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308 BLDG DEACTIVATION FUNCTION ANALYSIS REPORT

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WHC-SD-FL-FAR-001, Revision 0

**308 BUILDING
DEACTIVATION
FUNCTION ANALYSIS REPORT**

September 1995

Prepared for:

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308 BUILDING DEACTIVATION FUNCTION ANALYSIS REPORT

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1.0 INTRODUCTION

1.1 Objective

This report is the product of one of several steps in the system engineering approach and defines the content and interrelationships of the Hanford Site cleanup effort for the 308 Building. A summary of the steps are listed below:

- Mission Analysis: This step established the problem to be solved and an acceptable end condition. It provides the basis for developing a system to resolve the problem. The mission is basically the purpose of the system which is to transform the initial conditions to final conditions. The product from this step is WHC-SD-FL-FAR-001 308 Building Deactivation Mission analysis Report.
- Functional Analysis: The functions that the 308 Building must perform are derived in this step. These functions include technical functions that a system must perform, other functions that must be carried out in support of the technical functions (i.e., organizational/management functions), interdependencies among the functions, and functional performance criteria. The functional analysis process produces a functional hierarchy with detailed descriptions of all functions and interfaces.
- Requirement Identification: Statutory, regulatory, technical, social, and economic requirements with which a system must comply are identified in this step. These requirements fall into two classes: mission-driven requirements and externally imposed requirements. This step produces a baseline list including requirement sources and their descriptions.
- Requirements Allocation to System Functions: The identified requirements are allocated to the system functions producing a requirements baseline for the systems engineering process.
- Innovation of Alternative Solutions: Based on the products of the systems engineering steps described above different structural, physical and organizational configurations that provide system solutions are developed.

This report contains the products from the second step described above. The sections in this report are: 2.0 Functional Analysis, 3.0 Functional Interfaces and Dependencies, and 4.0 Issues. Addenda provide all of the back up information relating to the 308 Building. The addenda are reports generated from RDD-100, a computer program by Ascent Logic.

1.2 Mission Statement

The 308 Building Mission Statement was developed during mission analysis and is reported in WHC-SD-FL-MAR-001 308 Building Deactivation Mission Analysis Report. It is repeated below with minor revision indicated in *italics*:

"The purpose of the 308 BUILDING Deactivation Project is to establish a passively safe and environmentally secure configuration of the 308 Building, and turn over the 308 BUILDING to Decontamination and Decommissioning (D&D). The project removed, reduces, and/or stabilizes the major remaining radioactive sources within the 308 PROCESS BUILDING and removes the hazardous chemicals in the facility. There will be no active systems or utilities within the process buildings and office wing. *However, minimal electrical power is needed for lighting and a dry pipe fire suppression system.* During deactivation, all aspects of the safety envelope 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."

2.0 308 BUILDING FUNCTIONS

The ultimate function of the 308 BUILDING system is to perform operations that satisfy the mission need identified in WHC-SD-FL-MAR-001 308 BUILDING Deactivation Mission Analysis Report repeated below:

"Because the 308 BUILDING, a plutonium facility, is located near the city of Richland, Washington, because the facility is no longer needed for fuel production, because the cost is high to maintain the safety envelope, and because deactivation reduces the operating cost; the DOE has ordered deactivation of the facility. Essentially, the problem is how to deactivate 308 BUILDING to a point where safe and compliant D&D operations can take place with acceptable risk and where only minimum maintenance and surveillance is required to maintain the facility until D&D."

2.1 Relationship to Hanford Site Functional Hierarchy

The 308 BUILDING mission statement developed during the 308 BUILDING mission analysis is consistent with the top level (0 Cleanup Hanford) and the first, second and third level functions (4.0 Remedy Unsafe and Unacceptable Conditions, 4.1 Deactivate Facilities and 4.1.1 Deactivate Facilities with Special Nuclear Materials and Nuclear Materials (Type I Facility)) first identified in WHC-EP-0722 "Systems Engineering Functions and Requirements for the Hanford Cleanup Mission: First Issue" of January 1994 and later revised and maintained as the Hanford Site Integrated Technical Baseline (HSITB). This function hierarchy is shown in Figure 1. The 308 BUILDING mission begins with function 4.1.1.6 Deactivate the 308 BUILDING.

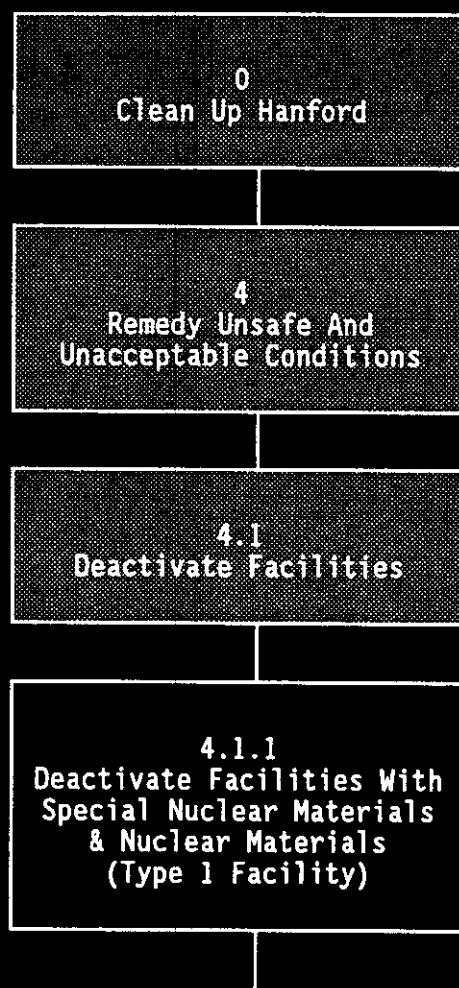


Figure 1. Hanford Site Function Hierarchy

2.2 Function Hierarchy

The detailed 308 BUILDING functional hierarchy is presented in Addendum 1. It begins at level four (4.1.1.5 Deactivate 308 BUILDING) and continues to level six and in some places level seven.

2.3 Function Definition Table

The definitions of the 308 BUILDING functions in the functional hierarchy in Addendum 1 are presented in Addendum 2.

3.0 FUNCTIONAL INTERFACES AND DEPENDENCIES

Another way to describe functions is using functional interface diagrams. They establish the dependencies between the functions defined in the functional hierarchy. By conceptualizing each function as a process where inputs, resources, and controls are transformed into outputs, the relationships between functions can be identified. The outputs of one function become the inputs of other functions. Function inputs (initial-state condition) enter from the left. Outputs (end-state condition) exit to the right. Controls enter from the top, and resources (sometimes called mechanisms) enter from the bottom. Inputs, outputs, controls and resources are all called interfaces and/or products and are defined for each system function.

3.1 IDEF Diagrams

The 308 BUILDING interface diagrams are provided in the form of ICOM Definition Method, ICOM is INPUT, Controls, Output, Mechanisms (IDEF) diagrams produced from the RDD system model and are found in Addendum 3.

3.2 Interface Definitions

The 308 BUILDING interface definitions, presented in Addendum 4, provides descriptions of all the interfaces found on the IDEF diagrams in Addendum 3. Inputs, outputs, controls and resources are all considered interfaces.

