Stat (3)

NOV 0 6 1995 **ENGINEERING DATA TRANSMITTAL**

Page 1 of 1

1. EDT № 614192

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
Distribution	Systems And Materials	NA
5. Proj./Prog./Dept./Div.:	**6. Cog. Engr.:**	**7. Purchase Order No.:**
10250	Dennis P. Lund	NA
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		10. System/Bldg./Facility: 309 Building
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16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
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DP Lund DP Lund 11-1-95 Signature of EDT Originator / Date	N/A Authorized Representative for Receiving Organization / Date	RR Borisch R.R. Borisch 11-1-95 Cognizant Manager / Date	[] Approved [] Approved w/comments [] Disapproved w/comments

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SUPPORTING DOCUMENT

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7. Abstract

The document contains the functions, function definitions, function interfaces, function interface definitions, Input Computer Automated Manufacturing Definition (IDEF0) diagrams, and a function hierarchy chart that describe what needs to be performed to deactivate the 309 Building.

8. RELEASE STAMP

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

309 BUILDING DEACTIVATION FUNCTION ANALYSIS REPORT

September 1995

Prepared for:

WESTINGHOUSE HANFORD COMPANY
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Richland, Washington 99352

Prepared by:
309 Building Working Group

309 BUILDING DEACTIVATION FUNCTION ANALYSIS REPORT

Table of Contents

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 309 BUILDING. A summary of the steps are listed below:

- Mission Analysis: This step establishes 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-SP-MAR-001 309 BUILDING

- Functional Analysis: The functions that the 309 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, 4.0 Issues. Addenda provide all of the back up information relating to the 309 BUILDING. The addenda are reports generated from RDD-100, a computer program by Ascent Logic.

1.2 Mission Statement

The 309 BUILDING Mission Statement was developed during mission analysis and is reported in WHC-SD-SP-MAR-001 309 BUILDING Deactivation Mission Analysis Report. It is repeated below:

> "The purpose of the 309 BUILDING Deactivation Project is to establish a passively safe and environmentally secure configuration of the 309 BUILDING, and turn over the 309 BUILDING to Decontamination and Decommissioning (D&D). The project removes, reduces, and/or stabilizes the major remaining radioactive sources 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 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."

2.0 309 BUILDING FUNCTIONS

The ultimate function of the 309 BUILDING system is to perform operations that satisfy the mission need identified in WHC-SD-FL-MAR-001 309 BUILDING Deactivation Mission Analysis Report repeated below:

> "Because the 309 BUILDING, a former reactor facility, is no longer needed, because the cost is too high to maintain the 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 where only minimum maintenance and surveillance is required to maintain the facility until D&D."

2.1 Relationship to Hanford Site Functional Hierarchy

The 309 BUILDING mission statement developed during the 309 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 4.1.2 Deactivate Facilities with Radioactive and Hazardous Material (Type 2 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 309 BUILDING mission begins with function 4.1.2.2 Deactivate the 309 BUILIDNG.

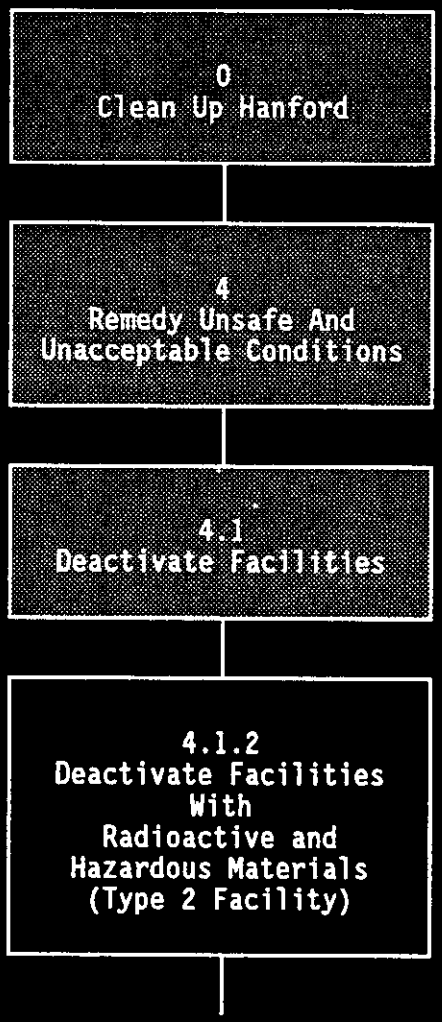


Figure 1. Hanford Site Function Hierarchy

2.2 Function Hierarchy

The detailed 309 BUILDING functional hierarchy is presented in Addendum 1. It begins at level four (4.1.2.2 Deactivate 309 BUILDING) and continues to level seven.

2.3 Function Definition Table

The definitions of the 309 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 309 BUILDING interface diagrams are provided in the form of ICOM Definition Method, ICOM is Input Controls Output Mechanisms (IDEF) diagrams produced form the RDD system model and are found in Addendum 3.

3.2 Interface Definitions

The 309 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.

