Richland, WA 99352

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1.0 INTRODUCTION

1.1 PURPOSE

This report presents the results of the 309 BUILDING (Plutonium Fuels Utilization Program) Deactivation Project mission analysis. Hanford systems engineering (SE) procedures call for a mission analysis. The mission analysis is an important first step in the SE process. The functions and requirements to successfully accomplish this mission, the selected alternatives and products will later be defined using the SE process.

1.2 BACKGROUND

The original 309 BUILDING mission was to provide an operating test reactor in the Hanford Works (HW) Plutonium Fuels Utilization Program whose purpose was to research and develop nuclear fuel technology. This test reactor was known as the Plutonium Recycle Test Reactor (PRTR). In 1962, the Plutonium Recycle Critical Facility (PRCF) was added to support PRTR operations as the location where reactivity values of fuel assemblies were checked.

In 1963, Fuel Element Rupture Test Facility (FERTF), hereafter called the Rupture Loop) operations began in one fringe channel of the PRTR. The FERTF itself was a pressurized, light-water-cooled loop within the main, heavy-water-cooled calandria. The FERTF was used as a pilot irradiation facility to test new fuel element designs and new operating regimes. Many of its tests involved pre-defecting fuel elements with pinhole breaks to study the stability of various pre-defected materials under irradiation.

Such FERTF tests continued under increasingly thermally hot conditions until a most serious (Type A) operating accident occurred on September 29, 1965 (fuel rod failure). After the subsequent cleanup, the PRTR resumed critical experiments and began what was known as the Batch Core Experiment. It experimented with augmenting the standard control rods with a "chemical shim" in the form of varied concentrations of boric acid dissolved in the heavy water moderator. This experiment ran for only about half of its planned duration before a flaw was discovered in the P-4 valve (the main valve in the primary coolant inlet system). The PRTR was shut down in order to replace the valve when in mid-1969 the U.S. Atomic Energy Commission (AEC) decided not to refuel the PRTR and to pursue breeder reactor technology instead.

During the years immediately following the PRTR layaway the PRCF continued to operate although its original mission soon gave way to housing experimental lattice testing for the design of various light-water-cooled reactors. Later, a commercial license obtained from the Nuclear Regulatory Commission (NRC) by Battelle Northwest Labs (BNWL) allowed the PRCF to experiment with commercial fuels from a variety of sources (this NRC license has since been closed out). In 1976 the PRCF was closed down due to its outdated technology. During the late 1980's, PRCF hardware and equipment were

removed, the area decontaminated, and portions of the area rendered inaccessible.

In 1975 the Interim Examination and Maintenance (IEM) Cell was built in the old maintenance and mockup (M&M) cell area. It is an exact "cold" replica of the operating cell in the Fast Flux Test Facility (FFTF) reactor and is still used to train and requalify operators and to check operating procedures.

In the late 1970's, the ground floor level inside the PRTR containment dome was emptied and converted into a "clean shop" (i.e., one using no radioactive materials and no sodium) to fabricate loops that would be used in the 324 and 337 Buildings to test sodium flow.

In 1986-87 a new space technology development program known as SP-100 was assigned to the 309 BUILDING. This program immediately undertook an extensive clean-out of the old PRTR facilities in the building. In 1991, the SP-100 program was placed on a 5-yr "hold", thus ceasing any further clean-out. The SP-100 program was terminated by DOE in November 1993, which has brought about the transition of the facility.

The 309 BUILDING, originally completed in 1960, has been expanded several times since then. The main building (process and service wings) is 80' X 100' with the adjacent reactor located below grade and covered by a 27" thick concrete slab at ground level and then by a welded, carbon steel cylindrical containment vessel 80' in diameter and 125' high (75' above grade). The remainder of the north-south running building originally housed shops, equipment rooms, offices, etc. In 1960, the M&M wing (61' X 100') was added west of the containment dome. A second addition, built in 1962-1963, east of the containment dome housed the PRCF. Building of the IEM Cell in 1975 added approximately 20' to the top of the M&M wing. Today the 309 BUILDING houses offices, engineering records, the FFTF IEM cell mockup and training facility, and a cement testing laboratory.

In August of 1993 the 309 Facility was declared excess by the U.S. Department of Energy (DOE).

