

**WORKING GROUP
FINAL DRAFT FOR REVIEW**

**DECOMMISSIONING PROGRAM
PLAN**

**(A RFCA Standard Operating
Protocol)**

DPP/RSOP

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EXECUTIVE SUMMARY

The Decommissioning Program Plan (DPP) describes the general procedures and processes for building disposition as defined by the Rocky Flats Cleanup Agreement (RFCA). The RFCA is the umbrella agreement that applies to cleanup of the Rocky Flats Environmental Technology Site (the Site). The RFCA regulates the Site remedial activities for Individual Hazardous Substance Sites (IHSS), decommissioning, mixed waste compliance activities, regulatory milestones and closure of underground storage tanks. At any given time, a given building or area may be in different stages of the operations/deactivation/decommissioning/remediation spectrum.

The Decommissioning Program Plan (DPP) is designated in the Rocky Flats Cleanup Agreement (RFCA) as a Site-Wide document subject to the review and approval of the Colorado Department of Public Health and Environment (CDPHE) and the U.S. Environmental Protection Agency (EPA). The RFCA allows the use of RFCA Standard Operating Protocols (RSOPs) for repetitive actions of a similar nature. Both the DPP and RSOP require review and approval. The RFCA also requires submittal of a Decommissioning Operations Plan (DOP) for each major facility for approval.

Decommissioning of all (non-DOP) facilities are similar in nature and the decommissioning protocol is described in this DPP. The DPP and RSOP have been combined into one document, described as the DPP/RSOP. Therefore the DPP is the RSOP for all building decommissioning except for those requiring DOPs. The DPP/RSOP provides a standardized evaluation and implementation protocol, that ensures all buildings are decommissioned using appropriate methodologies and DOE guidance.

The approved DPP provides RFCA authorization for the decommissioning of the non-DOP facilities (and associated external equipment or structures) listed in Appendix 1. The approval of the DPP includes approval of the Decommissioning RSOP. These facilities will be decommissioned using the protocol described in the Decommissioning Process Flow and those invoked by the remainder of the DPP text. The DPP also provides the National Environmental Policy Act documentation for Sitewide Building Decommissioning.

Decommissioning at the Rocky Flats Environmental Technology Site is performed on the three types of facilities described in the following paragraphs. The DPP/RSOP is used for all building decommissioning of the first and second facility types. The DOP is used for all building decommissioning of major facilities, the third type.

The first type, comparable to school or small business facilities, are industrial, office, or temporary trailer buildings that have never been used for radioactive or chemical process missions. These may have housed incidental quantities of chemicals or contain asbestos, lead-based paints and/or PCBs due to the period in which they were constructed.

The second type, comparable to a refinery or power plant, are industrial or office type structures that may have had plutonium, radioactive materials, or chemicals pass through in shipping containers or stored these materials prior to their transport to other facilities. These too, may have housed incidental quantities of chemicals or contain asbestos, lead-based paints and/or PCBs due to the period in which they were constructed.

The third type, decommissioned using a DOP and comparable to a uranium mill or processing plant are industrial buildings that did significant work with radioactive materials or chemicals or both. Some of these building were built as blast resistant structures, so their walls are thicker than ordinary industrial structures. These buildings contain radioactive and chemical contamination along with expected asbestos, lead-based paints and/or PCBs due to the period in which they were constructed.

The buildings decommissioned under the DPP/RSOP are occupied routinely as office space or for day use (e.g. garages, maintenance shops) to support the plant mission. The normal procedures for government property disposal are followed to determine if these buildings are candidates for reuse on the site, transfer to some other arm of the government for use, or for sale to the public. If the buildings are too old or worn out to be recycled, the buildings will be demolished and the rubble managed appropriately.

Typically, a building undergoing decommissioning will experience the following actions. An inspection of the building called the reconnaissance level characterization is performed. The building is evaluated for anything that would cause the building to not be recyclable or disposable as ordinary demolition waste. Specific attention is given to regulated chemicals, including asbestos, PCBs, and lead. If asbestos, PCBs, lead or other chemicals are found, they are removed and disposed of in accordance with the applicable regulation. Similarly, since Rocky Flats is known to have used radioactive materials, the buildings are evaluated using the Site Radiological Control Manual requirements to determine if their radioactivity levels are suitable for unrestricted use or require disposal as radioactive waste. If cost effective relative to disposal costs, the buildings are decontaminated. Cleaning or removal methods for chemical or radioactive items vary. The simplest but also least likely would be to remove the material in its container and dispose of it according to its characteristics. Contaminant material conditions will vary from loose powders or films to tightly attached or imbedded. Loose materials can be scraped, swept or vacuumed into controlled containers and disposed. More tightly bound material can often be removed by a scrubbing with a decontamination solution (essentially an industrial grade cleaning solution). The scrubbing rags, etc. and the solution are managed as a contaminated waste. Surface contamination can sometimes be removed by sandblasting or carbon dioxide pellet blasting. These residues are also managed as waste. Sometimes the materials have soaked into concrete or been painted over as a temporary control. Removal of the paint layer and/or several inches of concrete may remove the material completely leaving uncontaminated concrete structures.

In some cases, none of these or all of these methods are not sufficient to achieve economic decontamination to non-hazardous or non-radioactive debris and the building (or parts of the building) will be disposed of as Low-Level or Transuranic (TRU) waste. Recycled buildings are hauled offsite by moving contractors, trailers on their own wheels or flatbed trucks. Some buildings may be moved using commercial house moving techniques after disconnecting and/or capping the utility hookups. Each building is demolished or removed until, typically the foundation or slab remains in place with capped or terminated utilities present at the end of decommissioning.

The remaining slab or foundation achieves two purposes. First, any IHSS or OU under the building is not disturbed until the IHSS or OU is ready to be remediated. Second, the decommissioning or removal of buildings does not affect surface or ground water quality since the roof area removed is the equivalent of the foundation or slab remaining and the precipitation runoff characteristics should be essentially the same. Air emissions are monitored as part of the fugitive dust monitoring associated with demolition of the building shell, emissions prior to the destruction of the building shell are monitored by the existing monitoring systems.

This DRAFT DPP is organized as follows. Section 1 identifies the purpose and scope of the DPP. Section 2 presents how the existing infrastructure ensures regulatory compliance and the ARAR implementation infrastructure. Section 3 covers the various characterization data applications, including Characterization Types, Expected Contaminants, Health & Safety Plans, Waste Management, Building and Equipment Release Criteria and DOP decision criteria. Section 4 places decommissioning in the perspective of the Site closure. Section 5 provides the protocol from beginning to end of decommissioning for a facility approved under the DPP/RSOP. Section 6 contains the descriptions of the existing site conditions, alternatives considered, how decommissioning affects the final closure and the NEPA values for the decommissioning of all buildings on site. Section 7 indicates typical technologies that may be used for decommissioning dependant upon the conditions encountered. Sections 8, 9 and 10 are self explanatory. Attachment 1 identifies the scope of this protocol. Attachment 2 provides the Building Disposition Baseline from the Ten Year Plan Integrated Sitewide Baseline schedule for decommissioning. Appendix 1 - A list of buildings and other structures provides the next level of detail in the Ten Year Plan Cluster schedule. Cluster Identification and Planned Decommissioning Start and Finish Dates are shown. Appendix 2 lists the buildings potentially requiring documentation under the National Historic Preservation Act. Appendix 3 lists the references used, or which provided background or content information.

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1 INTRODUCTION

The action being considered for approval in accordance with Rocky Flats Cleanup Agreement (RFCA) (DOE 96a)* RFCA Part 9 - *Review and Approval of Documents and Work*, is a program plan to conduct decommissioning of buildings at RFETS. Although RFCA Part 8 and Attachment 9 provide the basic regulatory scheme for conducting decommissioning, the Decommissioning Program Plan is necessary to provide the basic criteria and logic flow to implement the scheme.

1.1 Decommissioning Program Plan (DPP)

The purpose of the Decommissioning Program Plan is to provide the RFCA Standard Operating Protocol (RSOP) that will authorize and govern the decommissioning of Site facilities. The DPP/RSOP provides a standardized evaluation and implementation protocol, that ensures all buildings are decommissioned using appropriate methodologies and DOE guidance (DOE 95c & 95d). The DPP contains a description of the Site Decommissioning process which includes the decision logic used to determine whether a building will be covered under the DPP/RSOP for regulatory approval or will in addition require a Decommissioning Operations Plan (DOP). Upon approval of the DPP in accordance with the RFCA, the DPP shall constitute the work approval document to conduct the activities specified in the DPP.

In accordance with the RFCA Attachment 9, the DPP applies to all buildings at RFETS. "Buildings" are further defined as those identified in Attachment 1 - *"Building" List by Cluster*. The use of the term "building(s)" in the remainder of this document means the facilities identified in Attachment 1. Attachment 2 provides the Building Disposition Baseline

1.2 Purpose of Decommissioning

The purpose of decommissioning is to disposition facilities which have no future mission as a preamble to the Site Remediation Actions that will be performed. The Rocky Flats Cleanup Agreement (RFCA) (DOE 96a) reaffirms that mortgage reduction is obtained by decommissioning followed by remediation or turnover for other non-DOE uses. The RFCA has integrated numerous requirements into an executable framework. The RFCA has established that all building decommissionings are removal actions under CERCLA to be conducted utilizing the Decommissioning Program Plan (DPP) and, as required, facility-specific Decommissioning Operation Plans (DOP). The RFCA allows the use of RSOP, i.e. RFCA Standard Operating Protocols to perform repetitive, similar decommissioning activities (standard work activities). Completion of decommissioning also reduces the potential for release of hazardous or radioactive materials. For those facilities that do not contain regulated materials, decommissioning makes those facilities available as excess government property. Decommissioning of the buildings on the Site is an intermediate activity that provides access to the Individual Hazardous Substance Sites (IHSS) or Operational Units (OU) to perform the associated Remedial Actions. Decommissioning does not provide Remedial Actions for those IHSSs or OUs.