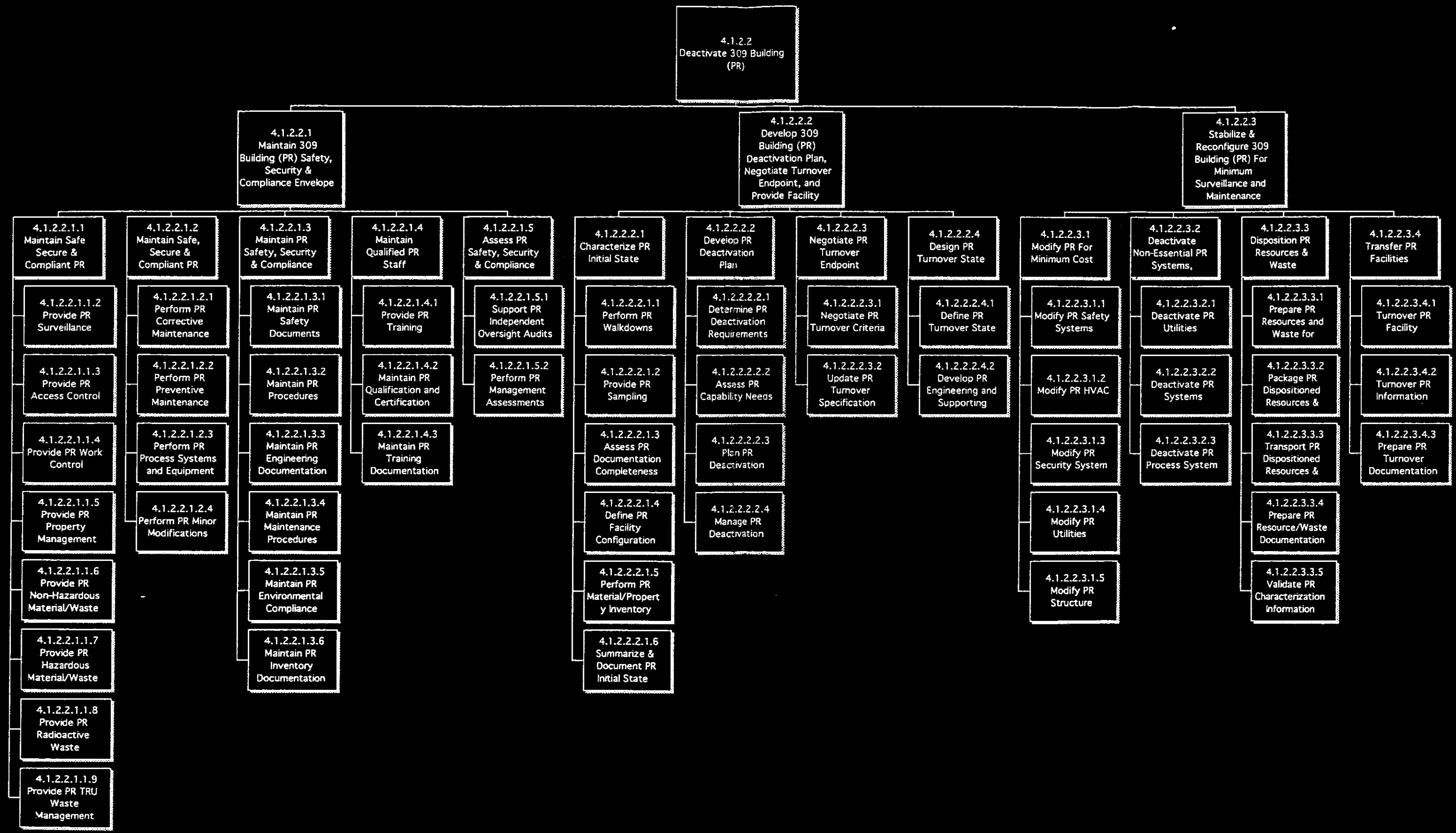
4.0 ISSUES

Listed below are issues that were identified in the 309 BUILDING Functional Analysis workshops. These issues will be further refined and clarified in order to effectively attached 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.

- Transferring material and wastes to other Hanford programs is the subject of changing acceptance requirements and policy level decisions. Any changes to the planned activities in the approved acceptance criteria documentation may cause delays.

ADDENDUM 1 - FUNCTIONAL HIERARCHY


4.1.2.2 Deactivate 309 Building (PR)
4.1.2.2.1 Maintain 309 Building (PR) Safety, Security & Compliance Envelope
4.1.2.2.2 Develop 309 Building (PR) Deactivation Plan, Negotiate Turnover Endpoint, and Provide Facility
4.1.2.2.3 Stabilize & Reconfigure 309 Building (PR) For Minimum Surveillance and Maintenance
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4.1.2.2.1.1.2 Provide PR Surveillance
4.1.2.2.1.1.3 Provide PR Access Control
4.1.2.2.1.1.4 Provide PR Work Control
4.1.2.2.1.1.5 Provide PR Property Management
4.1.2.2.1.1.6 Provide PR Non-Hazardous Material/Waste
4.1.2.2.1.1.7 Provide PR Hazardous Material/Waste
4.1.2.2.1.1.8 Provide PR Radioactive Waste
4.1.2.2.1.1.9 Provide PR TRU Waste Management
4.1.2.2.1.2 Maintain Safe, Secure & Compliant PR
4.1.2.2.1.2.1 Perform PR Corrective Maintenance
4.1.2.2.1.2.2 Perform PR Preventive Maintenance
4.1.2.2.1.2.3 Perform PR Process Systems and Equipment
4.1.2.2.1.2.4 Perform PR Minor Modifications
4.1.2.2.1.3 Maintain PR Safety, Security & Compliance
4.1.2.2.1.3.1 Maintain PR Safety Documents
4.1.2.2.1.3.2 Maintain PR Procedures
4.1.2.2.1.3.3 Maintain PR Engineering Documentation
4.1.2.2.1.3.4 Maintain PR Maintenance Procedures
4.1.2.2.1.3.5 Maintain PR Environmental Compliance
4.1.2.2.1.3.6 Maintain PR Inventory Documentation
4.1.2.2.1.4 Maintain Qualified PR Staff
4.1.2.2.1.4.1 Provide PR Training
4.1.2.2.1.4.2 Maintain PR Qualification and Certification
4.1.2.2.1.4.3 Maintain PR Training Documentation
4.1.2.2.1.5 Assess PR Safety, Security & Compliance
4.1.2.2.1.5.1 Support PR Independent Oversight Audits
4.1.2.2.1.5.2 Perform PR Management Assessments
4.1.2.2.2.1 Characterize PR Initial State
4.1.2.2.2.1.1 Perform PR Walkdowns
4.1.2.2.2.1.2 Provide PR Sampling
4.1.2.2.2.1.3 Assess PR Documentation Completeness
4.1.2.2.2.1.4 Define PR Facility Configuration
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4.1.2.2.3.1.3 Modify PR Security System
4.1.2.2.3.1.4 Modify PR Utilities
4.1.2.2.3.1.5 Modify PR Structure
4.1.2.2.3.2 Deactivate Non-Essential PR Systems,
4.1.2.2.3.2.1 Deactivate PR Utilities
4.1.2.2.3.2.2 Deactivate PR Systems
4.1.2.2.3.2.3 Deactivate PR Process System
4.1.2.2.3.3 Disposition PR Resources & Waste
4.1.2.2.3.3.1 Prepare PR Resources and Waste for
4.1.2.2.3.3.2 Package PR Dispositioned Resources &
4.1.2.2.3.3.3 Transport PR Dispositioned Resources &
4.1.2.2.3.3.4 Prepare PR Resource/Waste Documentation
4.1.2.2.3.3.5 Validate PR Characterization Information
4.1.2.2.3.4 Transfer PR Facilities
4.1.2.2.3.4.1 Turnover PR Facility
4.1.2.2.3.4.2 Turnover PR Information
4.1.2.2.3.4.3 Prepare PR Turnover Documentation