1.3 PROJECT SCOPE

The overall scope of The 309 BUILDING Deactivation is defined to systematically shut down and secure the facility systems consistent with the programmatic, operational, and safety needs of the facility. This includes:

- Shutdown of utility systems which are no longer required
- Timely shutdown of facility safety and monitoring systems consistent with facility needs and safety documentation
- Characterization and cleanup or stabilization of radiologically controlled areas and hazardous materials areas.

Deactivation will be divided into three major phases:

- The first phase will be to secure building and office areas. The operating environments, selected HVAC systems, HVAC support and radiological monitoring/alarm systems, etc., can all be reduced to a minimum level consistent with the safety protection and environmental requirements. The following facility system will be shutdown during this phase:

  - Shutdown and secure containment supply fan.

  - Shutdown and secure containment and room 20 exhaust fans. Blank off (or damper) exhaust ducts as appropriate between the exhaust fan and the HEPA filter.

  - Shutdown and terminate corresponding electrical services.

  - Shutdown and secure emergency power and building uninterruptable power supply (UPS) systems.

  - Provide portable air sampling instruments when appropriate.

- The second phase will be to stabilize PRTR systems and areas. The following actions will be undertaken during this phase:

  - Remove smearable contamination and then apply fixative to SCA's.

  - Remove and dispose of hazardous waste such as portable lead shielding.

  - Remove and dispose of mixed or radioactive waste such as ion exchange columns.

- The third phase will be to secure and modify facility services. The following fluid systems, electrical systems, and fire protection systems will be shutdown during this phase:

  - Convert wet-piping sprinkler system to a dry-pipe fire protection system.

  - Disconnect fire suppression system in office area, if appropriate.

  - Drain, dry, and secure nonessential sanitary water system piping.

  - Drain, dry, and secure nonessential compressed air systems.

  - Drain and dry process water piping. Close off, as appropriate.

- Terminate all process and nonessential electrical services.
- Secure facility confined space areas to prevent entry.
- Secure nonessential HVAC systems, such as chillers.
- Remove batteries from emergency lights and UPS.

Systems and equipment required for surveillance and maintenance (S&M) will not be deactivated until final decontamination and decommissioning (D&D).

Following the shutdown of the PRTR systems and areas, the 309 BUILDING office area will be shutdown and the ten office area supply fans and the three independent heat pumps will be secured. This includes securing the steam to the 309 BUILDING and locking all exterior doors. All power to the PRTR systems and the office area will be terminated, excluding nominal area lighting and other safety support needs. At completion of deactivation, the facility will be unoccupied, locked and maintained with minimum entry requirements.

Specific turnover criteria have been developed and negotiated with the D&D organization which determines what needs to be done to deactivate the 309 BUILDING. This criteria is similar to the Hanford Surplus Facility Program Criteria (100 Area Projects generic acceptance criteria for D&D).

The 309 BUILDING Plant configuration shall be modified and controlled sufficiently to enable safety and regulatory compliance during deactivation. Records shall be established and archived for reactivating D&D essential systems and providing meaningful D&D characterization information.

Hazardous and radioactive materials shall be removed from the facility or stabilized sufficiently to ensure long-term safety and regulatory compliance, enable facility classification as non-occupied, and enable subsequent successful D&D.

Materials will be removed and/or stabilized sufficiently to ensure that the facility complies with DOE-N-5480.6, Hanford Site Radiological Control Manual, as applicable to a non-occupied facility. Materials shall also be removed where plant knowledge and expertise is necessary to ensure safe and compliant removal.

Final facility configuration shall be such that environmental protection can be maintained until D&D.

To achieve a non-occupied facility status, the following actions shall be performed:

- Ventilation and monitoring equipment shall be eliminated, consolidated, relocated, housed, operated, and/or maintained

such that facility entry frequency does not compromise the non-occupancy status.

- Fire protection systems shall be modified to a dry system to minimize system testing and maintenance and to reflect the non-occupied status.

- Electrical to the 309 BUILDING shall be reduced and isolated. The water supply services to the 309 BUILDING shall be removed. Utilities will be terminated at the classical junction. Sanitary sewer systems shall be capped at the floor level. Centralized services shall be utilized.

- The building steam system shall be deactivated, requiring building steam requirements to be eliminated.