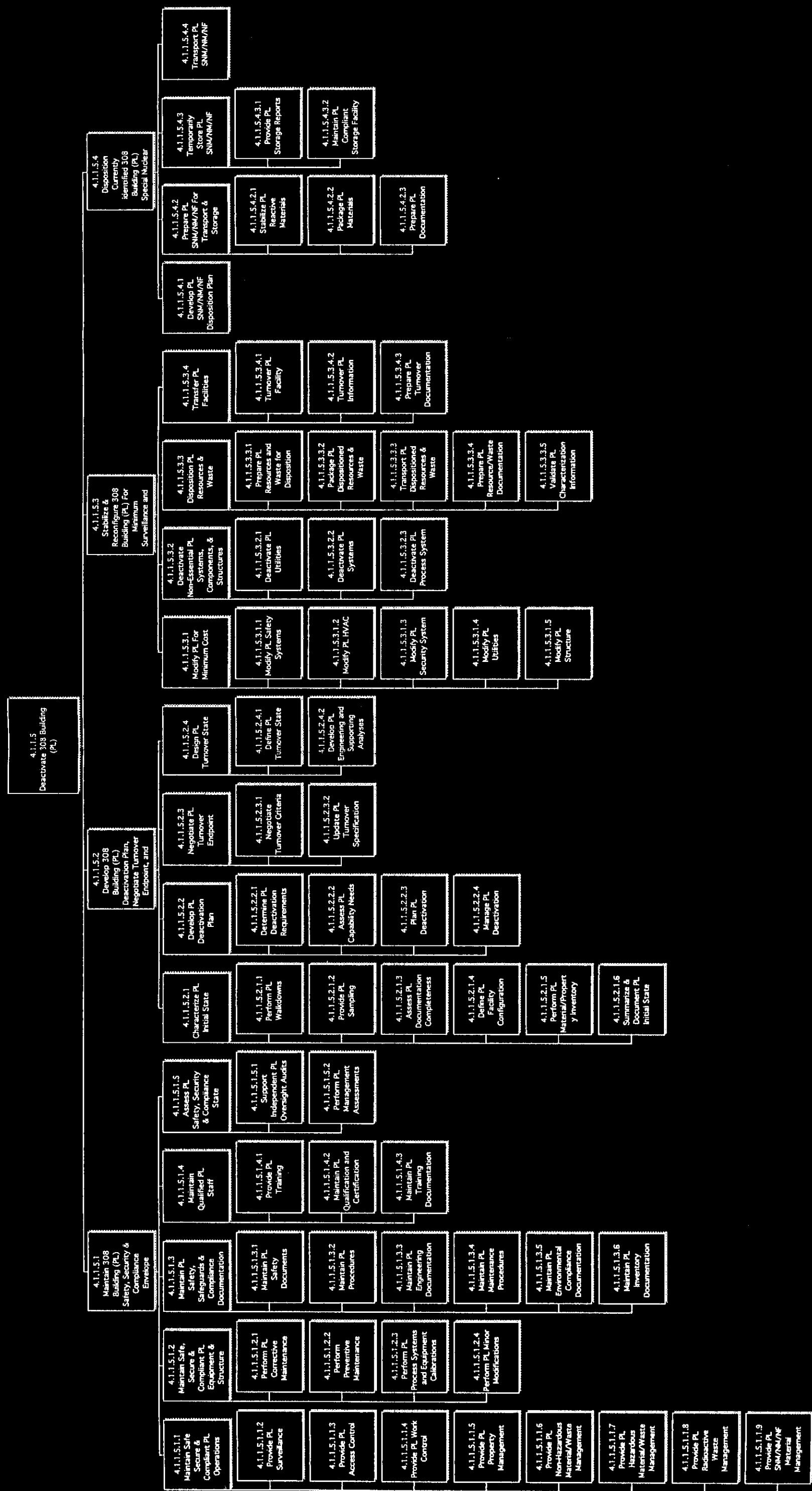
4.0 ISSUES

Listed below are issues that were identified in the 308 BUILDING Functional Analysis workshops. These issues will be further refined and clarified in order to effectively attach them to the functions and interfaces contained in the systems model in RDD-100.

- For the purposes of this analysis, the amount of current and future funding is assumed to be adequate to carry out the functions identified in this report. As the system alternatives and design are further developed, they will be compared to the MYPP and discrepancies will be reconciled.
- The ability to transfer materials in accordance with the 308 BUILDING deactivation project turnover criteria is assumed to be possible. Inability to remove these materials as planned will delay completion of deactivation.

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ADDENDUM 1 - FUNCTIONAL HIERARCHY



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ADDENDUM 2 - FUNCTION DEFINITIONS

Function	Definitions
4.1.1.5	Deactivate 308 BUILDING (PL)
4.1.1.5.1	<p>Maintain 308 BUILDING (PL) Safety, Security, & Compliance Envelope</p> <p><i>Maintains the 308 BUILDING (PL) structure, qualified staff, safe and compliant equipment, documentation and provides assessment of safety and compliance states. Provides for safe and compliant operation in accordance with governing safety codes and regulations.</i></p>
4.1.1.5.1.1	<p>Maintain Safe, Secure, & Compliant PL Operations</p> <p><i>Performs necessary surveillance; access control; property, material, and waste management to maintain the 308 BUILDING (PL) in compliance with governing requirements while the facility is being deactivated.</i></p>
4.1.1.5.1.1.2	<p>Provide PL Surveillance</p> <p><i>Provides surveillance of the facility operations and operating systems, develop acutely unsafe condition action plans, perform OSR surveillance procedures, environmental monitoring, RCRA tracking, and surveillance of safety analysis compliance.</i></p>
4.1.1.5.1.1.3	<p>Provide PL Access Control</p> <p><i>Provides access control to and internal to the facility for safeguards and security, safety, and radiological purposes.</i></p>
4.1.1.5.1.1.4	<p>Provide PL Work Control</p> <p><i>Provides a job control system for the facility activities.</i></p>
4.1.1.5.1.1.5	<p>Provide PL Property Management</p> <p><i>Provides property management for the facility in accordance with DOE orders and WHC procedures.</i></p>
4.1.1.5.1.1.6	<p>Provide PL Non-Hazardous Material/Waste Management</p> <p><i>Provides containment, control, and documentation of non-hazardous material and waste in accordance with safe and applicable standards.</i></p>
4.1.1.5.1.1.7	<p>Provide PL Hazardous Material/Waste Management</p> <p><i>Provides containment, control, and documentation of hazardous materials and wastes in conformance with safety requirements and all applicable hazardous material/wastes codes and regulations.</i></p>
4.1.1.5.1.1.8	<p>Provide Radioactive Waste Management</p> <p><i>Provides containment, control, and documentation of radioactive material and waste in accordance with safety requirements and all applicable codes and regulations.</i></p>