1.3 References

The references used, or which provide background or content information are contained in Appendix 3 of this DPP. These references are not incorporated into the DPP, but some of them are independently enforceable as requirements under RFCA.

* See Appendix 3 for reference details.

2 REGULATORY COMPLIANCE

The Department of Energy has produced the *Rocky Flats Vision* (DOE 96b). Its opening statement reads: **"The vision for Rocky Flats is ...To achieve accelerated cleanup and closure of Rocky Flats in a safe, environmentally protective manner and in compliance with applicable state and federal environmental laws..."** The DOE promulgates this requirement by requiring environmental compliance as a contractual term for its contractors and subcontractors at Rocky Flats. The Integrating Management Contractor, Kaiser-Hill incorporates this standard in Kaiser-Hills *Environmental Management Policy* (K-H 96a) **"The Kaiser Hill Team is committed ... complying with governing laws, permits and compliance agreements ... and will rely on each of its employees to maintain environmental compliance..."** This requirement is contractually required of all Team members as part of their contracts to perform work at the Site.

Actions performed at the Site are conducted in accordance with all applicable federal, state, and local laws, regulations, and DOE Orders with the protection of workers, the public, and the environment as our first consideration. The Site has a mature compliance program with environmental, waste management, radiological, and occupational safety regulations incorporated in Site documents to assure compliance.

This infrastructure has been reviewed or observed by the Defense Nuclear Facilities Safety Board, the Department of Energy, the Colorado Department of Health and Environment, the Environmental Protection Agency and other appointed review groups. The Site infrastructure is continually re-evaluated by Oversight and Compliance audits, inspections, and reviews. The activities continue to confirm that the Site operates in compliance with all applicable federal, state, and local laws, regulations, and DOE Orders. In order to maintain this record of compliance, decommissioning will rely on a proven two part strategy: 1) Use of the Site Infrastructure; and 2) Evaluation of the Applicable or Relevant and Appropriate Regulations (ARARs).

2.1 Site Infrastructure

Kaiser-Hill's *Quality Assurance Policy* (K-H 96b) states: **"Kaiser-Hill shall conduct all ...Site activities in a quality conscious manner in accordance with the applicable programmatic requirements."** The programmatic requirements, although identical, are contained in 10CFR 830.120 - *Quality Assurance Requirements* for nuclear facilities and activities and DOE Order 5700.6C - *Quality Assurance* for non-nuclear facilities and activities. Decommissioning as an activity falls under one or the other requirement depending upon the amounts of radiological material present for decommissioning. The *Conduct of Operations Policy* (K-H 96c) states: **"All operations and activities at ..RFETS are to be conducted in a manner consistent with the DOE Conduct of Operations philosophy of formality and accountability ..."** Decommissioning of buildings will be performed in accordance with this DPP or each building specific DOP.

The existing Site infrastructure implements these regulations and policies and provides assurance that these regulations are met. No planned decommissioning activity will require actions that cannot be accomplished through the existing site infrastructure. Personnel Training and Qualification is implemented using the *Training Users Manual* (K-H 97a). Record management and retention is governed by the *Records Management Guidance for Records Sources* (K-H 95f). Physical work is controlled by the *Integrated Work Control Program (IWCP)*(K-H 96e). The IWCP ensures that the *Radiation Control Manual* (K-H 96g) and the *Health & Safety Practices Manual* (K-H 96f) are appropriately considered for each IWCP package. Control of Measuring and Test Equipment is invoked by 1-197-ADM-12.01 *Control of Measuring and Test Equipment* (K-H 96p). Procedures affecting decommissioning are prepared in accordance with the Site Procedures Program (K-H 96q). Additional reviews of regulatory requirements are proposed only for newly issued rules and regulations.

The Site infrastructure is typically invoked through the authorization basis identified in the Master Activity List. The graded approach to decommissioning applies only those portions of the infrastructure that are applicable to the specific activities being performed. The graded approach establishes the degree of confidence needed in the quality of the results, in the value added by the increase in quality, and in the risk posed by the item or activity to health, safety, and the environment. Infrastructure includes but is not limited to the following programs and procedures:

- Administrative Procedures (K-H 96h)
- Conduct of Operations (K-H 96c)
- Conduct of Engineering (K-H 96i)
- Hazardous Waste Requirements Manual (K-H 95a)
- Health and Safety Practices Manual (K-H 96f)
- Integrated Work Control Program, (K-H 96e)
- Low-Level Waste Management Plan (EG&G 92a)
- Nuclear Safety Manual (K-H 95b)
- Radiological Control Manual (K-H 96f)
- Radiological Engineering Procedures (EG&G 94a)
- Radiological Operating Instructions (K-H 96j)
- RFETS Emergency Plan (K-H 95c)
- Site Quality Assurance Plan (K-H 96k)
- Site Quality Assurance Program Procedure Manual (K-H 96l)
- Transuranic (TRU) Waste Management Plan (EG&G 92b)
- Transportation Manual (K-H 96m)

The Site Policy Manual requires that potential or actual violations of these requirements are evaluated and corrected through the *Occurrence Reporting Process Procedure* (K-H 96n).

2.2 Applicable or Relevant and Appropriate Regulations (ARARs)

ARARs are the environmental regulations and requirements from the state and federal laws used to govern the cleanup. Table 2.2 lists the ARARs that apply to expected decommissioning activities. The Comments column in Table 2.2 identifies how each ARAR is implemented using the plant infrastructure. ARAR implementation will be by the indicated infrastructure or equivalent procedures reviewed and approved according to the requirements of that infrastructure. Each building decommissioning project will evaluate which ARARs apply to that project to confirm that the ARAR(s) are properly implemented for that project. Procedures to perform activities not currently included in the infrastructure will be written, reviewed and approved using the appropriate approval processes.

*****NOTE***** The ARAR table has been adjusted based upon preliminary incorporation of comments, however a meeting scheduled to be held the 14 th regarding an OU's ARARs is expected to revise the listing. We will fax you the revised pages as soon as they are available. If you do not receive faxes from John Whiting routinely, please call 303-966-7592 and leave an aude message stating your name, fax number and that you need a revised ARAR table when available. Thanks. *****Note*****

TABLE 2.2 - FEDERAL AND STATE ARARs

Requirement	Citation	Type	Comment/Implementation Process
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
AMBIENT AIR QUALITY STANDARDS	5 CCR 1001-14 [40 CFR 50]	C	National Ambient Air Quality Standards (NAAQS) are considered to be chemical-specific ARARs to assess the quality of ambient air and the need to remediate a particular IHSS to maintain the quality of the ambient air. The Site's Air Monitoring Program is implemented in 4D21-ENV-AQ.11 and several level four procedures.
COLORADO AIR POLLUTION REGULATIONS	5 CCR 1001 [40 CFR 52, Subpart G]		Regulation No. 1, Section III.D(2)(b), (c), (f), and (h) requires control measurements to be implemented for construction activities, haul roads, haul trucks, and demolition activities, respectively, to prevent the emission of fugitive particulates in excess of air standards. Regulation Nos. 3, 6, 7, 8, and 15 would be an ARAR only if the remedial action involves the specific emission source regulated.
<ul style="list-style-type: none"> • Emission Control Regulations for Particulates, Smokes, Carbon Monoxide, and Sulfur Oxides - Particulates - Emission Monitoring Requirements for Existing Sources - Sulfur Dioxide Emission Regulations 	[5 CCR 1001-3]	A	
<ul style="list-style-type: none"> • Air Contaminant Emissions Notices • Standards of Performance for New Stationary Sources 	[5 CCR 1001-5] [5 CCR 1001-8]		The Site's Air Monitoring Program is implemented in 4D21-ENV-AQ.11 and several level four procedures.
<ul style="list-style-type: none"> • Control of Hazardous Air Pollutants • Emissions of Ozone-Depleting Compounds 	[5 CCR 1001-10] [5 CCR 1001-19]		
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS	40 CFR 61, Subpart H		
<ul style="list-style-type: none"> • National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities - Standard - Compliance and Reporting 	.92 .93	C/A	Demonstration of compliance with 40 CFR 61.92 is performed on a statewide basis taking into consideration all RFETS sources. Stack monitoring is required for all release points which could contribute greater than 0.1 mrem/yr. The Site's Air Monitoring Program is implemented in 4D21-ENV-AQ.11 and several level four procedures.
COLORADO AIR QUALITY CONTROL COMMISSION	Regulation 8		
<ul style="list-style-type: none"> • Part B - Emission Standards for Asbestos 		A	Integrated into site procedure for Asbestos and training requirements for Decommissioning workers. The Site's Air Monitoring Program is implemented in 4D21-ENV-AQ.11 and several level four procedures.