ADDENDUM 2 - FUNCTION DEFINITIONS

Function	*Definitions*
4.1.2.2	**Deactivate 309 BUILDING (PR)** *Deactivate 309 BUILDING (PR) containing radioactive materials and hazardous materials.*
4.1.2.2.1	**Maintain 309 BUILDING (PR) Safety, Security, & Compliance Envelope** *Maintains the 309 BUILDING (PR) 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.*
4.1.2.2.1.1	**Maintain Safe, Secure, & Compliant PR Operations** *Performs necessary surveillance; access control; property, material, and waste management to maintain the 309 BUILDING (PR) in compliance with governing requirements while the facility is being deactivated.*
4.1.2.2.1.1.2	**Provide PR Surveillance** *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.*
4.1.2.2.1.1.3	**Provide PR Access Control** *Provides access control to and internal to the facility for safeguards and security, safety, and radiological purposes.*
4.1.2.2.1.1.4	**Provide PR Work Control** *Provides a job control system for the facility activities.*
4.1.2.2.1.1.5	**Provide PR Property Management** *Provides property management for the facility in accordance with DOE orders and WHC procedures.*
4.1.2.2.1.1.6	**Provide PR Non-Hazardous Material/Waste Management** *Provides containment, control, and documentation of non-hazardous material and waste in accordance with safe and applicable standards.*
4.1.2.2.1.1.7	**Provide PR Hazardous Material/Waste Management** *Provides containment, control, and documentation of hazardous materials and wastes in conformance with safety requirements and all applicable hazardous material/wastes codes and regulations.*
4.1.2.2.1.1.8	**Provide Radioactive Waste Management** *Provides containment, control, and documentation of radioactive material and waste in accordance with safety requirements and all applicable codes and regulations.*

Function	*Definitions*
4.1.2.2.1.1.9	**Provide PR TRU Material** *Provides all special SNM/NM/NF management operations in accordance with applicable codes and regulations including proper surveillance and security.*
4.1.2.2.1.2	**Maintain Safe, Secure, and Compliant PR Equipment & Structure** *Maintains the facility systems and infrastructure in the operational condition dictated by approved safety and compliance documentation (includes environmental regulations).*
4.1.2.2.1.2.1	**Perform PR Corrective Maintenance** *All maintenance that brings systems and equipment back to their operational states after failure.*
4.1.2.2.1.2.2	**Perform Preventive Maintenance** *Preventive maintenance activities to minimize all unplanned events and premature equipment failures.*
4.1.2.2.1.2.3	**Perform PR Process Systems and Equipment Calibrations** *Performs facility equipment, instrumentation, and process system calibrations to ensure accuracy.*
4.1.2.2.1.2.4	**Perform PR Minor Modifications** *Performs minor modifications to facility systems or structure to ensure safe and compliant operations during the facility deactivation process.*
4.1.2.2.1.3	**Maintain PR Safety, Safeguards, & Compliance Documentation** *Maintains all required facility safety, safeguards, compliance, engineering, inventory, and operating documentation during facility deactivation.*
4.1.2.2.1.3.1	**Maintain PR Safety Documents** *Maintains documentation necessary to ensure safe deactivation activities. This includes ISBs, CSERs, etc.*
4.1.2.2.1.3.2	**Maintain PR Procedures** *Maintains procedures for safety, safeguards, and security activities.*
4.1.2.2.1.3.3	**Maintain PR Engineering Documentation** *Maintains configuration drawings and associated engineering documentation required to operate and maintain the facility in a safe and compliant status.*
4.1.2.2.1.3.4	**Maintain PR Maintenance Procedures** *Maintains maintenance procedure documentation necessary for safe, efficient, and compliant operations.*