Function	Definitions
4.1.1.5.1.1.9	<p>Provide PL SNM/NM/NF Material <i>Provides all special SNM/NM/NF management operations in accordance with applicable codes and regulations including proper surveillance and security.</i></p>
4.1.1.5.1.2	<p>Maintain Safe, Secure, and Compliant PL Equipment & Structure <i>Maintains the facility systems and infrastructure in the operational condition dictated by approved safety and compliance documentation (includes environmental regulations).</i></p>
4.1.1.5.1.2.1	<p>Perform PL Corrective Maintenance <i>All maintenance that brings systems and equipment back to their operational states after failure.</i></p>
4.1.1.5.1.2.2	<p>Perform Preventive Maintenance <i>Preventive maintenance activities to minimize all unplanned events and premature equipment failures.</i></p>
4.1.1.5.1.2.3	<p>Perform PL Process Systems and Equipment Calibrations <i>Performs facility equipment, instrumentation, and process system calibrations to ensure accuracy.</i></p>
4.1.1.5.1.2.4	<p>Perform PL Minor Modifications <i>Performs minor modifications to facility systems or structure to ensure safe and compliant operations during the facility deactivation process.</i></p>
4.1.1.5.1.3	<p>Maintain PL Safety, Safeguards, & Compliance Documentation <i>Maintains all required facility safety, safeguards, compliance, engineering, inventory, and operating documentation during facility deactivation.</i></p>
4.1.1.5.1.3.1	<p>Maintain PL Safety Documents <i>Maintains documentation necessary to ensure safe deactivation activities. This includes ISBs, CSERs, etc.</i></p>
4.1.1.5.1.3.2	<p>Maintain PL Procedures <i>Maintains procedures for safety, safeguards, and security activities.</i></p>
4.1.1.5.1.3.3	<p>Maintain PL Engineering Documentation <i>Maintains configuration drawings and associated engineering documentation required to operate and maintain the facility in a safe and compliant status.</i></p>
4.1.1.5.1.3.4	<p>Maintain PL Maintenance Procedures <i>Maintains maintenance procedure documentation necessary for safe, efficient, and compliant operations.</i></p>

Function	Definitions
4.1.1.5.1.3.5	<p>Maintain PL Environmental Compliance Documentation <i>Maintains appropriate regulatory files and other related environmental documentation to assure and prove environmental compliance.</i></p>
4.1.1.5.1.3.6	<p>Maintain PL Inventory Documentation <i>Maintains nuclear materials documentation in compliance with DOE orders.</i></p>
4.1.1.5.1.4	<p>Maintain Qualified PL Staff <i>Provides facility specific training, testing, and training records maintenance to ensure facility staff remain trained, qualified, and certified (as required) throughout the facility deactivation process</i></p>
4.1.1.5.1.4.1	<p>Provide PL Training <i>Provides all training related to the activities necessary to deactivate the facilities and ensure they remain in a safe and compliant condition.</i></p>
4.1.1.5.1.4.2	<p>Maintain PL Qualification and Certification <i>Provides periodic personnel skills check, assessment, and testing required to maintain necessary qualifications and certifications.</i></p>
4.1.1.5.1.4.3	<p>Maintain PL Training Documentation <i>Maintains applicable worker training documentation. Documentation includes worker safety and competency qualification and certification.</i></p>
4.1.1.5.1.5	<p>Assess PL Safety, Security, & Compliance State <i>Performs/responds to oversight assessments and perform appropriate self assessments of the facility deactivation activities to evaluate the facility and operations safety and compliance status.</i></p>
4.1.1.5.1.5.1	<p>Support PL Independent Oversight Audits <i>Performs and responds to independent oversight audits.</i></p>
4.1.1.5.1.5.2	<p>Perform PL Management Assessments <i>Performs self assessments of facility operations to ensure that safety, security, and compliance are maintained.</i></p>

Function	Definitions
4.1.1.5.2	<p>Develop 308 BUILDING (PL) Deactivation Plan, Negotiate Turnover Endpoint, and Provide Facility Specific Engineering</p> <p><i>Assesses the current state of the 308 BUILDING (PL), identify and/or negotiate equipment disposition requirements, develop plans to deactivate facility, and negotiate and administratively maintain the desired facility turnover endpoint specifications. Establish and maintain a long-term archive of facility information. Provides necessary facility-specific engineering.</i></p>
4.1.1.5.2.1	<p>Characterize PL Initial State</p> <p><i>Identifies the current state of the facility infrastructure, process systems, and other facility systems, facility contents, equipment, instrumentation, and utilities.</i></p>
4.1.1.5.2.1.1	<p>Perform PL Walkdowns</p> <p><i>Performs walkdowns to compare actual facility state with available documentation.</i></p>
4.1.1.5.2.1.2	<p>Provide PL Sampling</p> <p><i>Obtains samples to characterize contamination and verify contamination levels, and to assist with SNN/NM/NF inventory verification.</i></p>
4.1.1.5.2.1.3	<p>Assess PL Documentation Completeness</p> <p><i>Assesses existing documentation for completeness and verifies with walkdowns, sampling, and other observations.</i></p>
4.1.1.5.2.1.4	<p>Define PL Facility Configuration</p> <p><i>Reviews facility drawings packages to determine accuracy and develop additional configuration control documents as required to document actual configuration of facility infrastructure, utilities, process systems, equipment, and instrumentation.</i></p>
4.1.1.5.2.1.5	<p>Perform PL Material/Property Inventory</p> <p><i>Performs inventory of all property and materials.</i></p>
4.1.1.5.2.1.6	<p>Summarize and Document PL Initial State</p> <p><i>Develops and provides a documentation summary of matrix that clearly and completely defines facility state.</i></p>
4.1.1.5.2.2	<p>Develop PL Deactivation Plan</p> <p><i>Develops strategies to best implement deactivation requirements, plans the facility deactivation, and identifies and/or negotiates facility equipment disposition requirements.</i></p>

Function	Definitions
4.1.1.5.2.2.1	<p>Determine PL Deactivation Requirements <i>Determines and documents all facility specific administrative, safety, environmental, regulatory, DOE orders, codes, standards, and other requirements.</i></p>
4.1.1.5.2.2.2	<p>Assess PL Capability Needs <i>Assesses personnel, material, equipment, facility, and technology needs necessary to support facility deactivation activities.</i></p>
4.1.1.5.2.2.3	<p>Plan PL Deactivation <i>Develops deactivation strategy, plans, and schedules.</i></p>
4.1.1.5.2.3	<p>Negotiate PL Turnover Endpoint <i>Negotiates and maintains the desired facility turnover endpoint criteria.</i></p>
4.1.1.5.2.3.1	<p>Negotiate PL Turnover Criteria <i>Negotiates turnover criteria with D&D or the transition of resources to beneficial uses organization.</i></p>
4.1.1.5.2.3.2	<p>Update PL Turnover Specification <i>Maintains the negotiated facility deactivation turnover specification.</i></p>
4.1.1.5.2.4	<p>Design PL Turnover State <i>Specifies turnover facility, equipment, and material status; develops facility deactivation turnover specification; develops deactivation engineering documentation and other supporting analyses.</i></p>
4.1.1.5.2.4.1	<p>Define PL Turnover State <i>Defines configuration specifics and develops negotiated facility deactivation turnover specification.</i></p>
4.1.1.5.2.4.2	<p>Develop PL Engineering and Supporting Analyses <i>Provides engineering and supporting analyses to support engineered deactivation package development. Examples include safety analyses, transportation analyses, and development of NEPA documentation.</i></p>
4.1.1.5.3	<p>Stabilize & Reconfigure 308 BUILDING (PL) for Minimum Surveillance (and Maintenance) <i>Deactivates nonessential systems, system components, and physical structures, and takes other actions as required to minimize environmental, public, and personnel hazards. Takes these actions consistent with minimizing continuing facility costs.</i></p>