A - Action-Specific ARAR
 C - Chemical-Specific ARAR
 L - Location-Specific ARAR
 TWC To Be Considered

TABLE 2.2 - FEDERAL AND STATE ARARS

Requirement	Citation	Type	Comment
FEDERAL WATER POLLUTION CONTROL ACT (aka Clean Water Act (CWA)) [33 USC 1251 et. seq.]			
COLORADO BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER • Basic Standards Applicable to Surface Waters of the State • Classifications and Numeric Standards for South Platte River Basin; Laramie River Basin; Republican River Basin; Smoky Hill River Basin	5 CCR 1002-8 3.1.11 3.8.0	C Applicable	Implementation of these requirements are found in Site EMD Standard Operation Procedures, Vol. IV SW.02 and in attachments to the Rocky Flats Cleanup Agreement.
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]			
The State of Colorado is authorized to administer portions of the hazardous waste management program (e.g., RCRA) to regulate the generation, treatment, storage, and disposal of hazardous waste within Colorado. As such, the Colorado regulations would be applicable to the management of hazardous waste. These regulations may also be relevant and appropriate in situations where a remediation waste is "sufficiently similar" to a RCRA-listed waste (e.g., waste which was generated and disposed of prior to the effective date of regulation) or when the proposed remedial action is similar to a RCRA-regulated activity and would be appropriate to ensure that the activity is protective of human health and the environment. Although the Colorado hazardous waste management regulations are similar to the federal requirements, both the federal and state regulatory citations are provided for reference purposes and to denote that both federal and state requirements were considered in establishing the identifying the ARAR requirement adopted for the remediation of the RFETS. Only substantive portions of the regulations are required under CERCLA actions for onsite activities.			
IDENTIFICATION AND LISTING OF HAZARDOUS WASTES	6 CCR 1007-3, 261 [40 CFR 261]	A	RCRA requirements are implemented through the Hazardous Waste Requirements Manual (1-10000-HRM).
GENERATOR STANDARDS • Hazardous Waste Determinations • Record Keeping and Reporting Requirements - Record Keeping and Reporting	6 CCR 1007-3, 262 [40 CFR 262] .11 .40 to .43	A	Persons who generate solid wastes are required to determine if the waste is hazardous. The definition and procedures contained in 6 CCR 1007-3, 261 [40 CFR 261] are to be followed to make this determination. RCRA requirements are implemented through the Hazardous Waste Requirements Manual (1-10000-HRM).

TABLE 2.2 - FEDERAL AND STATE ARARS

<p>CONTINGENCY PLAN AND EMERGENCY PROCEDURES</p> <ul style="list-style-type: none"> • Purpose and Implementation • Content of Plan • Emergency Coordinator • Emergency procedures 	<p>6 CCR 1007-3, 264, Subpart D [40 CFR 264, Subpart D] .51 .52 .55 .56</p>	<p>A</p>	<p>The existing REETS contingency plan will be reviewed and revised accordingly to ensure that the procedures are adequate to respond to any new conditions posed by the remedial actions and/or the operation of new hazardous waste management facilities. RCRA requirements are implemented through the Hazardous Waste Requirements Manual (1-10000-HRM).</p>
<p>MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING</p> <ul style="list-style-type: none"> • Applicability • Operating Record • Availability, Retention, and Disposition of Records 	<p>6 CCR 1007-3 Part 264, Subpart E [40 CFR 264, Subpart E] .70 .73 .74</p>	<p>A</p>	<p>RCRA requirements are implemented through the Hazardous Waste Requirements Manual (1-10000-HRM).</p>
<p>CLOSURE AND POST-CLOSURE</p> <ul style="list-style-type: none"> • Closure Performance Standards • Disposal or Decontamination of Equipment, Structures and Soils • Maintenance, Monitoring, Security, and Care • Post-Closure Use of Property 	<p>6 CCR 1007-3, 264, Subpart G [40 CFR 264, Subpart G] .111 .114 .117</p>	<p>A</p>	<p>RCRA requirements are implemented through the Hazardous Waste Requirements Manual (1-10000-HRM).</p>
<p>USE AND MANAGEMENT OF CONTAINERS</p> <ul style="list-style-type: none"> • Condition of Containers • Compatibility of Waste with Containers • Management of Containers • Inspections • Containment • Containment System Design and Operation • Containment for Ignitable or Reactive Wastes • Containment for Incompatible Wastes • Closure 	<p>6 CCR 1007-3, 264, Subpart I [40 CFR 264, Subpart I]</p>	<p>A</p>	<p>RCRA requirements are implemented through the Hazardous Waste Requirements Manual (1-10000-HRM).</p>

TABLE 2.2 - FEDERAL AND STATE ARARS

<p>STORAGE REQUIREMENTS FOR PCBs</p> <ul style="list-style-type: none"> • Time Limits • Facility Criteria • Temporary Storage • Inspections • Container Specifications • Marking • Laboratory Sample Exemption From Manifesting 	<p>40 CFR 761.65</p>	<p>A</p>	<p>TSCA requirements are implemented through the TSCA Requirements Manual (1-10000-TRM).</p>
<p>DECONTAMINATION</p> <ul style="list-style-type: none"> • Containers • Movable Equipment 	<p>40 CFR 761.79</p>	<p>A R/A</p>	<p>TSCA requirements are implemented through the TSCA Requirements Manual (1-10000-TRM).</p>
<p>PCB SPILL CLEANUP</p> <ul style="list-style-type: none"> • Requirements for PCB Spill Cleanup • Disposal of Cleanup Debris and Materials • Determination of Spill Boundaries • Spills of <500 ppm PCBs, Involve <1 lb of PCBs by wt. • Spills of <500 ppm PCBs, Involve <1 lb of PCBs by wt. • Time Limits and Actions Within the First 24 Hours • Requirements for Decontaminating Spills in Outdoor Electrical Substations • Requirements for Decontaminating Spills in Restricted Access Areas • Sampling Requirements 	<p>40 CFR 761.125</p>	<p>TBC</p>	<p>TSCA requirements are implemented through the TSCA Requirements Manual (1-10000-TRM).</p>

TABLE 2.2 - FEDERAL AND STATE ARARS

Requirement	Citation	Type	Comment
ATOMIC ENERGY ACT (AEA) [42 USC 2200 et. seq.]			
RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT		TBC	
<ul style="list-style-type: none"> • Radiation Protection Standard - All Pathways • Radiation Protection Standard - Airborne Emissions • Radiation Protection Standard - TRU Waste Storage/Disposal • ALARA Process • Effluent Discharges to Surface Waters • Effluent Discharges to Sanitary Sewer Systems • Residual Radioactivity Levels (Real Property, Materials, and Equipment) • Monitoring and Surveillance 	<p>DOE Order 5400.5 (10 CFR 834, Proposed) Chapter II.1a and III (834.101) Chapter II.1b (834.102) Chapter II.1c (834.109) Chapter II.2 (834.11) Chapter II.3a (834.201) Chapter II.3d (834.203) Chapter II.5 and IV (834, Subpart D) Chapter II.6 (834.10)</p>		<p>This DOE Order establishes criteria for the protection of human health and the environment to ensure radiation exposure resulting from DOE activities does not exceed an effective equivalent dose for 100 mrem per year. This radiation dose limit also forms the basis for the release of radionuclides to the environment and the release of properties for unrestricted use.</p> <p>State Regulations, 6 CCR 1007-1.1 et seq, are not applicable to decommissioning actions but are identified for reference. State exposure level for workers and the public, 6 CCR 1007-4, also are for other types of actions.</p>
ENVIRONMENTAL RADIATION PROTECTION STANDARDS FOR MANAGEMENT AND DISPOSAL OF SPENT NUCLEAR FUEL, HIGH LEVEL, AND TRANSURANIC RADIOACTIVE WASTE - Radioactive Dose Standards	40 CFR 191	C	Standards apply to TRU waste only.
RADIOACTIVE WASTE MANAGEMENT	.03		
<ul style="list-style-type: none"> • Management of Transuranic Waste • Temporary Storage at Generating Sites • Management of Low-Level Waste • Performance Objectives • Performance Assessment • Waste Characterization • Disposal • Disposal Site Closure/Post Closure • Environmental Monitoring 	<p>DOE Order 5820.2A Chapter II 3e Chapter III 3a 3b 3c 3i 3j 3k</p>	TBC	<p>Waste Management Operations Procedures, 1001-1103, implement these guidance functions into all Radiological Waste Streams.</p>
Radiation Site Cleanup Regulations	Draft 40 CFR 196	TBC	

3 CHARACTERIZATION APPLICATION

One of the concerns of all involved with decommissioning is that a building or its contents might be inappropriately dispositioned. The consistency of the facility disposition process is maintained by all buildings being characterized and then screened for appropriate disposition. This section describes general characterization terms and requirements, followed by a description of how the results are used in make the various decisions that determine the level of detail of the project plan for a specific facility. This is the proper application of the graded approach and results in appropriate disposition and the most effective use of the available funding.

3.1 Facility Characterization

The decommissioning of buildings requires that the physical, radiological and chemical condition of the facility be assessed. Characterization is achieved through a combination of facility walkdowns, reviews of historical records, interviews of personnel familiar with building operations, direct measurement, non-destructive assays, and sample collection for laboratory analysis. The characterization data will be utilized for assessing potential hazards, waste management decisions, as the basis for the development of the technical approach to decommissioning, and to determine the appropriate release controls for property and wastes. Facility characterization is an iterative process that will build on existing information and continue through the decommissioning project.