Function	*Definitions*
4.1.2.2.1.3.5	**Maintain PR Environmental Compliance Documentation** *Maintains appropriate regulatory files and other related environmental documentation to assure and prove environmental compliance.*
4.1.2.2.1.3.6	**Maintain PR Inventory Documentation** *Maintains nuclear materials documentation in compliance with DOE orders.*
4.1.2.2.1.4	**Maintain Qualified PR Staff** *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*
4.1.2.2.1.4.1	**Provide PR Training** *Provides all training related to the activities necessary to deactivate the facilities and ensure they remain in a safe and compliant condition.*
4.1.2.2.1.4.2	**Maintain PR Qualification and Certification** *Provides periodic personnel skills check, assessment, and testing required to maintain necessary qualifications and certifications.*
4.1.2.2.1.4.3	**Maintain PR Training Documentation** *Maintains applicable worker training documentation. Documentation includes worker safety and competency qualification and certification.*
4.1.2.2.1.5	**Assess PR Safety, Security, & Compliance State** *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.*
4.1.2.2.1.5.1	**Support PR Independent Oversight Audits** *Performs and responds to independent oversight audits.*
4.1.2.2.1.5.2	**Perform PR Management Assessments** *Performs self assessments of facility operations to ensure that safety, security, and compliance are maintained.*

Function	*Definitions*
4.1.2.2.2	**Develop 309 BUILDING (PR) Deactivation Plan, Negotiate Turnover Endpoint, and Provide Facility Specific Engineering** *Assesses the current state of the 309 BUILDING (PR), 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.*
4.1.2.2.2.1	**Characterize PR Initial State** *Identifies the current state of the facility infrastructure, process systems, and other facility systems, facility contents, equipment, instrumentation, and utilities.*
4.1.2.2.2.1.1	**Perform PR Walkdowns** *Performs walkdowns to compare actual facility state with available documentation.*
4.1.2.2.2.1.2	**Provide PR Sampling** *Obtains samples to characterize contamination and verify contamination levels.*
4.1.2.2.2.1.3	**Assess PR Documentation Completeness** *Assesses existing documentation for completeness and verifies with walkdowns, sampling, and other observations.*
4.1.2.2.2.1.4	**Define PR Facility Configuration** *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.*
4.1.2.2.2.1.5	**Perform PR Material/Property Inventory** *Performs inventory of all property and materials.*
4.1.2.2.2.1.6	**Summarize and Document PR Initial State** *Develops and provides a documentation summary of matrix that clearly and completely defines facility state.*
4.1.2.2.2.2	**Develop PR Deactivation Plan** *Develops strategies to best implement deactivation requirements, plans the facility deactivation, and identifies and/or negotiates facility equipment disposition requirements.*

Function	*Definitions*
4.1.2.2.2.2.1	**Determine PR Deactivation Requirements** *Determines and documents all facility specific administrative, safety, environmental, regulatory, DOE orders, codes, standards, and other requirements.*
4.1.2.2.2.2.2	**Assess PR Capability Needs** *Assesses personnel, material, equipment, facility, and technology needs necessary to support facility deactivation activities.*
4.1.2.2.2.2.3	**Plan PR Deactivation** *Develops deactivation strategy, plans, and schedules.*
4.1.2.2.2.3	**Negotiate PR Turnover Endpoint** *Negotiates and maintains the desired facility turnover endpoint criteria.*
4.1.2.2.2.3.1	**Negotiate PR Turnover Criteria** *Negotiates turnover criteria with D&D or the transition of resources to beneficial uses organization.*
4.1.2.2.2.3.2	**Update PR Turnover Specification** *Maintains the negotiated facility deactivation turnover specification.*
4.1.2.2.2.4	**Design PR Turnover State** *Specifies turnover facility, equipment, and material status; develops facility deactivation turnover specification; develops deactivation engineering documentation and other supporting analyses.*
4.1.2.2.2.4.1	**Define PR Turnover State** *Defines configuration specifics and develops negotiated facility deactivation turnover specification.*
4.1.2.2.2.4.2	**Develop PR Engineering and Supporting Analyses** *Provides engineering and supporting analyses to support engineered deactivation package development. Examples include safety analyses, transportation analyses, and development of NEPA documentation.*
4.1.2.2.3	**Stabilize & Reconfigure 309 BUILDING (PR) for Minimum Surveillance (and Maintenance)** *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.*