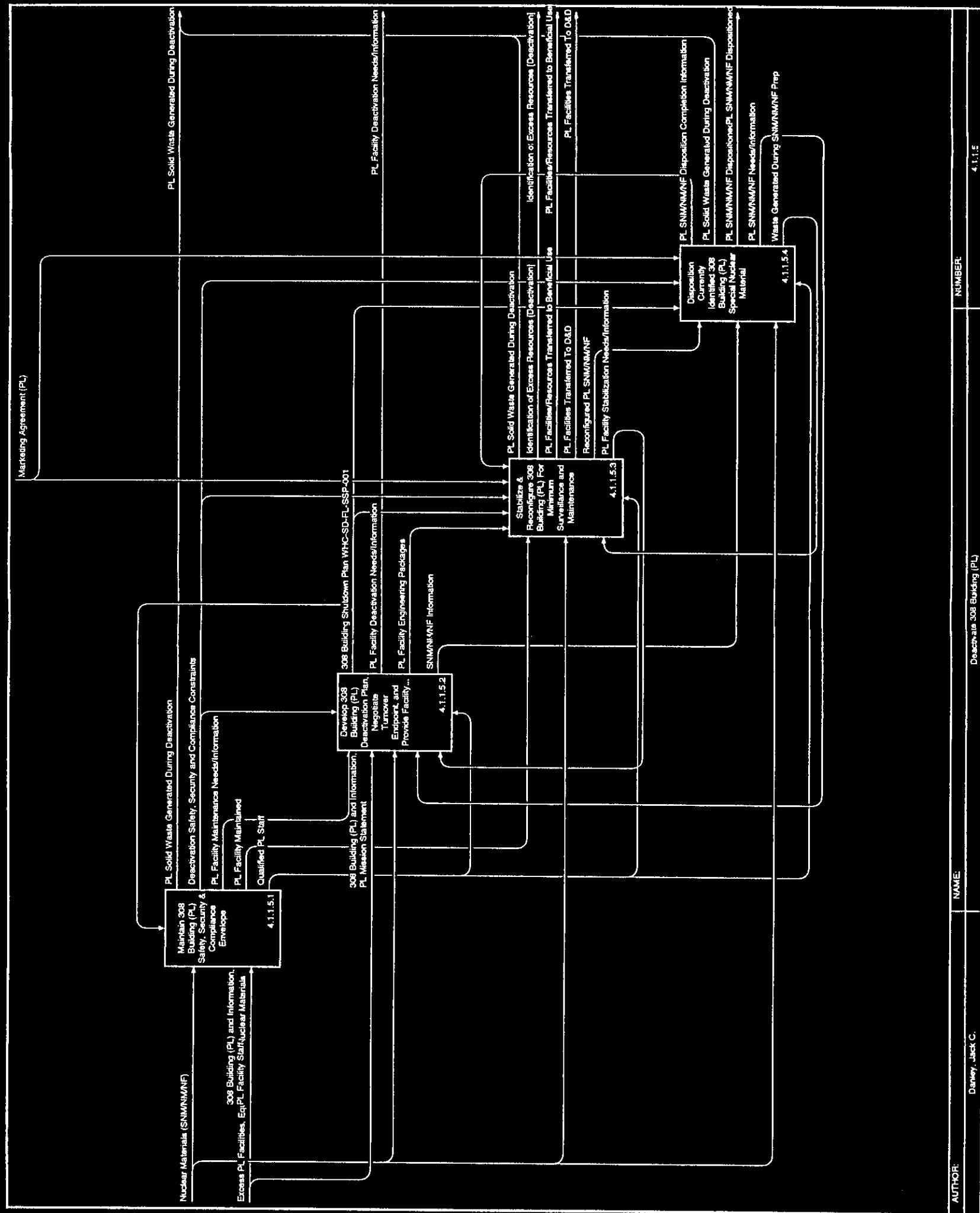
Function	Definitions
4.1.1.5.3.1	<p>Modify PL for Minimum Cost <i>Reconfigures plant systems and structure to minimize cost of maintenance and operation during deactivation phase and while waiting for D&D while retaining minimum acceptable compliance with safety and environmental requirements.</i></p>
4.1.1.5.3.1.1	<p>Modify PL Safety Systems <i>Makes any appropriate modifications to safety systems such as elimination or conversion (wet to dry) of fire systems.</i></p>
4.1.1.5.3.1.2	<p>Modify PL HVAC <i>Modifies HVAC for minimum acceptable heating, ventilation, and radiological containment requirements.</i></p>
4.1.1.5.3.1.3	<p>Modify PL Security System <i>Reconfigures security systems consistent with SNM/NM/NF inventory and security requirements.</i></p>
4.1.1.5.3.1.4	<p>Modify PL Utilities <i>Modifies or downsizes utility systems to satisfy reduced needs.</i></p>
4.1.1.5.3.1.5	<p>Modify PL Structure <i>Modifies structural aspects if savings can be obtained (e.g., adding a firewall rather than maintaining a fire suppression system).</i></p>
4.1.1.5.3.2	<p>Deactivate Non-Essential PL Systems, Components, and Structures <i>Deactivates non-essential systems, system components, and physical structures while maintaining safety and environmental compliance.</i></p>
4.1.1.5.3.2.1	<p>Deactivate PL Utilities <i>Deactivates water, sewer, electrical, HLAN, steam, telephone, power, fire system as appropriate to still maintain minimum safety and environmental compliance.</i></p>
4.1.1.5.3.2.2	<p>Deactivate PL Systems <i>Deactivates facility systems to minimize operating and maintenance costs and still maintain minimum safety and environmental compliance.</i></p>
4.1.1.5.3.2.3	<p>Deactivate PL Process System <i>Drains, flushes, removes, etc., process systems in accordance with negotiated turnover specifications.</i></p>
4.1.1.5.3.3	<p>Disposition PL Resources & Waste <i>Accumulates, packages, and dispositions resources and waste for the PL facilities.</i></p>