Characterizations performed to support decommissioning activities will utilize the characterization results collected during deactivation. The results of characterization activities will be used to support decision making both prior to beginning decommissioning activities as well as throughout the decommissioning process. The data will be available to project decision makers, engineering personnel, health and safety specialists, radiological engineering staff and decommissioning workers. The characterization results will be integral part of the decommissioning planning basis for both the DOP and the more detailed work planning documents such as the IWCPs. Characterization will be an ongoing program throughout the decommissioning process with four basic components.

3.1.1 Data Quality Assurance

Kaiser-Hill's *Quality Assurance Policy* (K-H 96b) states: "**Kaiser-Hill shall conduct all ...Site activities in a quality conscious manner in accordance with the applicable programmatic requirements.**" The identical programmatic requirements are contained in 10CFR 830.120 for nuclear facilities and activities and DOE Order 5700.6C for non-nuclear facilities and activities. Decommissioning as an activity falls under one or the other requirement depending upon the amounts of radioactive material present for decommissioning. Data quality assurance is assured by the preparation of project specific characterization plans using the Data Quality Objectives Process. The fundamental questions that must be considered include the types of contaminants suspected, what level constitutes "contamination," current state of analysis sensitivity, and how the data will be used. Based on project specific needs, the Data Quality Objectives Process will establish kinds of samples or measurements required, required instrument sensitivities, sample sizes, number of samples/measurements, QA requirements and data reduction, validation and reporting requirements.

Analysis of characterization samples results will be performed under a Kaiser-Hill approved Quality Assurance (QA) program. The QA program provides a measure of confidence in the results of the monitoring programs in order to assure the regulatory agencies and the public that the results are valid. Written procedures will be used for sample collection; packaging, shipment, and receipt of samples for offsite analysis; preparation and analysis of samples; maintenance, storage, and use of radioactivity reference standards; calibration and checks of radiation and radioactivity measurement systems; and evaluation, and reporting of data. Data will be reviewed and compared to project specific requirements to determine their use to support project decisions.

3.1.2 Reconnaissance Level Characterization Survey

Provides a report designed to collect in a single document sufficient information to establish a planning basis concerning the physical, chemical and radiological conditions of the facility. The Reconnaissance Level Characterization Report will serve as the technical basis to develop preliminary project details and will be provided to the lead regulatory agency.

The reconnaissance level characterization is performed to establish a preliminary estimate of the type of the physical, chemical, and radiological hazards of the facility. This includes the assembly and review of existing characterization data, taking samples if needed, and conducting inspections designed to complement existing information. The purpose of the characterization is (1) to evaluate the physical and chemical characteristics of radiological and hazardous material contamination and the extent of contaminant distribution; (2) to assess the environmental parameters that effect potential human exposure from existing and residual radiological or hazardous material contamination; (3) to support the preparation of detailed decommissioning work plans, Decommissioning Operations Plan (DOP), and to assist in determining the preferred approach for decontamination, equipment removal, and waste disposal; (4) to estimate the type and amount of waste to be generated during decommissioning; (5) to support required project plan considerations of dose assessments and As Low As Reasonably Achievable (ALARA) analyses.

The Reconnaissance Level Characterization is performed by evaluating the facility for unrestricted release using procedure *Radioactive Material Transfer and Unrestricted Release of Property and Waste* (K-H 95g). Radiological characterization is performed using the procedure *Performance of Surface Contamination Surveys* (K-H 95h) or equivalent. Release of surfaces or equipment is determined by using procedure *Radiological Requirements for Unrestricted Release* (K-H 95i). Chemical characterization is performed by a process knowledge evaluation of the *Waste Stream and Residue Identification and Characterization (WSRIC)* Document for that facility against the conditions observed during the facility inspection. Chemical waste forms are identified using the procedure *Waste Identification and Analysis* (K-H 95j) by qualified waste generators who have been trained to the requirements of the procedure *RCRA Training and Qualification* (K-H 95k). Industrial Hygiene personnel perform an building inspection using the *Building Inspections* procedure (EG&G 91). They perform asbestos characterization using the *Asbestos Control Program* procedure (EG&G 90) and the *Bulk Asbestos Sampling and Assessment* procedure (EG&G 94b) if required. Lead is characterized using the *Lead Control Program* procedure (EG&G 92c) and Beryllium using the *Beryllium Control Program* procedure (EG&G 92d). Polychlorinated Biphenyls (PCBs) are characterized using the *Polychlorinated Biphenyls* procedure (Rockwell-89).

The Reconnaissance Level Characterization includes:

- Review of available Historical Information;
- Identification of Known Contaminants;
- Use of the Data Quality Objectives Process to Define Initial Survey and Sampling Plans;
- Conduct of Sampling and Measurements
- Review, Analysis, and Verification of Data
- Prepare the Reconnaissance Level Characterization Report

The Reconnaissance Level Characterization Report contains four sections:

- 1) a summary of results;
- 2) a listing of the historical information reviewed;
- 3) the Initial Survey and Sampling Plan; and
- 4) a room by room listing of any hazardous or regulated materials and whether the room exceeds the radiological unrestricted release criteria contained in procedure 1-P73-HSP-18.10 *Radioactive Material Transfer and Unrestricted Release of Property and Waste* (K-H 95g).

Additional radiological, industrial hygiene, and safety characterization will be performed, as required, to prepare appropriate work authorization documents such as Radiological Work Permits, ALARA reviews, Integrated Work Control Packages and activity hazard analysis. This type of characterization data will typically be obtained shortly before work is initiated to ensure conditions have not changed and to more accurately assess the hazards based on a detailed work plan. In addition, in-process characterization data will be used to assess the hazards associated with inaccessible areas and systems. This approach is both protective of the worker and environment and ensures the most cost effective collection of data.

3.1.3 Final Decommissioning Survey

The final decommissioning survey is conducted to demonstrate that the radiological or hazardous contaminants within the facility have been reduced to levels that comply with the established decommissioning end state. Radiological characterization is performed using the procedure *Performance of Surface Contamination Surveys* (K-H 95h) or equivalent. Release of surfaces or equipment is determined by procedure *Radiological Requirements for Unrestricted Release* (K-H 95i). Both of these procedures may be revised or new procedures prepared to reflect the results of the Building Radiation Closure Standards development that is in progress. These procedures will be prepared, review and approved by the same process as K-H 95h and 95i. Industrial Hygiene personnel will perform an inspection of the remaining building portions using the *Building Inspections* procedure (EG&G 91) to identify any remaining hazardous or regulated material remaining. Decommissioning will normally remove all hazardous waste material as a decommissioning activity. The final decommissioning survey report will included in the project record, turned over to Environmental Remediation organization and copied to the Administrative Record for the OU the building was located over.

3.1.4 Confirmatory/Verification Survey

This survey is conducted to verify that the facility and/or material removed meets the established end state. The confirmatory/verification survey is normally performed by a third party, which provides an independent review of the final decommissioning survey methodology and survey data. The verification survey will be filed with the Final Decommissioning Survey from Section 3.1.4.

3.2 Expected Contaminants

Contaminants routinely expected to be present and some potential locations follow:
The following are potentially present in the older facilities at the Site.

Lead	-	Painted surfaces and shielding
Asbestos	-	Thermal system piping, tile, adhesive
PCBs	-	Electrical transformers

These radioactive elements are present in processing facilities.

Plutonium	-	Interior of gloveboxes and ventilation systems
Uranium	-	Interior of gloveboxes and ventilation systems
Americium	-	Interior of gloveboxes and ventilation systems

Depending on the facility history these contaminants may be present.

Beryllium	-	Building and equipment surfaces
Acids	-	Nitric, sulfuric, and hydrochloric

Other contaminants identified based on analysis of the proposed work, facility history, walkdowns, or process knowledge or identified during the course of decommissioning will be included in the characterization efforts.

3.3 Health and Safety Plan

The Reconnaissance Level Characterization Report will provide the information necessary to evaluate plutonium release and criticality hazards. Other facility hazards will be identified or confirmed using the characterization data. Hazard analysis plays a crucial role in assessing the risks to the worker, the public, and the environment during decommissioning operations. If these risks are unacceptable, engineering designs and operational procedures must be changed so that risks are minimized. Appropriate industrial and/or nuclear safety documentation is prepared for incorporation into the authorization basis for decommissioning of that facility.

The performance of decommissioning and demolition is considered to be a construction activity in the DOE Order system. Accordingly a project Health and Safety Plan (HASP) is required safety documentation. for facilities that do not contain plutonium. The HASP will apply a graded approach to the requirements contained in 1-C18-HSP-23.01, *Construction Safety and Health Requirements* (K-H 95e), the *Health and Safety Practices Manual* (K-H 96c), the *Radiological Control Manual*, the *Nuclear Safety Manual*, 29CFR1926 *Safety and Health Regulations for Construction* and 29CFR1910 *Occupational Safety and Health Standards*.

The HASP establishes the appropriate Health and Safety Program and Procedures which will allow the decontamination and decommissioning project to proceed effectively while minimizing the potential for worker, public or environmental exposure to incidents or risks. The HASP must address the following elements.