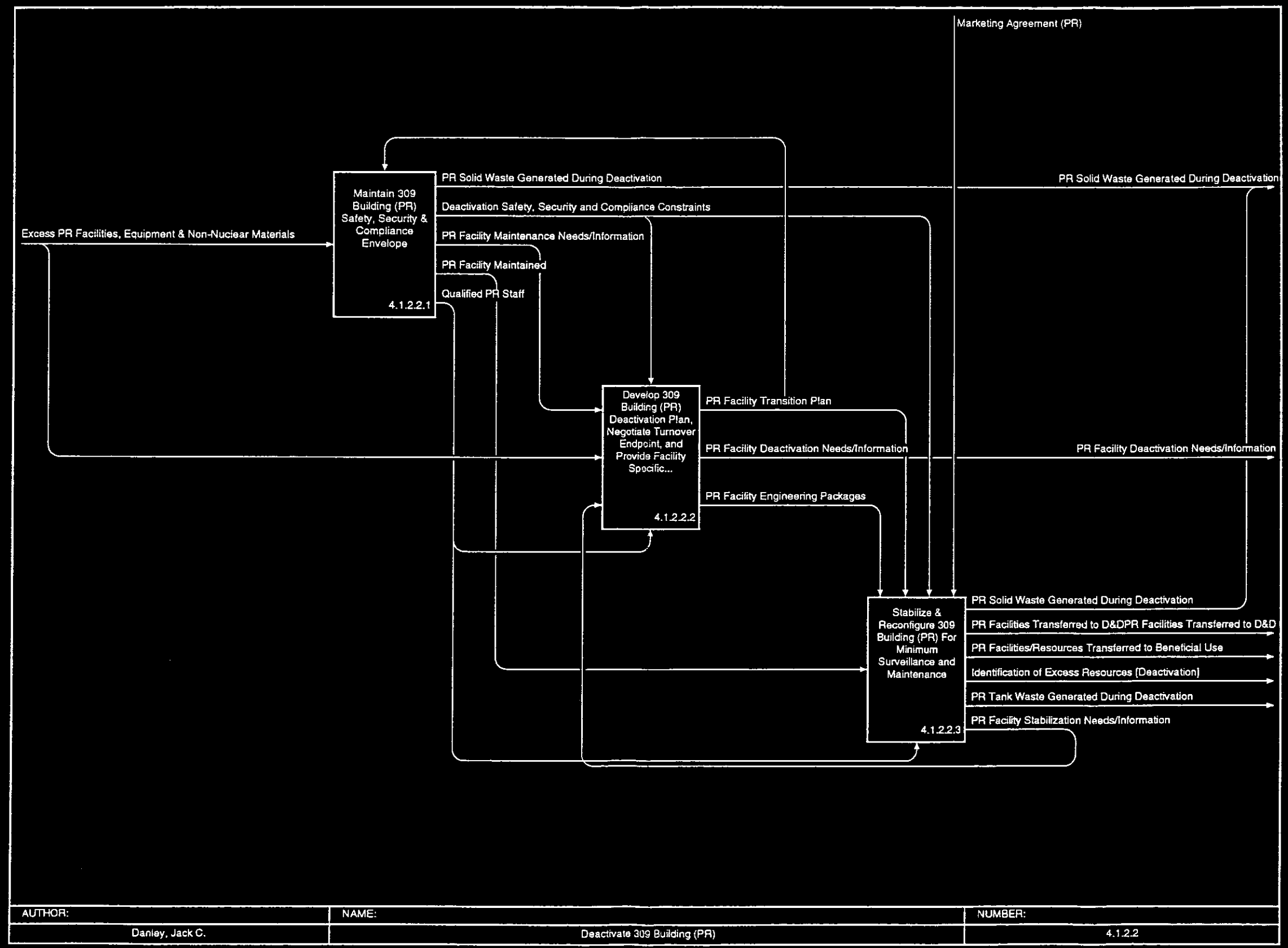
Function	*Definitions*
4.1.2.2.3.1	**Modify PR for Minimum Cost** *Reconfigures plant systems and structure to minimize cost of maintenance and operation during deactivation phase and while waiting for D&D while retaining minimum acceptable compliance with safety and environmental requirements.*
4.1.2.2.3.1.1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

Function	*Definitions*
4.1.2.2.3.3.1	**Prepare PR Resources and Waste for Disposition** *Accumulates, drains, collects, and dispositions equipment, consumables, etc., and waste or resources for disposal or reuse.*
4.1.2.2.3.3.2	**Package PR Dispositioned Resources & Waste** *Packages resources and waste for disposal or reuse.*
4.1.2.2.3.3.3	**Transport PR Dispositioned Resources & Waste** *Transports resources and waste to disposal or reallocation sites.*
4.1.2.2.3.3.4	**Prepare PR Resource/Waste Documentation** *Prepares any documentation required for disposal or certification for reuse or excess.*
4.1.2.2.3.4	**Transfer PR Facilities** *Maintains and effects transfer of facility structure and surrounding area to D&D organizations for remediation or to transition organization for reuse, privatization, etc.*
4.1.2.2.3.4.1	**Turnover PR Facility** *After deactivation is complete, maintains and manages the facility until transfer for beneficial user or D&D is accomplished. Performs actual transfer of facility.*
4.1.2.2.3.4.2	**Turnover PR Information** *Transfers actual information on facility status and characterization to receiving organization.*
4.1.2.2.3.4.3	**Prepare PR Turnover Documentation** *Prepares appropriate documentation on the facility status and supporting information in accordance with turnover specification.*

ADDENDUM 3 - IDEFO DIAGRAMS

IDEF0 Diagram
[4.1.2.2] Deactivate 309 Building (PR)