Function	Definitions
4.1.1.5.3.3.1	Prepare PL Resources and Waste for Disposition <i>Accumulates, drains, collects, and dispositions equipment, consumables, etc., and waste or resources for disposal or reuse.</i>
4.1.1.5.3.3.2	Package PL Dispositioned Resources & Waste <i>Packages resources and waste for disposal or reuse.</i>
4.1.1.5.3.3.3	Transport PL Dispositioned Resources & Waste <i>Transports resources and waste to disposal or reallocation sites.</i>
4.1.1.5.3.3.4	Prepare PL Resource/Waste Documentation <i>Prepares any documentation required for disposal or certification for reuse or excess.</i>
4.1.1.5.3.4	Transfer PL Facility <i>Maintains and effects transfer of facility structure and surrounding area to D&D organizations for remediation or to transition organization for reuse, privatization, etc.</i>
4.1.1.5.3.4.1	Turnover PL Facilities <i>After deactivation is complete, maintains and manages the facility until transfer for beneficial user or D&D is accomplished. Performs actual transfer of facility.</i>
4.1.1.5.3.4.2	Turnover PL Information <i>Transfers actual information on facility status and characterization to receiving organization.</i>
4.1.1.5.3.4.3	Prepare PL Turnover Documentation <i>Prepares appropriate documentation on the facility status and supporting information in accordance with turnover specification.</i>
4.1.1.5.4	Disposition Currently Identified 308 BUILDING (PL) Special Nuclear Material <i>Collects and prepares materials for temporary storage and transfer, and transports materials out of the facility.</i>
4.1.1.5.4.1	Develop PL SNM/NM/NF for Disposition Plan <i>Develops and obtains approval for disposition of SNM/NM/NF.</i>
4.1.1.5.4.2	Prepare PL SNM/NM/NF for Transport & Storage <i>Stabilizes and packages SNM/NM/NF for temporary storage or transportation to an alternate company or permanent storage or for other use.</i>
4.1.1.5.4.2.1	Stabilize PL Reactive Materials <i>Treats material as required to meet storage, shipment, and disposition criteria.</i>

Function	Definitions
4.1.1.5.4.2.2	Package PL Materials <i>Packages SNM/NM/NF for temporary storage or shipment.</i>
4.1.1.5.4.2.3	Prepare PL Documentation <i>Prepares all documentation for storage, shipping, or alternate use.</i>
4.1.1.5.4.3	Temporarily Store PL SNM/NM/NF <i>Stores SNM/NM/NF until alternate, temporary, or permanent storage or beneficial use is identified.</i>
4.1.1.5.4.3.1	Provide PL Storage Reports <i>Prepares and maintains required storage reports.</i>
4.1.1.5.4.3.2	Maintain PL Compliant Storage Facility <i>Maintains facility and equipment qualifications and operating requirements for compliant storage.</i>
4.1.1.5.4.4	Transport PL SNM/NM/NF <i>Transport materials to alternate storage or a beneficial use.</i>

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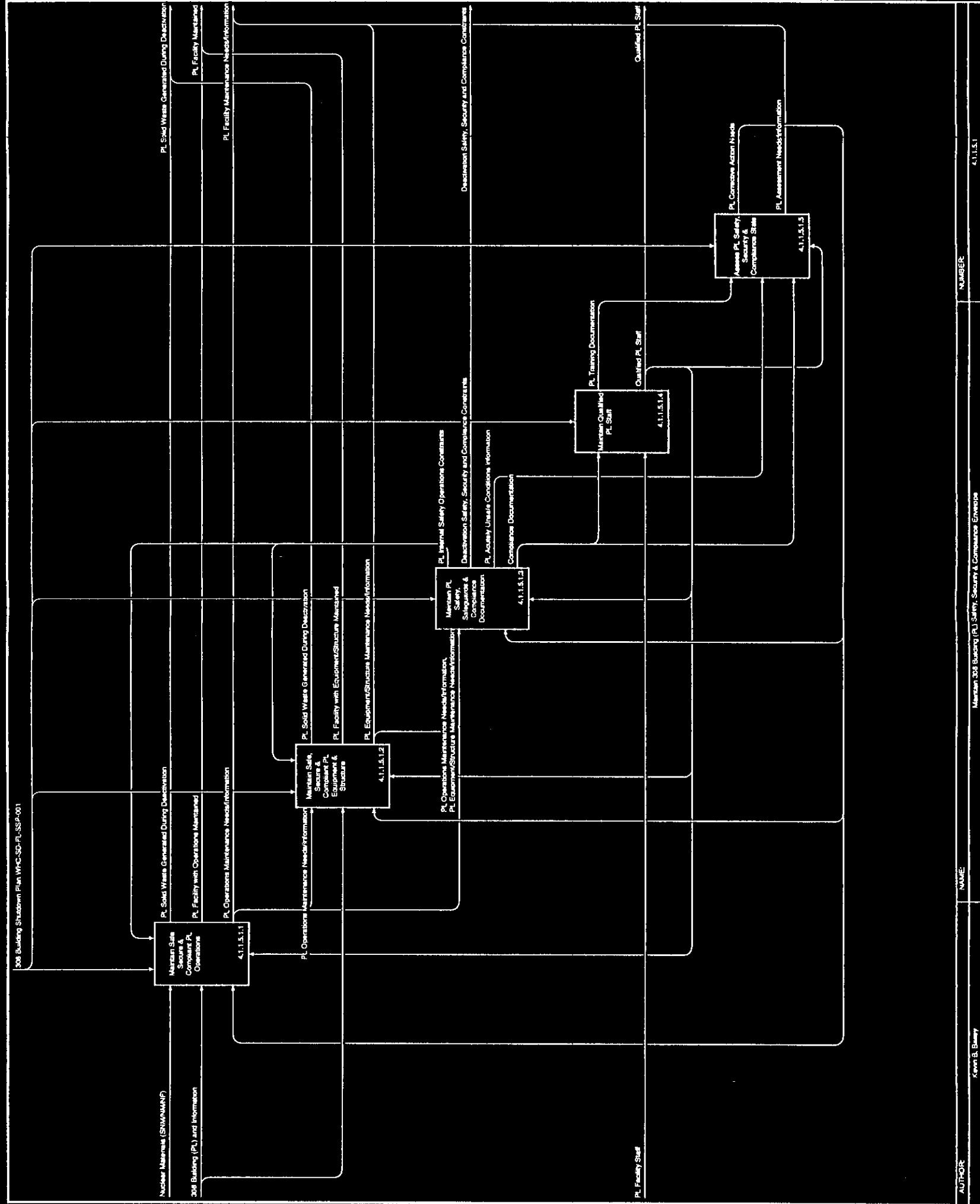
ADDENDUM 3 - IDEFO DIAGRAMS