1.4 MISSION STATEMENT

The purpose of the 309 BUILDING Deactivation Project is to establish a passively safe and environmentally secure configuration of the 309 BUILDING, and turnover the 309 BUILDING to D&D. The project removes, reduces, and/or stabilizes the major remaining radioactive sources and hazards within the 309 BUILDING and removes the hazardous chemicals in the facility. There will be no active systems or utilities within the process, laboratory, and office areas. During deactivation, all aspects of the safety envelop will be continually challenged, and appropriate portions maintained to ensure deactivation takes place in a safe and regulatory compliant manner. Stakeholders will be actively involved during deactivation.

2.0 MISSION ANALYSIS

2.1 309 BUILDING PROBLEM STATEMENT

Because the 309 BUILDING, a former reactor facility, is no longer needed because the cost is too high to maintain the current safety envelope, and because deactivation will reduce the operating costs; the DOE has ordered deactivation of the facility. Essentially, the problem is how to deactivate 309 BUILDING to a point where safe and compliant D&D operations can take place with acceptable risk and only minimum maintenance and surveillance is required to maintain the facility until D&D.

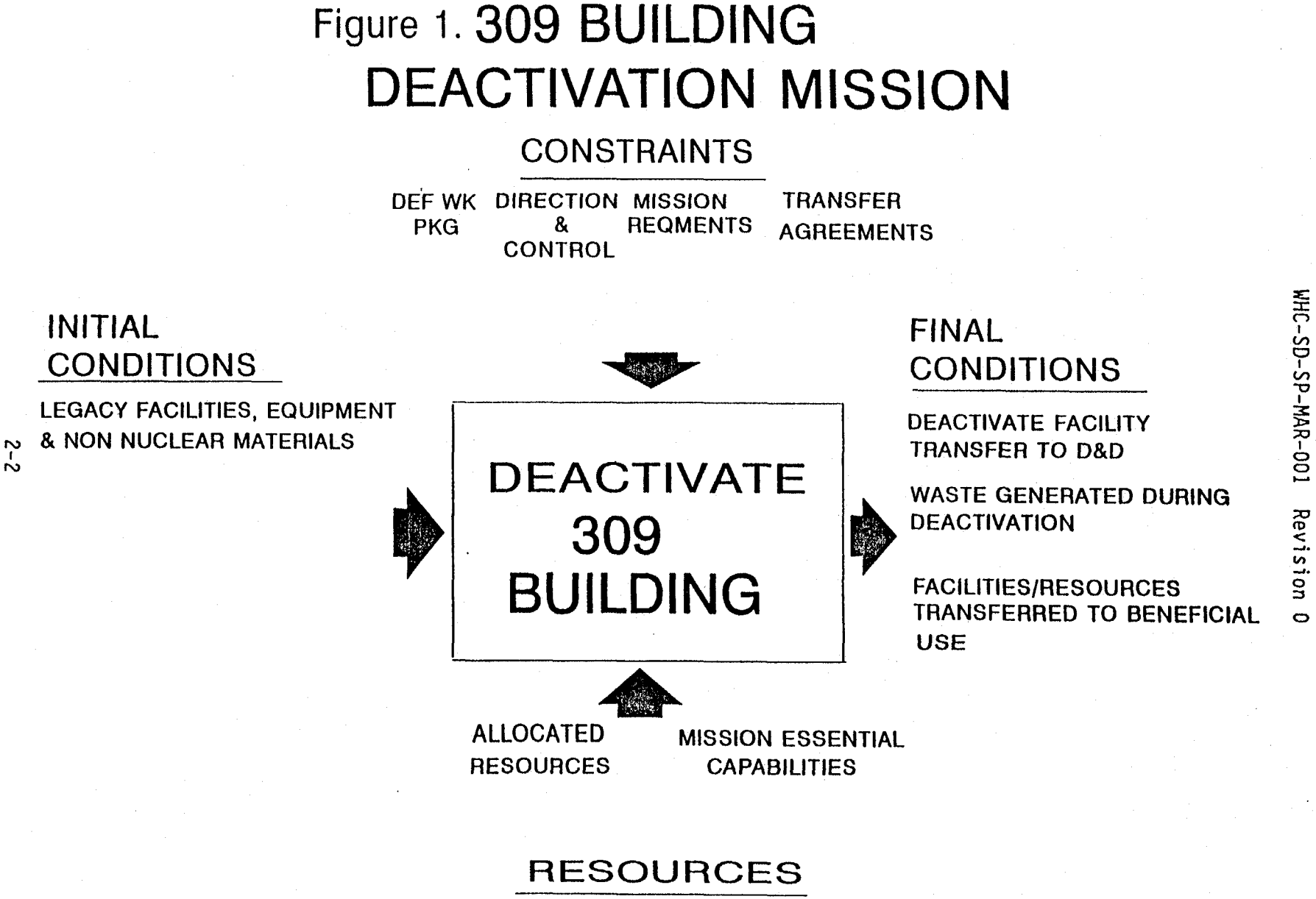
2.2 PROJECT OBJECTIVES

- Establish a passively safe and environmentally secure configuration of the facility with no active internal functions or equipment within confinement area, and retain that configuration until turnover to D&D.
- Achieve a total yearly cost target of less than $1 million/ year at turnover to D&D.
- Implement cost-effective, innovative approaches to ensure the required safety envelope is defined and maintained during deactivation.
- Achieve compliance with Environmental, Safety, and Health codes and standards during deactivation. Apply lessons learned from commercial deactivation experience.
- Involve stakeholders, as appropriate, in the development and execution of the 309 BUILDING Deactivation Project.
- Establish the 309 BUILDING Deactivation Project as a model for reactor and associated facility deactivations.

2.3 MISSION DEFINITION

In addition to the mission statement, the mission to deactivate 309 BUILDING can be further defined through an understanding of the initial conditions prior to deactivation, the final endpoint or conditions desired upon completion of the mission, the constraints under which the mission must be performed, and the resources that are available to enable the mission. The following paragraphs describe the initial and final conditions, the physical boundaries and programmatic interfaces, and the resources to achieve 309 BUILDING deactivation. A diagram of the initial conditions, final conditions, constraints and resources required to perform the 309 BUILDING Deactivation Mission are shown in Figure 1.