Introduction

- Decommissioning Project Overview
- Scope of Work Summary
- Specific Task Descriptions

Subcontractor Project Organization & Responsibilities

- Project Manager
- Site Superintendent
- Site Safety and Health Officer
- Project Personnel
- Subcontractor ES&H Manager
- Contractor Construction Coordinator

Orientation and Training

- Site Specific Safety and Health Orientation
- Safety and Health Training Requirements
- Employee Task Training
- Worksite Access Training (If Required)

Personal Protective Equipment

- Site Specific PPE Requirements

Exposure Monitoring

- Environmental Monitoring
- Noise Monitoring

Medical Surveillance (Where Required)

Hazard Analysis

- Preliminary Hazard Analysis
- Activity Hazard Analysis
- Daily Jobsite Hazards/Deficiencies Inspection
- Weekly Formal Jobsite Safety and Health Inspections
- Construction Site Specific Hazards
- Accident/Incident Investigations Lessons Learned

General Safety Requirements

- Control of Decommissioning Site Access
- Decommissioning Project Bulletin Board

- Required Postings
- Emergency Numbers
- Sanitation
 - Potable Water
 - Portalets
 - Showers/Washing Stations (Where Required)
- Emergency Response
 - Employee Injury or Illness
 - Emergency Equipment
 - Emergency Evacuation
 - Unusual Conditions
 - Accident/Incident Reporting
- Spill Control
 - Chemical Spills
- Recordkeeping Requirements
 - Orientation and Training
 - Weekly Safety Meetings
 - General
 - Injury and Illness
 - Medical Records
- Post Decommissioning Activities
- Signatures
- Any Required Appendices or Tables

The HASP is submitted to the contractor's Project Manager for review and approval before the start of physical work. The Project Manager is required to involve expertise from applicable outside disciplines (i. e. Safety and Health Professionals) in the review process.

3.4 Waste Management Operations

Decommissioning wastes are defined as remediation wastes in the RFCA. This allows flexibility in transport and storage, while wastes are onsite. Additional waste storage permits are not required to stage waste onsite.

For materials that may contain radioactive or hazardous constituents, appropriate surveys, waste stream analysis and sampling will be performed. Waste materials will typically be sorted at the time of removal and will be staged for further decontamination, survey, recycling, processing, and packaging. Contaminated liquids will be treated, solidified or shipped offsite for processing. Contaminated material such as filters, components, and dismantlement material will be evaluated to determine the optimum method for disposition including unconditional release, decontamination, onsite processing, or shipment offsite for further processing or disposal.

Any recyclable materials such as metal (regulations permitting) will be cleaned and dispositioned based on existing marketing conditions. Waste streams will be solidified and packaged depending on their radiation level and dispositioned in accordance with the selected ASAP alternative.

3.4.1 Waste Generation

The Project Management Plan will describe the wastes which will be generated during the decommissioning operations phase. These will be based on preliminary characterization and process knowledge obtained prior to the start of the work and the methods which will be used to characterize wastes which will be generated during the decommissioning process. Waste estimates will include a description of the wastes that are to be generated by a specific project. The volumes and types of wastes to be generated, to include hazardous constituent

characterization as well as radioisotope composition will be included in the volume estimates. Volumes for the amounts of LLW, mixed, hazardous, TRU, TRU mixed, recyclables, and clean waste will be projected based on engineering estimates for the project. Decontamination techniques may be used in order to reduce SNM contamination levels from waste that is initially classified as TRU to waste classified as LLW.

3.4.2 Waste Certification

Waste certification includes verification that waste characterization, treatment, storage and packaging have been conducted in accordance with the receiving site's Waste Acceptance Criteria (WAC). Characterization of wastes requires a determination of the physical, chemical, and radiological properties of the wastes to the extent necessary to support informed decision making. Certification requirements are addressed through procedures identified in the DOP and/or IWCP. Specific procedures for certification of wastes which address individual WACs for the receiving sites will be used to insure that wastes are characterized, treated, packaged, stored and transported in accordance with the applicable WAC. Site waste certification requirements are contained in the sitewide *Low Level Waste Management Plan* (EG&G 92b), the *TRU Waste Management Plan* (EG&G 92c) and the *Hazardous Waste Requirements Manual* (K-H 95b).

In addition, the certification program for decommissioning will include qualified waste inspectors who are responsible for visual inspection and certification of all waste containers. Inspectors will be integrated into the decommissioning operation to insure that waste drums and crates are packaged in accordance with approved procedures during decommissioning activities. Waste packages will be certified at the point of generation and sent to onsite facilities for content verification through nondestructive assay (NDA) and Real-Time Radiography (RTR).

3.4.3 Waste Treatment and Packaging

The Site has several operating waste management facilities with the objectives of processing and packaging liquid and solid wastes generated at the Site for safe storage, transport and disposal. These facilities were not, however, specifically designed to treat mixed wastes to meet the required Land Disposal Restricted (LDR) treatment standards. Treatment and waste handling operations involve many waste types (e.g., TRU, mixed TRU, low-level, mixed low-level, hazardous and sanitary or clean wastes) and many forms (e.g., liquids, sludges, solids, and compressible solids). Waste treatment activities are conducted primarily in four existing treatment facilities: Building 374, Building 774, Buildings 776/777 and Building 995. Treatment methodologies and waste types are described in detail in the Site Part A and B Permit Application and other Section III site treatment plans and storage units. Treatability groupings are also established to support the Site Proposed Site Treatment Plan (Rev. 3, March 30, 1995).

Once plutonium contaminated wastes are packaged for disposal, they are assayed prior to being transported from the point of generation to onsite storage or being shipped offsite. The Site has two active units, the drum assay unit which is located in Building 371 and a crate assay unit, located in Building 569. RTR is also utilized to examine the contents of drums prior to shipment. RTR provides additional information to assist in certification of the contents of a waste container prior to shipment.

3.4.4 Waste Minimization

Waste minimization is accomplished by eliminating or minimizing the generation of waste, and by processing to achieve volume reduction. Those waste materials that cannot be eliminated or minimized but can be recycled will be used, reused, or reclaimed. Waste that cannot be recycled may be treated to reduce its volume, toxicity, and mobility before storage or disposal.

3.4.5 Waste Disposal

Waste disposal will be in accordance with the Ten Year Plan assumptions. Waste may be stored at the Site or transported to a licensed nuclear waste processing facility or disposal site.

3.5 Building Radiation Closure Standards

Building Radiation Closure Standards are identified in the RFCA. These standards for remaining building structures and materials are based upon limiting the effective dose equivalent (EDE) to the proposed EPA Standard(EPA 96) of 15/85 mrem from the Site in any single year above background. This means: (1) Conduct remediation so that, after completion of the remedial action, radioactive material in excess of background radiation levels shall not exceed concentrations that could cause any reasonably maximally exposed member of the public to receive, through all potential exposure pathways, an EDE of 15 mrem from the Site in any single year. The 15 mrem will be calculated using exposure scenarios that are consistent with the land uses contemplated in the Vision; and (2) Determine that the remediation provides a reasonable expectation that, for 1000 years after completion of the remedial action in the event of failure of the active control measures, radioactive material in excess of background radiation levels shall not exceed concentrations that could cause any reasonably maximally exposed member of the public to receive, through all potential exposure pathways, an EDE of 85 mrem from the Site in any single year.

The Building Radiation Closure Standard(BRCS) will delineate the specific levels of residual radioactive materials contained in remaining building surfaces, equipment and demolition debris that is compliant with the 15 mrem limit and appropriate ALARA considerations. The BRCS is currently being developed in coordination with the EPA, CDPHE, and DOE. The specific surface contamination levels for removable and total activity will be determined using an appropriate dose model such as RESRAD or RESRAD-BUILD. Radiological surveys are performed using the procedure *Performance of Surface Contamination Surveys* (K-H 95h) or equivalent. Release of surfaces or equipment is determined by procedure *Radiological Requirements for Unrestricted Release* (K-H 95I). The BRCS will be met prior to the demolition of the outer building structure.

Until such time as the Building Radiation Closure Standard is approved, the criteria contained in DOE Order 5400.5 as implemented in the RFETS Radiological Control Manual and associated RFETS radiation protection implementing procedures will be used to determine if building surfaces, equipment and demolition debris are acceptable for unconditional release. Table 3.5 - *Summary of Contamination Values for Unrestricted Release* contains the criteria in use at the Site. Table 3.5 may be revised in the future to reflect the application of the Building Radiation Closure Standards.

3.6 Equipment Unrestricted Radiological Release Criteria

The unrestricted release of equipment removed from site will comply with DOE Order 5400.5, as implemented in the RFETS Radiological Control Manual and associated RFETS radiation protection implementing procedures. Radiological surveys are performed using the procedure *Performance of Surface Contamination Surveys* (K-H 95h) or equivalent. Release of surfaces or equipment is determined by procedure *Radiological Requirements for Unrestricted Release* (K-H 95I). Table 3.5 - *Summary of Contamination Values for Unrestricted Release* contains the criteria in use at the Site. Table 3.5 may be revised in the future to reflect the application of the Building Radiation Closure Standards.