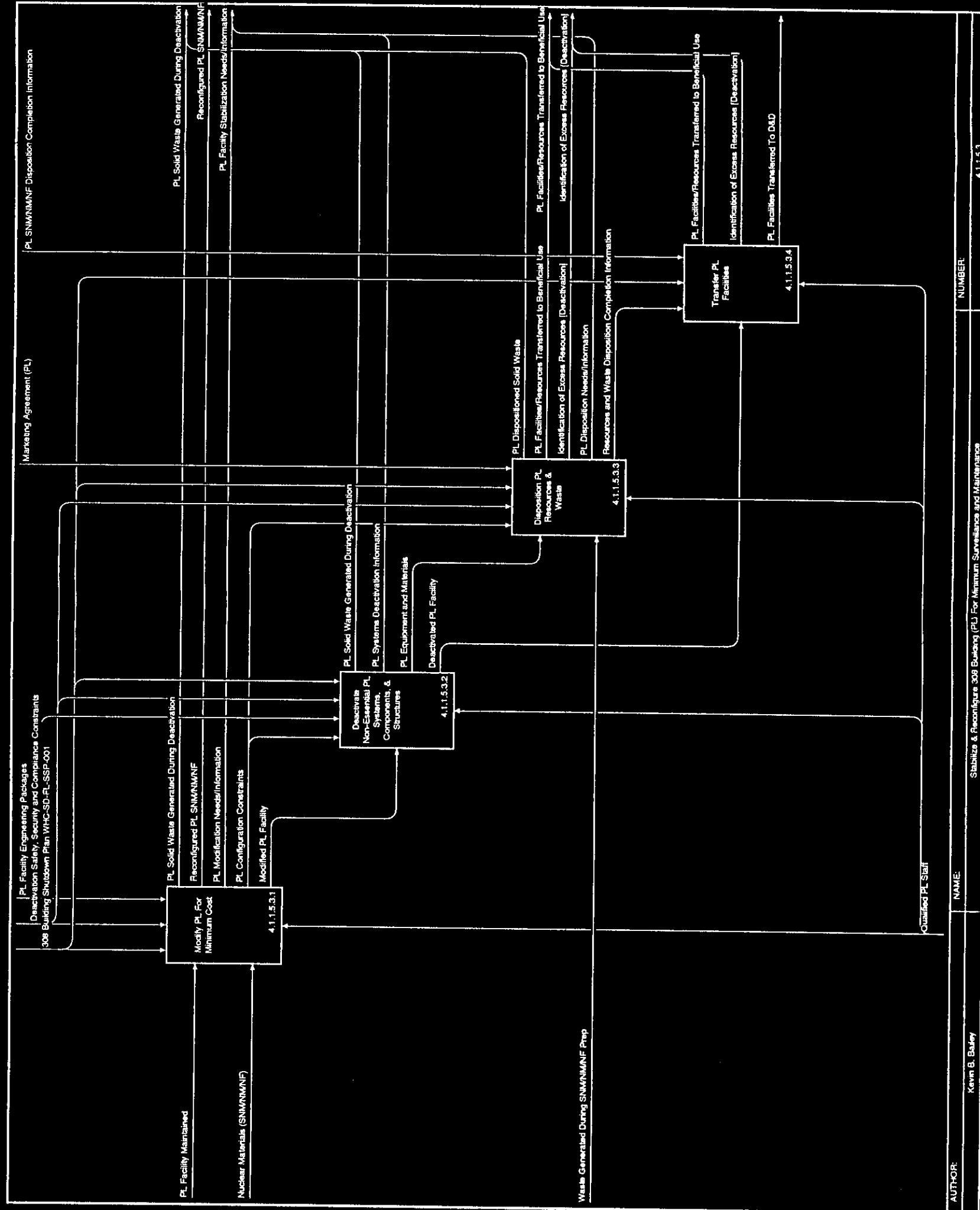


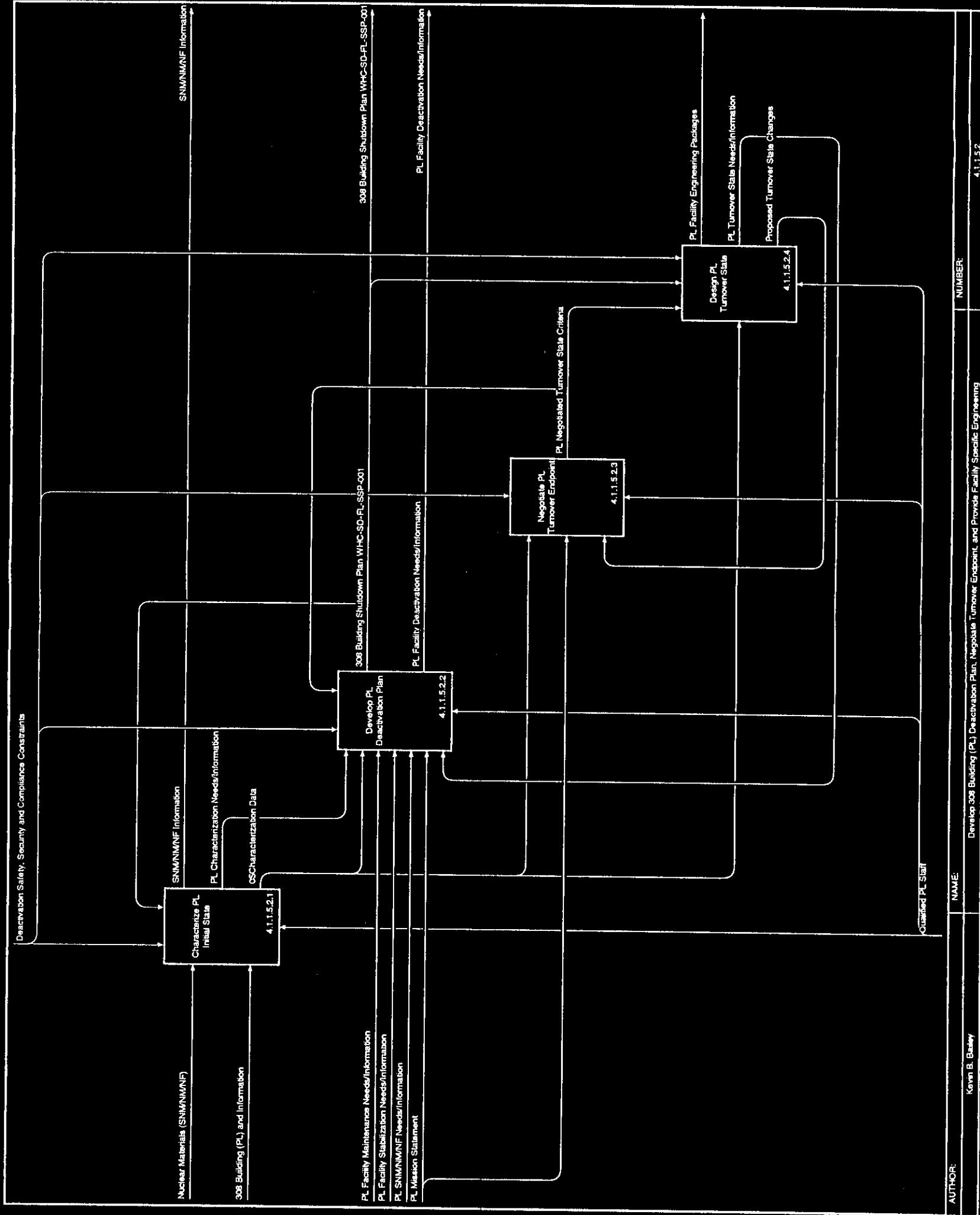
AUTHOR: Daney, Jack C.