Figure 1. 309 BUILDING DEACTIVATION MISSION



2.3.1 INITIAL CONDITIONS

LEGACY FACILITIES, EQUIPMENT AND NON-NUCLEAR MATERIALS

The 309 BUILDING contains equipment and material remaining from approximately two decades of fuels research in the PRTR reactor and the PRCF along with training equipment for the FFTF reactor. This equipment and material includes process equipment and associated components, IEM Cell mock-up equipment, tools, fixtures, shop equipment, and office furniture. Equipment items are located in the IEM cell, shop areas, service basement, and office areas.

The 309 BUILDING contains several areas and structures that have previously been decontaminated and decommissioned or removed for burial. Since the PRTR activities were discontinued in 1969, some equipment excessed as part of 1986-87 SP-100 cleanup activities, including all of it located in the A-, B-, and C-Cells.

The major stabilization and decontamination efforts include the Plutonium Recycle Test Reactor (PRTR), fuel storage and transfer pits, Transfer Waste (TW) tanks and the Ion Exchange Vaults. Some possibilities for mixed-waste exist such as radioactive contamination of lead or asbestos. The Rupture Loop Annex contains approximately 24 lead bricks that could be mildly contaminated. The containment vessel contains asbestos that also could be contaminated. The containment dome, room 20, IX vaults, stack pit, and the TW tanks and piping are locations all believed to house some form of LLW. Some items in these areas cannot be sufficiently decontaminated for free-release, because of inaccessible internal surfaces and automatically become LLW.

Other regulated items continue to exist within the confines of the 309 BUILDING. The rupture loop and reactor ion exchange vaults, reactor calandria, fuel examination cell, fuel transfer pit, and moderator storage tank could contain TRU waste. Most of this waste is contaminated as a result of the fuel rod failure incident of September 1965, during which approximately 700 grams of fuel (UO_2-4wt% PuO_2) were ejected. After cleanup, approximately 350 grams (14-15 grams Pu) are still contained in the systems. TRU waste generation was minimized in 1976 with the shutdown of the PRCF operations.

In addition to stabilizing contaminated areas, equipment, components, records, and waste products, and will be dispositioned. All nonessential systems, such as, heating, ventilation, and air conditioning (HVAC), electrical, monitoring, and fluids, will be shutdown and drained or de-energized. This will allow securing of the process, laboratory, and office areas of the facility. After deactivation, the facility will be operated at a level commensurate with its surveillance needs while awaiting D&D.