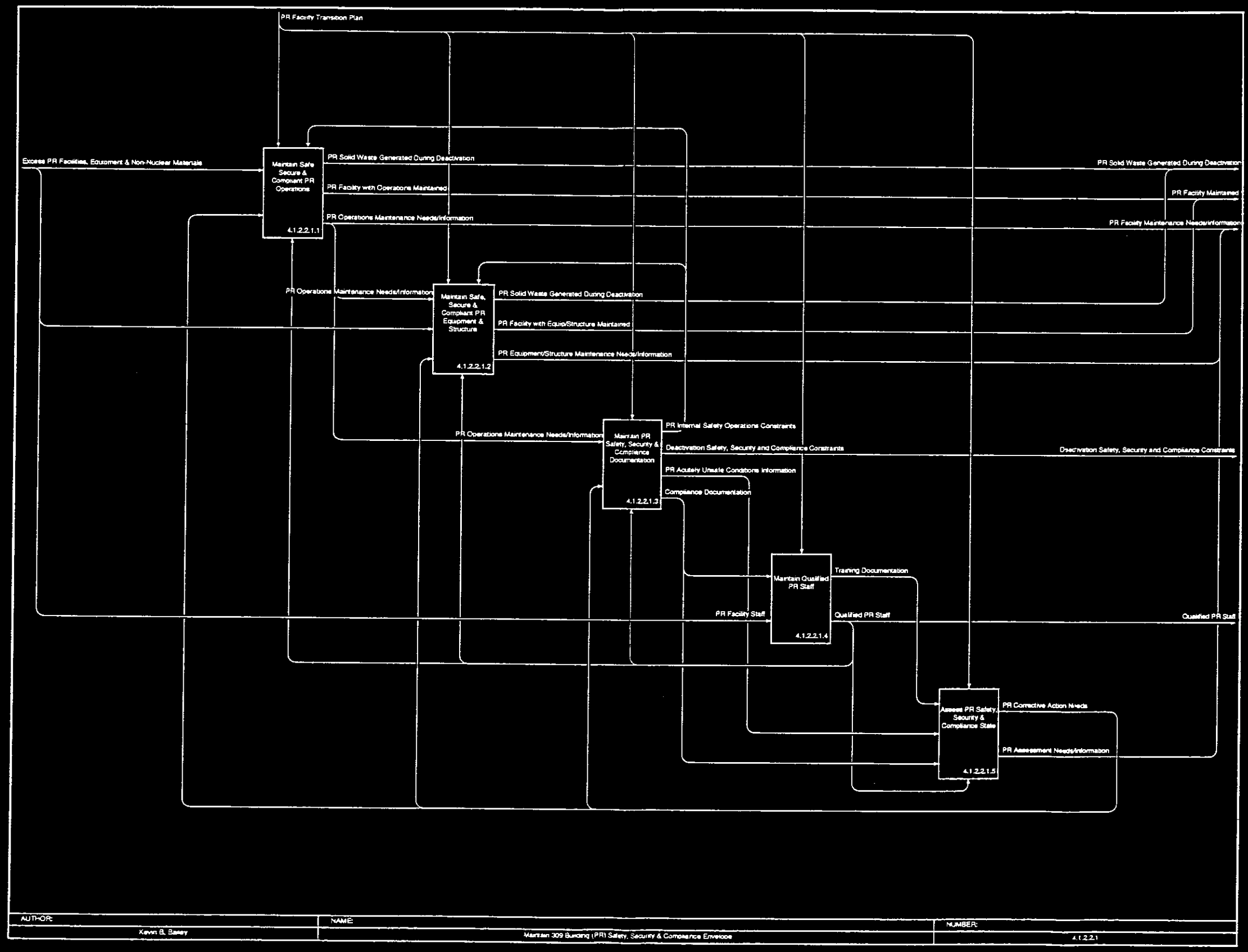
June 8, 1995 7:21:16 am



AUTHOR:	NAME:	NUMBER:
Danley, Jack C.	Deactivate 309 Building (PR)	4.1.2.2

IDEF0 Diagram
[4.1.2.2.1] Maintain 309 Building (PR) Safety, Security & Compliance Envelope