Table 3.5 - Summary of Contamination Values for Unrestricted Release

RADIONUCLIDE (1)	Average Total (Fixed + Removable) dpm/100cm ² (2), (3), (4)	Maximum Total (Fixed + Removable) dpm/100cm ² (2), (4), (5)	Removable dpm/100cm ² (2), (4), (6)
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100	300	20
Th-Natural, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-131, I-133	1000	3000	200
U-Natural, U-235, U-238 and associated decay products, alpha emitters	5000	15000	1000
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above (7)	5000	15000	1000

Notes:

- (1) Where surface contamination by both alpha and beta-gamma emitting radionuclides exists, the limits established for alpha and beta-gamma emitting radionuclides should apply independently.
- (2) As used in this table, disintegrations per minute (dpm) is defined as the rate of emission by radioactive material as determined by correcting the counts per minute measured by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
- (3) Measurements of average contamination should not be averaged over an area of more than 1 meter². For objects with a total surface area of less than 1 meter², the average should be derived for each object.
- (4) The average and maximum dose rates associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mRad/hour and 1.0 mrad/hour, respectively at 1cm.
- (5) The maximum contamination level applies to an area of not more than 100cm.
- (6) The amount of removable material per 100cm² of surface area should be determined by wiping an area of that size with a dry filter of soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100cm² is determined, the activity per unit area should be based on the actual area and the entire surface should be wiped. Except for transuranics and Ra-228, Ac-227, Th-228, Th-230, Pa-231 and alpha emitters, it is not necessary to use swiping techniques to measure removable contamination levels if direct scan surveys indicate the total residual surface contamination levels are within the limits for removable contamination.
- (7) This category of radionuclides includes mixed fission products, including the Sr-90 which is present in them. It does not apply to Sr-90 which has been separated from the other fission products or mixtures where the Sr-90 has been enriched.

3.7 Decommissioning Operations Plan Requirement Logic

The Reconnaissance Level Characterization Report provides the data to identify how each facility decommissioning should be managed. The facilities can be grouped into three groups: 1) those that require a Decommissioning Operations Plan; 2) those that are Decommissioned using the DPP/RSOP; and 3) facilities decommissioned under other applicable standards or regulations.

1) The RFCA requires that "...Decommissioning Operations Plans for major facilities, such as Buildings 371, 771, 776/777, 707, and 991" ..." are subject to the review and approval of the Lead Regulatory Agency...". Additionally, the Decommissioning Program is submitting a Building 779 DOP as a "pilot" submittal in order to obtain lessons learned to improve the DOPs review and approval process. The lessons learned from this submittal are expected to improve the quality and content of subsequent DOP submissions.

2) The facilities that are not determined to be "free of contamination" as indicated in Attachment 9 of the RFCA will be decommissioned using the DPP/RSOP.

A notification letter will be transmitted to the Lead Regulatory Agency 14 days prior to the start of field work. This letter will forward the Reconnaissance Level Characterization Report and will confirm that the project is consistent with the Integrated Sitewide Baseline. The Reconnaissance Level Characterization Report will be used to determine by mutual agreement of the DOE and the LRA that a facility is "major" and will require the preparation of a DOP or will be decommissioned using the DPP/RSOP.

3) If, based upon the Reconnaissance Level Characterization, the building is determined to be free of contamination, further disposition activities will not constitute removal or remediation of hazardous substances or hazardous wastes requiring an accelerated action under the RFCA. However, the disposition or reuse of the building will be subject to standards or regulations that are otherwise applicable such buildings.

"Free of contamination" shall mean that:

-Hazardous wastes, if any, generated and/or stored in the building have been previously removed in accordance with CHWA and RCRA requirements; and

-Radioactive materials were not stored or used in the building, and/or if it is suspected that radioactive materials were present in the building in the past, appropriate radiological surveys show the facility is not contaminated; and

-Hazardous substances, if any, are an integral part of the building's structural, lighting, heating, electrical, insulation or decorative materials.

4 FACILITY DISPOSITION OVERVIEW

The RFETS Facility Disposition Process shown in Figure 4.1 incorporates all activities from the end of production in a facility through completion of Site Remediation. The specific activities are organized into three phases, Deactivation, Decommissioning and Remediation Activities. A summary description of each phase follows to provide perspective as to how decommissioning fits into the life cycle of facilities at the Site. While all four phases life cycle phases are summarized in this section, the details of the decommissioning process, the subject of this regulatory submittal, will be provided in Section 5. Figure 4.1 is also used to portray applications of lessons learned to the work planning process. In the discussions that follow, recognize that the Facility Disposition Process describes the RFCA phases and the Project Closure Process (PCP) describes planning and performance monitoring activities. Although presented serially, the RFCA regulates the simultaneous performance of Site remedial activities for Individual Hazardous Substance Sites (IHSS), decommissioning, mixed waste compliance activities, regulatory milestones and closure of underground storage tanks. At any given time, a given building or area may be in different phases of the end of production/deactivation/decommissioning/remediation process.

The RFETS Project Closure Process, shown in Figure 4.1, has been identified as the integration methodology between potentially interacting activities. The PCP incorporates all activities for each facility from the end of production through completion of site remediation. The closure process will be managed as a project and will be described in a project plan. For buildings requiring a DOP, the project plan will incorporate the DOP. The Facility Disposition phase completion milestones will be included in the Integrated Sitewide Baseline (ISB) for each building.

The projectized approach is goal oriented and will facilitate:

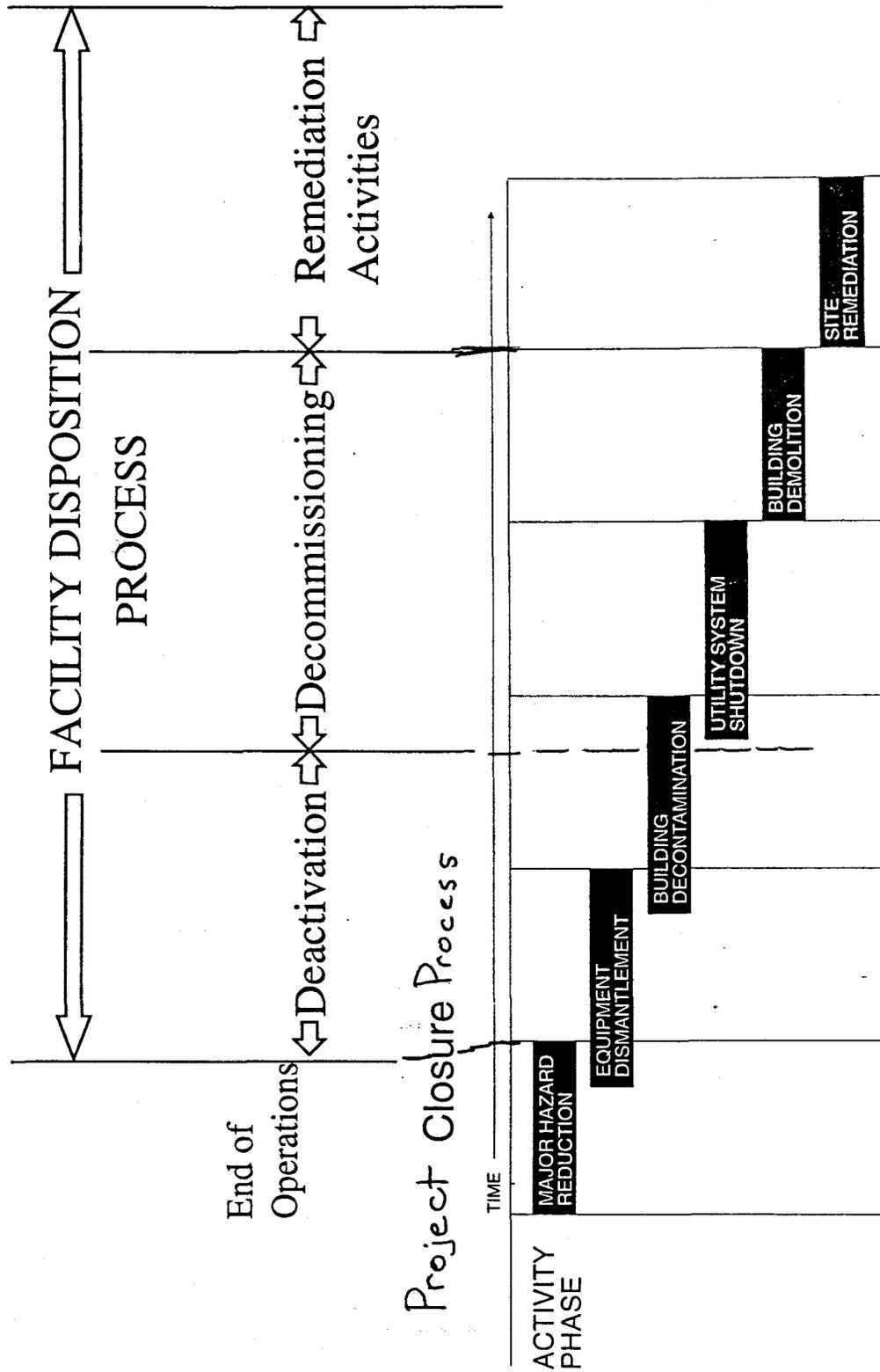
- project management
- resource allocation
- oversight
- linkage to the ISB

The PCP will also be a tool for implementing the Government Performance and Results Act (GPRA) which requires Federal facilities to link planning, goal setting, budget, and measurement of performance compared to the goals and budget.

The project closure process begins with the end of production. As shown by figure 4.1, there are six major activities in the process. Figure 3.1 depicts the realistic and necessary overlap between FDP phases and PCP activities. For example, equipment may be removed from a facility in either the deactivation or decommissioning phases depending upon accessibility, hazard reduction, need for the equipment to remain in place to support future activities, etc.