In August of 1993, the 309 BUILDING was declared excess by the U. S. Department of Energy (DOE). As defined in WHC-CM-1-3, MRP 6.15

(Management Requirements and Procedures) the 309 Facility falls under the standby condition designation of Condition IV-Deactivated. A Field Work Proposal (FWP #9302002B R43) was prepared by Westinghouse Hanford Company (WHC) at the direction of DOE-RL (Richland Operations) which stated the need to transfer the 309 Facility from DOE-NE (Nuclear Energy) to DOE-EM (Office of Environmental Restoration and Waste Management).

As determined earlier this year, the 309 BUILDING is a High Ranking Facility under the Surplus Facility Inventory and Assessment (SFIA) Project guidelines. This was an assessment which ranked approximately 1,300 facilities, DOE wide, based on an evaluation of the hazards.

2.3.2 FINAL CONDITIONS

DEACTIVATED FACILITY(s)

The only deactivated facility will be the 309 BUILDING.

Specific turnover criteria was developed and negotiated with the D&D organization which will be used to determine what needs to be done to deactivate the 309 BUILDING. This criteria is similar to the Hanford Surplus Facility Program Criteria (100 Area Projects generic acceptance criteria for D&D). Deactivated facilities along with the D&D data package are transferred to the Environmental Restoration (ER) activity for D&D. In some cases, D&D operations may not begin for many years, making it essential that the facilities be placed in a minimum safe, stable and environmentally compliant condition that requires minimal maintenance and surveillance and results in an unoccupied facility status. Deactivated facilities shall not pose undue risk to future D&D activities.

The condition of the 309 BUILDING at turnover to D&D will be a deactivated Building that has been cleaned out. All equipment, components, and furniture will be removed. Hazardous and non-hazardous waste and materials will be either removed or stabilized. Electrical services will be greatly reduced. Dry fire system will be installed. HVAC water and sewer will be shutdown. The facility will be deactivated. Some fixed surface contamination will exist under paint and flooring materials.

A D&D data package that documents and describes what has been done to deactivate the 309 BUILDING and current conditions will be transferred to D&D at their takeover of the 309 BUILDING.

WASTES GENERATED DURING DEACTIVATION

Wastes that will be generated during deactivation of the 309 BUILDING will be spent ion exchange columns, liquid waste, TRU/fission products from cleaned up surface contamination, non-radioactive building waste, including asbestos, and contaminated

solutions, acids, soil and other material. This waste can be classified as low level solid (LLW {solid}), low level liquid (LLW {liquid}), low level mixed (LLMW), transuranic (TRU), hazardous, sanitary (LANDFILL), and sanitary (LANDFILL - ASBESTOS).

FACILITIES/RESOURCES TRANSFERRED TO BENEFICIAL USE

Equipment, furniture, and components will be redeployed to other programs or excessed. Personnel will be redeployed to other programs.

2.3.3 PHYSICAL BOUNDARIES

The physical boundaries of the 309 BUILDING are the exterior walls of the main building including all expansions. The included areas are: process and service wings, PRTR, M&M wing, PRCF, and IEM Cell.

2.3.4 EXTERNAL INTERFACES

Interfaces occur when information, material or energy are exchanged between two entities. The 309 BUILDING interfaces with the following areas including those agencies which impose requirements:

- Federal Agencies
- State and Local Governments
- Confederated Tribes
- DOE Headquarters and Field Office
- DOE Laboratories
- Other Hanford Programs and Projects
  - Solid Waste
  - Liquid Effluent
  - PFP Transition Project
  - Site Environmental Monitoring
  - Site Infrastructure
- D&D Contractor
- Stakeholders

2.3.5 CONSTRAINTS

DEFINED WORK PACKAGES

Defined work packages at this level really constitute the technical baseline for the current fiscal year. They define the intended work scope in broad terms, generally at a program level.

DIRECTION AND CONTROL

Direction and control is provided from the Manage function as described in WHC-EP-0722 "Systems Engineering Functions and Requirements for the Hanford Cleanup Mission: First Issue". Direction is generally provided at a program level. The Manage function must integrate all program and project efforts and make site level decisions to achieve the best overall results at the site level.

MISSION REQUIREMENTS

Mission requirements are limits and performance criteria on system design solutions imposed from authority outside the cleanup mission. On a broad level, mission requirements consist of compliance with the following:

- Mission constraints that are self imposed upon the cleanup mission are as follows:

  - Design solutions must inherently improve the safety posture of the site with respect to subsequent operations.