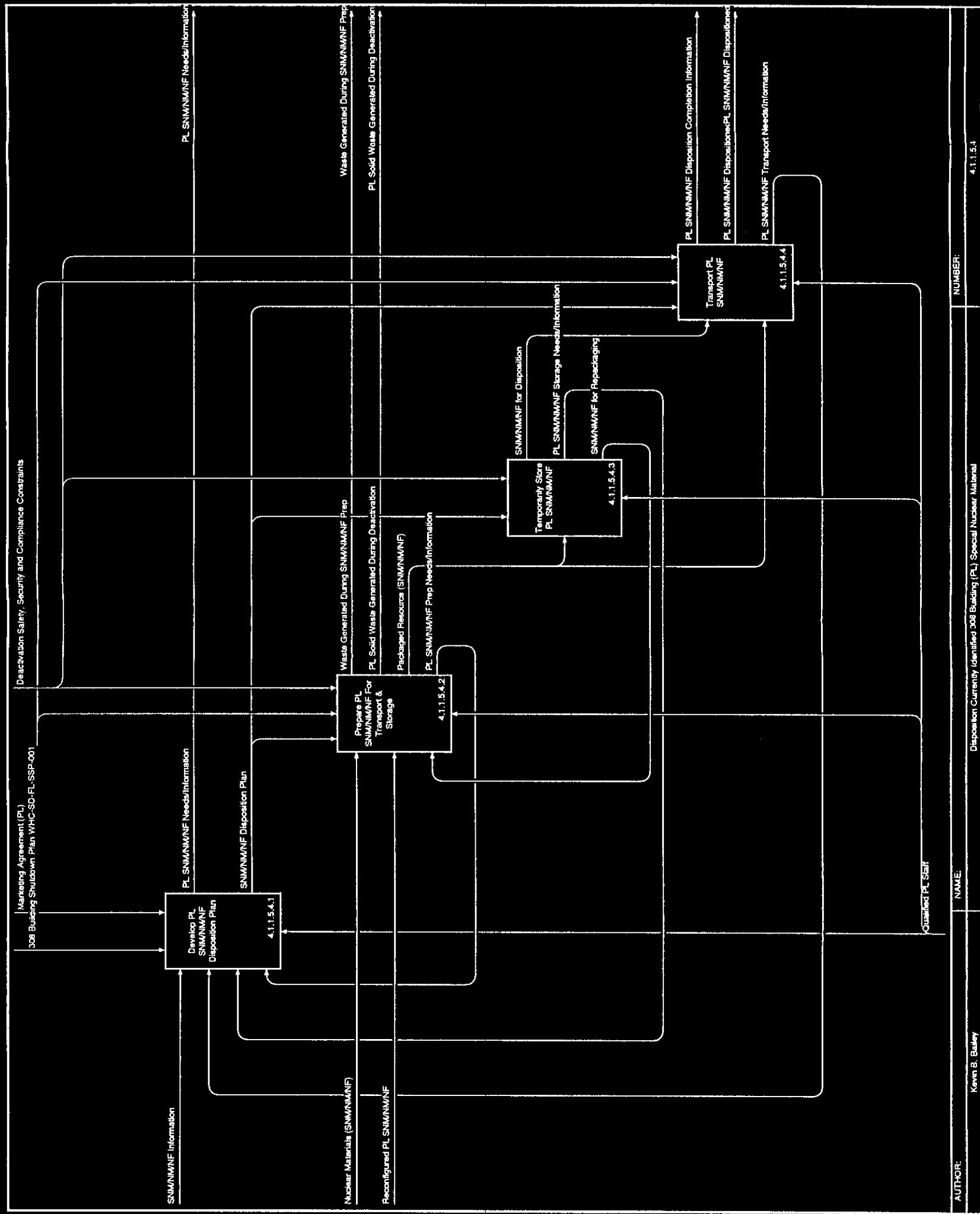
NAME: Deactivate 308 Building (PL)

NUMBER: 4.1.1.5









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ADDENDUM 4 - INTERFACE DEFINITIONS

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
<p>0\$Characterization Data <i>Information collected from facility walkdowns and documentation review about the actual physical configuration of the facility, status of process and other facility systems, material contents, and contamination areas and levels.</i></p>	
<p>308 Building (PL) and Information <i>The systems, structures, and equipment in and around the 308 Building. Included is configuration and status information. These buildings are hereafter referred to PL facilities.</i></p>	
<p>308 Building Shutdown Plan WHC-SD-FL-SSP-001 <i>308 building deactivation plan containing the requirements defined in the turnover specification that must be met before D&D will accept the facility. Certain systems may need to be deactivated. Contaminated areas will need stabilization. Materials and equipment may need to be removed, i.e., ER.</i></p>	
<p>Compliance Documentation <i>NFPA, OSHA, and other safety and compliance documents including safety basis documents.</i></p>	
<p>Deactivated PL Facility <i>PL facility with all non-essential systems, equipment and structures deactivated.</i></p>	
<p>Deactivation Safety, Security and Compliance Constraints <i>Constraints required to maintain the safety, security, and compliance envelope. Examples include HVAC system requirements, configuration, electrical system requirements/configuration, instrument requirements/configuration, material storage configuration/location, fire alarm system, etc.</i></p>	
<p>Excess PL Facilities, Equipment & Non-Nuclear Materials <i>PL facilities, including all equipment and materiel associated with those facilities, that supported the Hanford production mission and are not needed to support the cleanup mission</i></p>	<ul style="list-style-type: none"> • 308 Building (PL) and Information • PL Facility Staff • PL Mission Statement

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
Identification of Excess Resources [Deactivation] <i>Identification of potentially transferable resources which consists of excess inventory information.</i>	<ul style="list-style-type: none"> • Identification of Excess B Plant Resources [Deactivation] • Identification of Excess FFTF Resources [Deactivation] • Identification of Excess NF Resources [Deactivation] • Identification of Excess PFP Resources [Deactivation] • Identification of Excess PL Resources [Deactivation] • Identification of Excess PR Resources [Deactivation] • Identification of Excess PUREX Resources [Deactivation] • Identification of Excess Resources (K Basin Deactivation)
Marketing Agreement (PL) <i>The agreement on the final SNM/NM/NF disposition and associated disposition criteria.</i>	
Modified PL Facility <i>PL facility that has been placed into a configuration that requires minimal cost, maintenance, surveillance, and security.</i>	
Nuclear Materials (SNM/NM/NF) <i>Special nuclear materials, nuclear materials, nuclear fuels; includes less than 400 grams of plutonium oxide, greater than 4 kg of depleted uranium oxide, 101 TRIGA fuel assemblies, 3 non-irradiated TRIGA fuel assemblies, and 4 radioactive sources in the 308 building.</i>	
PL Acutely Unsafe Conditions Information <i>Nuclear or chemically unsafe conditions and information, does not include OSHA, for example. These are conditions detected during the cleanup operations which need to be immediately fed back to the program management function for consideration which may result in new direction & control, defined work packages, and/or mission requirements.</i>	
PL Assessment Needs/Information <i>Information and needs developed during assessment of the safety, security & compliance state.</i>	