The overlap shown in Figure 4.1 of some phases and activities in the first three phases depicts the "gray areas" that exist between "deactivation" and "decommissioning" phases as defined in RFCA. Use of project milestones and each project plan's description of the activities underlying each milestone will support and further clarify the definition of the terms. Using the activity information, the specific scope will be clearly understood. When combined with that in Appendix A of the RFCA Implementation Guidance Document (IGD), this information will ensure that the LRA and support agencies understand and have time to plan for oversight of the project in accordance with the MOU. In other words, using the project plan, the LRA and support agencies will have the capability of effectively planning their oversight to occur during activities of interest to them.

Figure 4.1 - Facility Disposition Process Phases Correlation to Project Closure Process Activities.



The closure goals for each project will be defined in the early project stages. Endpoints will be derived from the Site Use Review Board (SURB) decisions as to whether facilities will be reused or demolished. Milestones will be selected for each project to ensure activities are completed in time to support the ISB schedule. A process similar to the one used at the DOE PUREX facility at Hanford for determining deactivation end points will be modified and its use expanded to define project milestones (See discussion of endpoints and milestones in section 4.5). Activities (scope) and the budget needed to meet the milestones will be determined and included in the project plan. Because the schedules will be dependent upon availability of funds, the ISB and the project milestones will need to be modified to reflect the impact of receiving more or less funding.

4.1 End of Production Phase—Major Hazard Reduction and Equipment Dismantlement Activities

This is the starting condition for all facilities entering the Facility Disposition Process. At the Site, the production mission has ended but operations are conducted to provide Risk Reduction from Site hazards, to the worker, the public and the environment. Among Risk Reduction actions are excess chemical removal; Special Nuclear Material reconfiguration, consolidation and offsite shipment; residue stabilization and elimination; and liquid stabilization. Operations include building operation and maintenance in support of previously named actions including collection, packaging, storage and shipment of the wastes generated during risk reduction. Operations will continue in some facilities until all other facilities have been dispositioned.

While Risk Reduction actions continue, authorization basis requirements are reviewed to eliminate those requirements that are no longer necessary to provide personnel and public safety. Cost efficient operations result from eliminating unnecessary actions administratively or by authorization basis changes. This review is a continuous event during the entire disposition process until no surveillance or maintenance actions are required. RCRA unit and other permitting is reviewed similarly, with unit closure occurring as soon as closure is efficient.

Planning activities that impact all down stream actions are underway on most facilities at the Site. The results of this planning are captured in the Ten Year Plan, associated schedules and Work Breakdown Structure. These planning activities continue through the completion of remediation actions. Planning starts with order of magnitude estimates and progresses to detailed specific budgets for discreet activities. Typical activities include facility sequences, end states, customer and regulator transitions, and impacts on other facilities.

4.2 Deactivation Phase -- Major Hazard Reduction, Equipment Demolition and Building Decontamination Activities

The Facility Disposition Process begins with the Deactivation phase. Deactivation requires a series of reviews of the facility. The historical information about the facility, with particular attention to potentially unrecognized radiological and industrial hazards during the facility disposition, is reviewed. A series of radiological and chemical surveys are performed, idle equipment reuses identified, and facility layouts confirmed. The requirements to relocate operations that will continue during deactivation are evaluated. Building chemical and radiological characterization and worker hazard assessment reports are prepared. The proposed deactivation end points (DOE 95b) are identified. The end points are dependent upon both facility characterization and the planned duration between completion of deactivation and the start of decommissioning. Deactivation of portions of a facility is expected to be performed in parallel with decommissioning of previously deactivated portions of a facility if both tasks can be performed safely.

Deactivation removes containerized Special Nuclear Material (SNM), stored SNM, and processes residues, liquids and SNM. Plutonium (Pu) holdup in ducting and equipment, which can be removed without destroying the confinement system, will be removed during the

deactivation period which may allow down-grading the building security category. The remainder of the holdup will be removed during the decommissioning phase. Deactivation performs a preliminary characterization of the building process equipment to identify quantities of Pu and then to assure that attractive quantities of Pu have been removed prior to turnover to Decommissioning. The intent of this preliminary characterization survey is to locate attractive quantities of Pu and then to verify that any quantities of Pu remaining after deactivation do not present a criticality concern nor require security clearance beyond "L", and preferably, would allow uncleared personnel to perform the decommissioning work.

As the deactivation work is completed, area-by-area validation of activity performance and the deactivation end points are performed. Validators are expected to include the affected parties or other independent reviewers. Normal processes for work completion at the Site will be used. The validation data is assembled into a document called the "Deactivation End Point Validation Report" which provides justification to determine that the area will be turned over for decommissioning as scheduled.

4.3 Decommissioning Phase – Equipment Dismantlement, Building Decontamination, Utility System Shutdown and Building Demolition Activities

Decommissioning is the second phase of the Facility Disposition Process. The *Decommissioning Program Plan* has been designed to accommodate decommissioning activities under CERCLA, decommissioning activities that take place under another appropriate federal or state response, or decommissioning activities that take place under permits or orders issued under the Resource Conservation and Recovery Act (RCRA). In all cases, the same basic process will be followed and the graded approach will determine the level of detail required.

The turnover of an area for decommissioning, triggers the process detailed in Section 5 *Decommissioning Process Flow*. The first activity is a characterization of the deactivated facility. The reconnaissance level characterization provides input to the preparation of the decommissioning safety analysis, the personnel risk assessment, the determination of the engineering support requirements and the determination of the desired decommissioning end state.

As the decommissioning work is completed, area by area, validation of activity performance and the reaching of the decommissioning end state is performed. Normal processes for work completion at the Site will be used. The validation data is assembled into the "Decommissioning End State and Final Survey Report" which provides the completion documentation for that facility that is turned over to the Remediation Actions Group and placed in the Administrative Record.

4.4 Remediation Actions Phase -- Site Remediations Activity

Remediation Actions is the third phase in the Facility Disposition Process. Technically the building no longer exists at this time, however its footprint is in an IHSS or OU. Therefore, the building footprint must be evaluated to determine necessary Remediation Actions. Remediation Actions will be provided that accommodate any decommissioning end state under CERCLA, RFCA, and permits or orders issued under the Resource Conservation and Recovery Act (RCRA). The Remediation Actions program will begin the preparation of the environmental Sampling and Analysis Plan(s). These plans, identified in RFCA, are needed to describe the sampling that will occur prior to Remediation Actions and at the completion of the Remediation Actions. They undergo public and regulator review and approval.

Characterization of the decommissioned facility footprint is performed and combined with other facility and area characterizations to produce the Site characterization. The Site characterization provides input to the risk analysis, the determination of the regulatory documents required, and the surveillance program needed. The site remediation plan will be prepared using this information to determine intensity and methods of performing remediation actions to properly protect the workers, environment and the public.

The site remediation operation starts after approval, project by project. While the remediation actions occurs, the facility staff will identify Surveillances and Maintenance actions that can be eliminated. Any remaining RCRA unit closures will occur during this period. As the work is completed, activity performance is validated area-by-area until the ASAP end state is achieved. Normal processes for work completion at the Site will be used. An independent verification contractor may be used to validate the Survey and Analysis Plan results.

4.5 Project Closure Process Milestones and Closure Goal Selection

As stated in section 4.0, the process for setting project closure goals will be based on the SURBs decisions for each facility. The project closure goals will mandate which activities are needed to achieve them. The project plan will include the activities and monitoring milestones used to assess each project's conformance to budget, scope and schedule. After milestones are set and included in the ISB and the project plan, they may be modified using the Site Change Control Process based on expected funding impacts, updated characterization results, and other factors.

5 DECOMMISSIONING PROCESS FLOW

This section describes the Site specific implementation of the DOE Office of Environmental Management guidance for the decommissioning activities necessary to complete the Site mission. This process flow also reflects the impact of the RFCA upon decommissioning and demonstrates that decommissioning is underway as opposed to being considered for implementation. The work flow is described for any building being decommissioned. This description describes, in summary form, the activities associated with each entry in Figure 5.1-*Facility Disposition Process* for decommissioning actions. Decommissioning actions are identified starting on Page 27 using a 5.x notation that corresponds to the paragraph numbers in Section 5 - *Decommissioning Process Flow*.

Typically, a building undergoing decommissioning will experience the following actions. An inspection of the building called the reconnaissance level characterization is performed. The building is evaluated for anything that would cause the building to not be recyclable or disposable as ordinary demolition waste. Specific attention is given to regulated chemicals, including asbestos, PCBs, and lead. If asbestos, PCBs, lead or other chemicals are found, they are removed and disposed of in accordance with the applicable regulation. Similarly, since Rocky Flats is known to have used radioactive materials, the buildings are evaluated using the Site Radiological Control Manual requirements to determine if their radioactivity levels are suitable for unrestricted use or require disposal as radioactive waste. If cost effective relative to disposal costs, the buildings are decontaminated. Cleaning or removal methods for chemical or radioactive items vary. The simplest but also least likely would be to remove the material in its container and dispose of it according to its characteristics. Contaminant material conditions will vary from loose powders or films to tightly attached or imbedded. Loose materials can be scraped, swept or vacuumed into controlled containers and disposed. More tightly bound material can often be removed by a scrubbing with a decontamination solution (essentially an industrial grade cleaning solution). The scrubbing rags, etc. and the solution are managed as a contaminated waste. Surface contamination can sometimes be removed by sandblasting or carbon dioxide pellet blasting. These residues are also managed as waste. Sometimes the materials have soaked into concrete or been painted over as a temporary control. Removal of the paint layer and/or several inches of concrete may remove the material completely leaving uncontaminated concrete structures.