  - Only cost effective design solutions will be considered.

  - Stakeholder interests must be included in alternative definition and selection.

  - Successful alternatives must be capable of resulting in, or contributing to, the rapid progress needed to sustain mission momentum and support.

  - The cleanup work must not adversely affect other ongoing or project Hanford Site missions.

- Public Law (PL); these are federal legislative statutory laws that are generated by a specific session of Congress. The National Defense Authorization Report in connection with the permanent closure of DOE Defense Nuclear Facilities is an example of one applicable PL.

- United States Code (USC); these are laws of a general and permanent nature under arrangement of official code of laws of the United States. Examples include: Clean Water Act; National Environmental Policy Act; Resource Conservation and Recover Act of 1976; Comprehensive Environmental Response, Compensation, and Liability Act of 1980; and the Nuclear Waste Policy Act.

- Federal Register (FR); these include, but are not limited to, proposed and final federal agency regulations, policies, documents required to be published by an act of Congress and other federal agency documents of public interest. The Final Environmental Impact Statement for the Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes, Hanford Site, Richland, Washington: Decision of Records is an example of a FR document.

- Code of Federal Regulations (CFR); these are a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. Examples include: Packaging and Transportation of Radioactive Material; Occupational Safety and Health Administration; Identification and Listing of Hazardous Waste; Standards Applicable to Generators of Hazardous Waste; and Shippers-General Requirements for Shipments and Packaging.

- Hanford Federal Facility Agreement and Consent Order (89-10, Rev. 1); this is the agreement between DOE, EPA, and the Washington State Department of Ecology and is more commonly known as the Tri-Party Agreement. The Tri-Party Agreement identifies milestones that quantify actions toward Hanford Site compliance with the Resource Conservation and Recovery Act of 1976, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, and the Washington State Hazardous Waste Management Act.

- Washington Administrative Code (WAC); these are a codification of general and permanent rules published in the Washington State Register by the agencies of the State of Washington. Examples include: Dangerous Waste Regulations; Washington Ambient Air Quality Standards and Emission Limits for Radionuclides; Washington Standard for Protection Against Radiation; and Transportation of Hazardous Materials.

- Revised Code of Washington (RCW); comprises all laws of a general and permanent nature under arrangement of official code of laws of the State of Washington. Examples include: Washington State Environmental Policy Act; Washington

Radioactive Waste Act; Washington Industrial Safety and Health Act; and Washington Clean Air Act.

- Executive Order (EO); these are orders or regulations issued by the President, or administrative authority, that can have the effect of law if published in the Federal Register. Responses to Environmental Standards (Aug. 14, 1981; 46 FR 42237) and Superfund Implementation (Feb. 23, 1987; 52 FR 2923) are examples of EOs.

- Secretary of Energy Notices (SEN); these convey direction on processes and procedures which control operations, design, procurements, etc.. SEN-35-91, Nuclear Safety Policy is an example of a SEN.

- U.S. Department of Energy Orders; these are long-lasting directives stating policy or establishing standards of operation. Examples of DOE Orders include: Comprehensive Environmental Response, Compensation, and Liability Act Requirements; Radiation Protection of the Public and the Environment; National Environmental Policy Act Compliance Program; Environmental Protection, Safety and Health Protection Standards; and Radiation Protection for Occupational Workers.

- U.S. Department of Energy Notices; these are one-time or short-term (less than 1 year) instructions or information. Notices are used to provide immediate dissemination until the information can be incorporated into an order.

- Codes and Standards; these are national or international consensus documents written and critiqued by technical specialists versed in the field of interest. Usually these standards are generated by professional societies.

- U.S. Department of Energy Environmental Management Policy; these are guidelines formulated by the Assistant Secretary for Environmental Management or by the Secretary of Energy.

- Westinghouse Hanford Company Controlled Manuals; these are internal company procedures that are intended to encompass all relevant requirements associated with activities covered in the procedure and describe how the activities need to be performed to ensure compliance. Examples include WHC-CM-4-3, Industrial Safety Manual; etc. . . .

TRANSFER AGREEMENT

Transfer agreements provide the authority to make transfers of materials between various programs and projects on-site, or off-site. Authority for the transfer comes from the Manage function

as described in WHC-EP-0722 "Systems Engineering Functions and Requirements for the Hanford Cleanup Mission: First Issue".