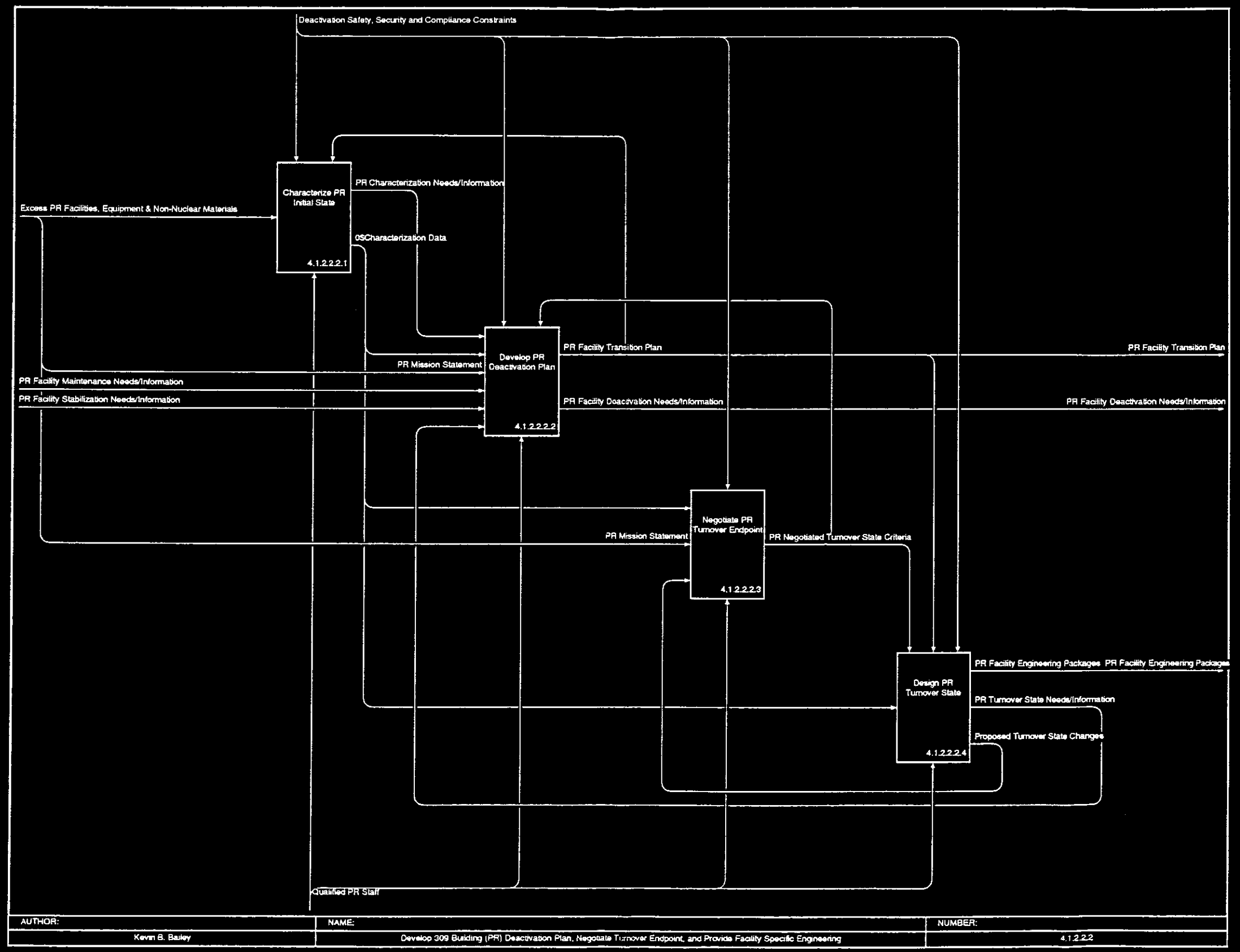
June 8, 1995 7:21:16 am



March 31, 1995 Technical Baseline

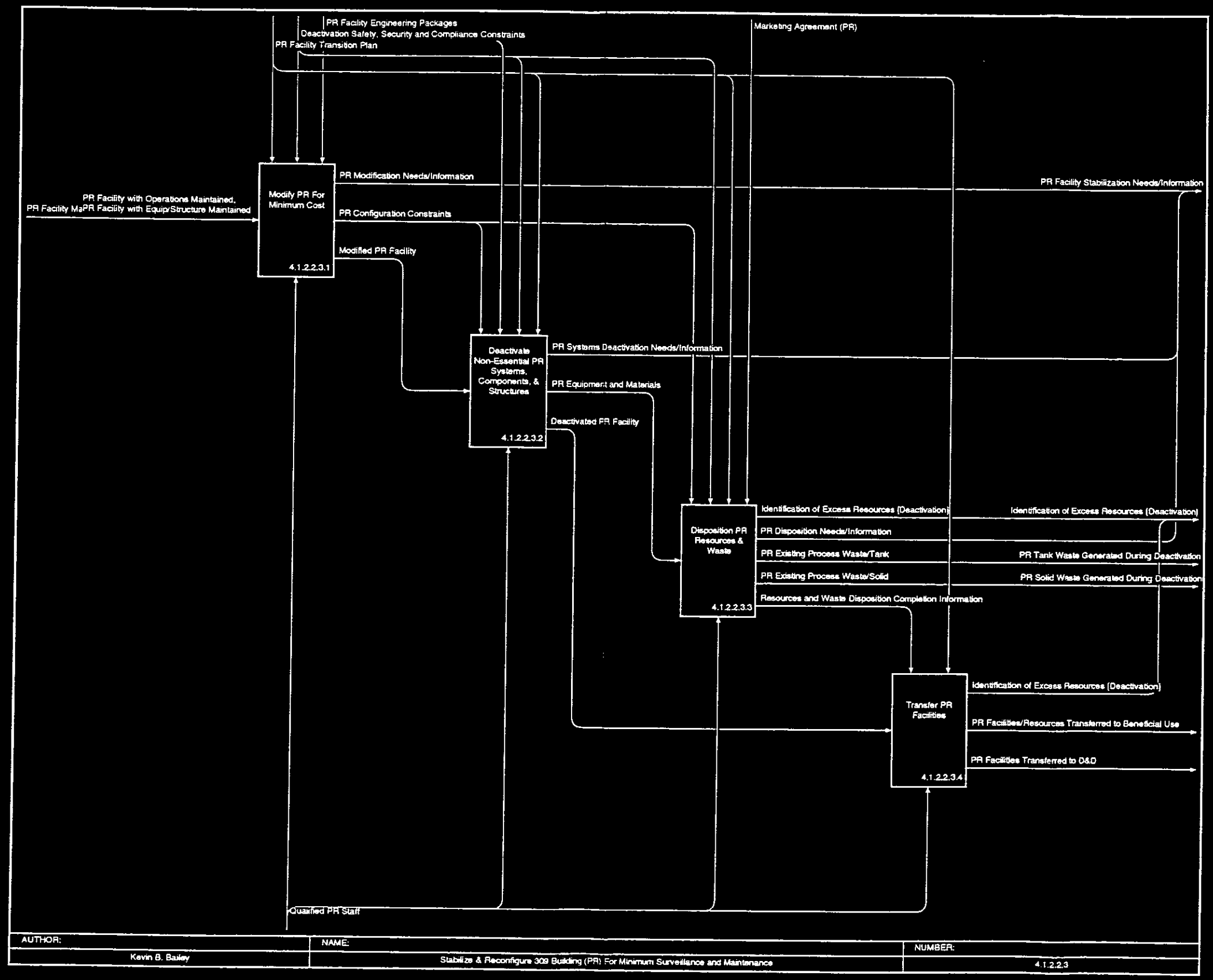
IDEF0 Diagram
[4.1.2.2.2] Develop 309 Building (PR) Deactivation Plan, Negotiate Turnover Endpoint, and Provide Facility Specific Engineering

June 8, 1995 7:21:16 am



IDEF0 Diagram
[4.1.2.2.3] Stabilize & Reconfigure 309 Building (PR) For Minimum Surveillance and Maintenance

June 8, 1995 7:21:16 am



ADDENDUM 4 - INTERFACE DEFINITIONS

[4.1.2.2] Deactivate 309 Building (PR)