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
PL Characterization Needs/Information <i>Identification of needed characterization data regarding configuration of facility, status of process and other facility systems, material contents, SNM/NM/NF and contamination areas and levels.</i>	
PL Configuration Constraints <i>Constraints placed on the deactivation of systems, equipment, and structures, and disposition of resources and waste by modifications to the facility to minimize cost, maintenance, surveillance, and security.</i>	
PL Corrective Action Needs <i>Actions that must be taken to ensure that the safety and compliance envelope of the facility is maintained.</i>	
PL Disposition Needs/Information <i>Identification of additional necessary actions to complete disposition of SNM/NM/NF resources or waste.</i>	
PL Dispositioned Solid Waste <i>Waste that is ready for disposal.</i>	
PL Equipment and Materials <i>Equipment and materials removed from PL facilities as a result of deactivation activities. These are potentially transferrable resources.</i>	
PL Equipment/Structure Maintenance Needs/Information <i>Information on maintenance, calibration, and minor modification activities, as well as status of equipment and structure, compliance state, and design & configuration information.</i>	
PL Facilities Transferred To D&D <i>PL facilities turned over for D&D in accordance with acceptance criteria defined for initiation of D&D activities.</i>	
PL Facilities/Resources Transferred to Beneficial Use <i>Physical and intellectual resources (e.g., facilities, equipment, materials, infrastructure, land, technology, and scientific data) that remain after facility deactivation and can be transferred to other areas in the public or private domains.</i>	

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
<p>PL Facility Deactivation Needs/Information <i>Information, developed during performance of facility deactivation activities, provided to program management functions to support decision-making essential to managing the deactivation process.</i></p>	
<p>PL Facility Engineering Packages <i>Detailed procedures and work packages necessary for the stabilization and reconfiguration activities.</i></p>	
<p>PL Facility Maintained <i>308 Building maintained in a safe condition by appropriate surveillance, preventive and corrective maintenance activity.</i></p>	<ul style="list-style-type: none"> • PL Facility with Equipment/Structure Maintained • PL Facility with Operations Maintained
<p>PL Facility Maintenance Needs/Information <i>Information on maintenance, calibration, and minor modifications activities.</i></p>	<ul style="list-style-type: none"> • PL Assessment Needs/Information • PL Equipment/Structure Maintenance Needs/Information • PL Operations Maintenance Needs/Information
<p>PL Facility Stabilization Needs/Information <i>Information and needs developed during stabilization and reconfiguration activities, which are utilized for developing the Deactivation Plan, for negotiating the turnover endpoint, and for facility specific engineering.</i></p>	<ul style="list-style-type: none"> • PL Disposition Needs/Information • PL Modification Needs/Information • PL Systems Deactivation Information
<p>PL Facility Staff <i>PL facilities deactivation direct staff and indirect support staff prior to necessary training and testing qualifications.</i></p>	
<p>PL Facility with Equipment/Structure Maintained <i>PL facility equipment and structures maintained by appropriate preventive and corrective maintenance.</i></p>	
<p>PL Facility with Operations Maintained <i>PL facility maintained in a safe condition by appropriate surveillance, access control, and material management.</i></p>	
<p>PL Internal Safety Operations Constraints <i>Safety constraints derived from PL safety basis, radiological safety procedures, occupational safety codes and standards, DOE safety orders, etc.</i></p>	
<p>PL Mission Statement <i>Includes the project scope, mission statement, project objectives, and mission definition developed for the 308 Building Deactivation Mission Analysis Report.</i></p>	

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
PL Modification Needs/Information <i>Identification of additional modifications necessary to place facility in minimal cost state for surveillance, maintenance, and security.</i>	
PL Negotiated Turnover State Criteria <i>Definition of the condition of the 308 Building at turnover to D&D (e.g., turnover acceptance criteria). The condition represents a safe, minimum cost, dormant state configuration for PL facilities.</i>	
PL Operations Maintenance Needs/Information <i>Information and needs developed during activities to maintain the facility safety and compliance envelope, which are utilized for developing the Deactivation Plan, for negotiating the turnover endpoint, and for facility specific engineering.</i>	
PL SNM/NM/NF Disposition Completion Information <i>Certification that disposition of SNM/NM/NF is complete.</i>	
PL SNM/NM/NF Dispositioned <i>Nuclear materials transferred to final disposition during PL deactivation.</i>	
PL SNM/NM/NF Needs/Information <i>Information and capability needs identified during performance of SNM/NM/NF handing, treatment, storage, and/or disposition activities, provided to program management functions to support decision-making essential to managing the SNM/NM/NF material process.</i>	
PL SNM/NM/NF Prep Needs/Information <i>Information and capability needs identified during preparation for transport and storage of PL SNM/NM/NF, which are utilized for development of the PL SNM/NM/NF Disposition Plan.</i>	
PL SNM/NM/NF Storage Needs/Information <i>Information and capability needs identified during temporary storage of PL SNM/NM/NF, which are utilized for development of the PL SNM/NM/NF Disposition Plan.</i>	
PL SNM/NM/NF Transport Needs/Information <i>Information and capability needs identified during transport of PL SNM/NM/NF, which are utilized for development of the PL SNM/NM/NF Disposition Plan.</i>	

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
<p>PL Solid Waste Generated During Deactivation <i>Contaminated tools, equipment and materials generated as a direct result of facility deactivation activities; including used cleaning solvents, rags, stack filters and similar items requiring processing prior to disposal or transfer to a useful function within or outside the Cleanup Hanford mission.</i></p>	<ul style="list-style-type: none"> • PL Dispositioned Solid Waste
<p>PL Systems Deactivation Information <i>Information and needs identified during deactivation of non-essential systems, components, & structures necessary to place facility in minimal cost state for surveillance.</i></p>	
<p>PL Training Documentation <i>Documentation on PL deactivation staff training, qualification, and certification.</i></p>	
<p>PL Turnover State Needs/Information <i>Needs and information identified during design of the PL turnover state, which are utilized for development of the PL Deactivation Plan.</i></p>	
<p>Packaged Resource (SNM/NM/NF) <i>SNM/NM/NF prepared for storage and/or transport.</i></p>	
<p>Proposed Turnover State Changes <i>Potential changes to the turnover state criteria based on facility engineering activities.</i></p>	
<p>Qualified PL Staff <i>Staff that has had the necessary training and testing to perform the facility deactivation and material disposition activities in a safe and compliant manner.</i></p>	
<p>Reconfigured PL SNM/NM/NF <i>SNM/NM/NF collected during stabilization and reconfiguration activities.</i></p>	
<p>Resources and Waste Disposition Completion Information <i>Certification that removable waste and resources have been dispositioned and other deactivation activities are complete.</i></p>	
<p>SNM/NM/NF Disposition Plan <i>Plan for the activities necessary to assure the SNM/NM/NF meets the disposition criteria.</i></p>	
<p>SNM/NM/NF Information <i>Information from characterization on the location, nature, and amount of SNM/NM/NF in the PL facility.</i></p>	

[4.1.1.5] Deactivate 308 Building (PL)

<i>Interface</i>	<i>Constituents</i>
SNM/NM/NF for Disposition <i>SNM/NM/NF transferred from storage for disposition.</i>	
SNM/NM/NF for Repackaging <i>SNM/NM/NF requiring repackaging for continued storage and/or disposition.</i>	
Waste Generated During SNM/NM/NF Prep <i>Contaminated tools, equipment and materials generated as a direct result of preparing SNM/NM/NF for disposition</i>	

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