2.3.5 RESOURCES

ALLOCATED RESOURCES

Allocated resources primarily includes the budget necessary to carry out the current fiscal technical baseline defined by the Manage function as described in WHC-EP-0722 "Systems Engineering Functions and Requirements for the Hanford Cleanup Mission: First Issue".

MISSION ESSENTIAL CAPABILITIES

Mission essential capabilities include the expertise, facilities, equipment, infrastructure, supplies, information, services and technology to perform the 309 BUILDING Deactivation Project. Typically, these are provided by the Acquire Mission Essential Capabilities function as described in WHC-EP-0722 "Systems Engineering Functions and Requirements for the Hanford Cleanup Mission: First Issue".

2.4 MISSION EVALUATION

2.4.1 MISSION RISK AREAS/FACTORS

- Sufficient budget will be available to support the planned work for each fiscal year of deactivation. Insufficient budget will negatively impact the schedule for completion of deactivation activities.
- 309 BUILDING will be able to transfer the necessary hazardous materials to other programs to meet the deactivation project turnover criteria. Inability to remove these materials will delay completion of deactivation.
- Public involvement in the deactivation decisions can affect the scope of work and thus impact budget needs and effect the schedule for completion of deactivation.
- Changing requirements can effect the scope of work and thus impact budget needs and the schedule for completion of deactivation.
- Mission essential capabilities are not provided in a timely manner and to the degree necessary to ensure successful deactivation.

- Environmental impacts beyond those anticipated as a result of deactivation.
- Risk to workers beyond those anticipated as a result of deactivation.
- Timely decisions by the Manage function and other interfacing organizations to ensure minimal impact to deactivation.
- Ability to move the hazardous waste, and waste out of the 309 BUILDING due to NEPA issues, or no policy agreement on the disposition of the hazardous waste and waste.

2.4.2 MEASURES OF EFFECTIVENESS

- Deactivation of 309 BUILDING completed, successful, and approved with the 309 BUILDING turned over to D&D.
- 309 BUILDING D&D data package completed and accepted by D&D.

3.0 REFERENCES

9452199; March 29, 1994; Hanford Site Systems Engineering Management Plan; Westinghouse Hanford Company.

9453650; May 25, 1994; Hanford Site Systems Engineering Manual; Westinghouse Hanford Company.

WHC-EP-0722 Rev. 0; January 1994; Systems Engineering Functions and Requirements for the Hanford Cleanup Mission: First Issue; Westinghouse Hanford Company.

WHC-SD-SP-SSP-001 Rev. 1; April 28, 1995; 309 BUILDING Transition Plan; Westinghouse Hanford Company.

WHC-SD-SP-DB-002; Rev. 0; April 19, 1993; D&D Facility Acceptance Criteria for 309 BUILDING.

4.0 GLOSSARY

This section contains the definition of words and phrases found in the text of this document.

active	This term describes the operational status of a process or facility. When a facility is active, it is currently operating or scheduled for operation.
deactivation	The transition of facilities to a state where the buildings, chemical processing systems and infrastructure are placed in a long term, low cost, minimum surveillance and maintenance, safe condition and are ready for D&D. A facility enters deactivation when the need for a facility to fulfill its current mission does not exist.
D&D	D&D is decontamination and decommissioning and is performed when no other missions are identified. The objective of D&D is to place the site in a long-term radiologically safe condition. Dismantling and decontamination, mothball for later dismantlement and entombment are all D&D options.
ER	ER is Environmental Restoration. It is an activity contracted to the ER Contractor. They will perform D&D and demolition of facilities.
infrastructure (facility)	Facility infrastructure is the physical portions of the facility which are implicit to the function of the activities in the structure, such as the heating ventilation, electricity etc.
infrastructure (site)	Includes all utility, support and other service systems that interfere with a particular facility complex. Within a facility complex ancillary facilities and structures provide infrastructure support to the main facility.
mission	A mission is a narrative description of the ultimate goals and highest purpose for an organizational unit, facility or project.
stabilize	This is the process of treating (chemically or physically) material to make it less hazardous.

standby	This term describes the operational status of a process or facility. A facility in standby is not currently operating, but it is operable after appropriate startup checks and testing have been performed. In some cases appropriate repairs and upgrades may be necessary.
turnover	Turnover is the transaction which transfers responsibility from the current organizational unit (Transition Projects) to the ER contractor.