Interface	*Constituents*
0$Characterization Data *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.*	
Compliance Documentation *NFPA, OSHA, and other safety and compliance documents including safety basis documents.*	
Deactivated PR Facility *A facility with all non-essential systems, equipment and structures deactivated.*	
Deactivation Safety, Security and Compliance Constraints *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.*	
Excess PR Facilities, Equipment & Non-Nuclear Materials *The systems, structures, equipment, and materials in and around PRTR and attached office building. Included is PRTR configuration and status information. Hereafter, 309 building is referred to as PR.*	• PR Facility Equip/Matls • PR Facility Staff • PR Mission Statement
Identification of Excess Resources [Deactivation] *Identification of potentially transferable resources which consists of excess inventory information.*	• 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)

[4.1.2.2] Deactivate 309 Building (PR)

Interface	*Constituents*
Marketing Agreement (PR) *Marketing Agreements consisting of identification of resources to be used in building the local economy which essentially causes transferrable items to be removed from the "disposal" list to the transfer list.*	
Modified PR Facility *PR facility that has been placed into a configuration that requires minimal cost, maintenance, surveillance, and security.*	
PR Acutely Unsafe Conditions Information *Nuclear or chemically unsafe conditions and information, does not include OSHA, for example. These are conditions detected during 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.*	
PR Assessment Needs/Information *Information and needs developed during assessment of the safety, security & compliance state.*	
PR Characterization Needs/Information *Identification of needed characterization data regarding configuration of facility, status of process and other facility systems, material contents, and contamination areas and levels.*	
PR Configuration Constraints *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.*	
PR Corrective Action Needs *Actions that must be taken to ensure that the safety and compliance envelope of the facility is maintained.*	
PR Disposition Needs/Information *Identification of additional necessary actions to complete disposition of resources or waste.*	
PR Equipment and Materials *Equipment and materials removed from 309 building as a result of deactivation activities. These are potentially transferrable resources.*	

[4.1.2.2] Deactivate 309 Building (PR)

Interface	*Constituents*
PR Equipment/Structure Maintenance Needs/Information *Information on maintenance, calibration, and minor modifications activities, as well as status of equipment and structure, compliance state, and design & configuration information.*	
PR Existing Process Waste/Solid *Waste from previous process activities in the facility that occurs as solid waste.*	
PR Existing Process Waste/Tank *Waste from previous process activities in the facility that exist in tanks or transfer lines.*	
PR Facilities Transferred to D&D *Facilities turned over for D&D in accordance with acceptance criteria defined for initiation of D&D activities.*	
PR Facilities/Resources Transferred to Beneficial Use *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.*	
PR Facility Deactivation Needs/Information *Information, developed during performance of facility deactivation activities, provided to program management functions to support decision-making essential to managing the deactivation process.*	
PR Facility Engineering Packages *Detailed procedures and work packages necessary for the stabilization and reconfiguration activities.*	
PR Facility Maintained *309 building maintained in a safe condition by appropriate surveillance, preventive and corrective maintainance activity.*	• PR Facility with Equip/Structure Maintained • PR Facility with Operations Maintained
PR Facility Maintenance Needs/Information *Information on maintenance, calibration, and minor modifications activities.*	• PR Assessment Needs/Information • PR Equipment/Structure Maintenance Needs/Information • PR Operations Maintenance Needs/Information

[4.1.2.2] Deactivate 309 Building (PR)

Interface	*Constituents*
PR Facility Stabilization Needs/Information *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.*	• PR Disposition Needs/Information • PR Modification Needs/Information • PR Systems Deactivation Needs/Information
PR Facility Staff *309 building deactivation direct staff and indirect support staff prior to necessary training and testing qualifications.*	
PR Facility Transition Plan *309 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, ie. ER.*	
PR Facility with Equip/Structure Maintained *PR facility equipment and structures maintained by appropriate preventive and corrective maintainance.*	
PR Facility with Operations Maintained *PR facility maintained in a safe condition by appropriate surveillance, access control, and material management.*	
PR Internal Safety Operations Constraints *Safety constraints derived from PR safety basis, radiological safety procedures, occupational safety codes and standards, DOE safety orders, etc.*	
PR Mission Statement *Includes the project scope, mission statement, project objectives, and mission definition developed for the 309 Building Deactivation Mission Analysis Report.*	
PR Modification Needs/Information *Identification of additional modifications necessary to place facility in minimal cost state for surveillance, maintenance, and security.*	
PR Negotiated Turnover State Criteria *Definition of the condition of the PR facility at turnover to D&D (e.g. turnover acceptance criteria). The condition represents a safe, minimum cost, dormant state condition from the PR facility.*	

Interface	*Constituents*
PR Operations Maintenance Needs/Information *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.*	
PR Solid Waste Generated During Deactivation *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.*	• Contaminated Water (PR) • Ion Exchange Columns (PR) • PR Existing Process Waste/Solid
PR Systems Deactivation Needs/Information *Information and needs identified during deactivation of non-essential systems, components, & structures necessary to place facility in minimal cost state for surveillance.*	
PR Tank Waste Generated During Deactivation *Contaminated waste from tanks or transfer lines that is generated as a direct result of facility deactivation activities.*	• PR Existing Process Waste/Tank
PR Turnover State Needs/Information *Needs and information identified during design of the PR turnover state, which are utilized for development of the PR Deactivation Plan.*	
Proposed Turnover State Changes *Potential changes to the turnover state criteria based on facility engineering activities.*	
Qualified PR Staff *Staff that has had the necessary training and testing to perform the facility deactivation and material disposition activities in a safe and compliant manner.*	
Resources and Waste Disposition Completion Information *Certification that removable waste and resources have been dispositioned and other deactivation activities are complete.*	
Training Documentation	