In some cases, none of these or all of these methods are not sufficient to achieve economic decontamination to non-hazardous or non-radioactive debris and the building (or parts of the building) will be disposed of as Low-Level or Transuranic (TRU) waste. Recycled buildings are hauled offsite by moving contractors, trailers on their own wheels or flatbed trucks. Some buildings may be moved using commercial house moving techniques after disconnecting and/or capping the utility hookups. Each building is demolished or removed until, typically the foundation or slab remains in place with capped or terminated utilities present at the end of decommissioning.

The activities described in this section will be implemented using a graded approach based upon the facility (building, systems, structures, and components) condition at the time decommissioning begins. Facilities containing no Pu or RCRA regulated substances will utilize this graded approach and are expected to have substantially reduced documentation volume. This section provides step-by-step detail for the time period following deactivation and preceding remediation actions.

5.1 Transfer Control to Decommissioning and Initiate Project Plan

Attachment 1- "*Building*" List by Cluster provides a list of Site facilities, sorted by TYP Cluster, which includes building numbers, the Site WBS element numbers, and the building name. The last column indicates whether the DPP or a DOP is expected to be the decommissioning regulatory document. The ownership of facilities transfers from operating to short-term

FIGURE 5.1 FACILITY DISPOSITION PROCESS Page 1

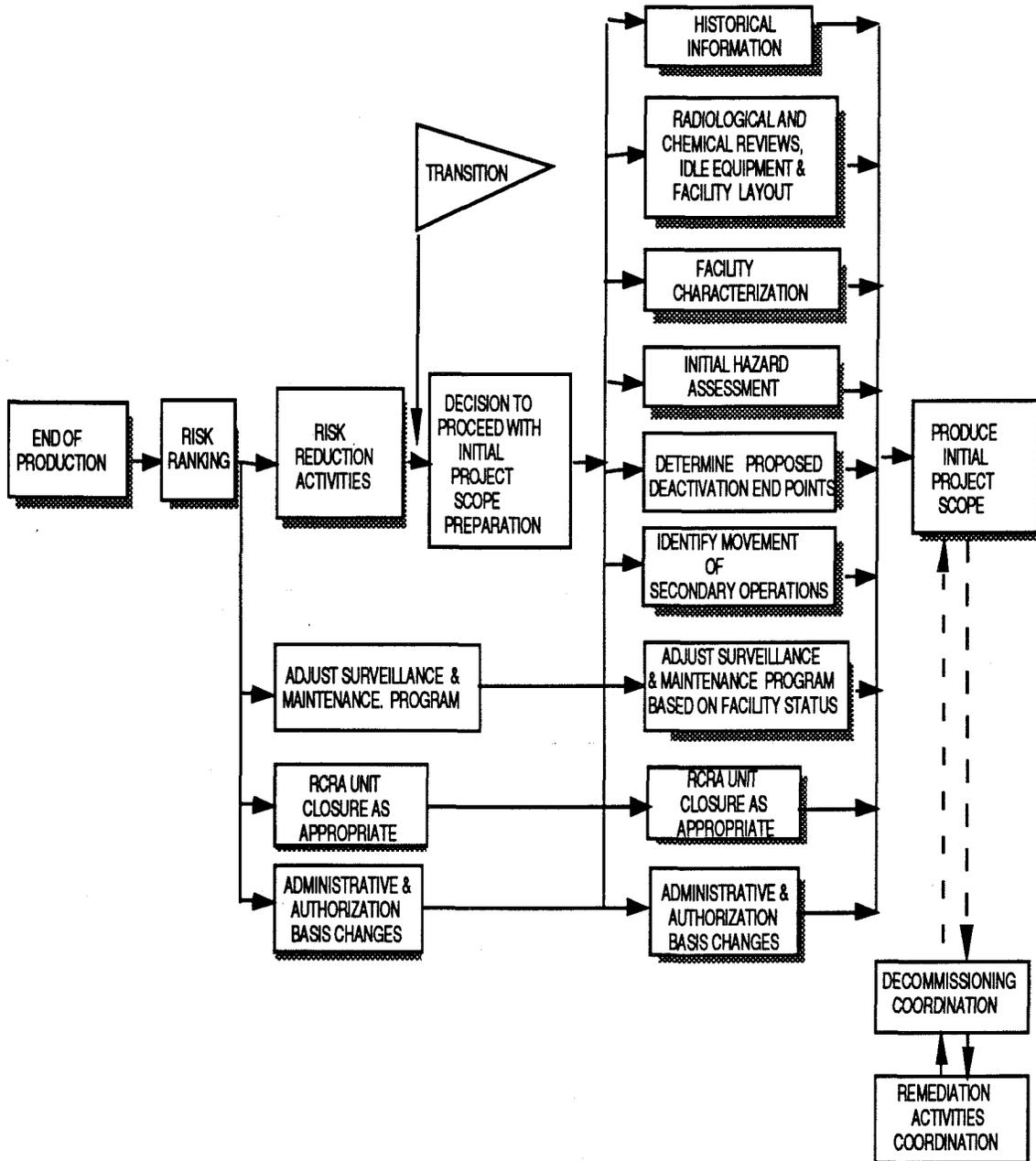


FIGURE 5.1 FACILITY DISPOSITION PROCESS Page 2

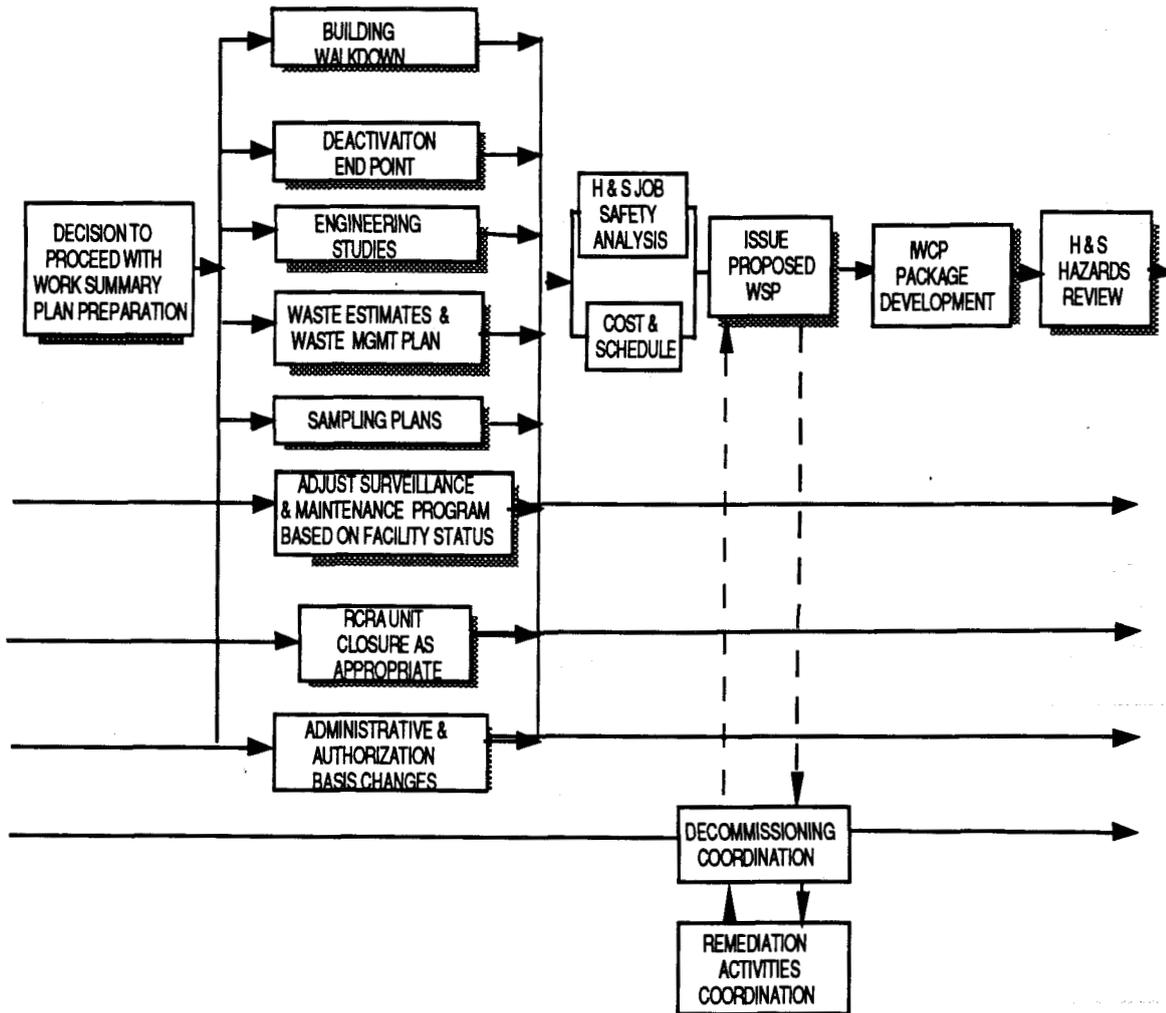


FIGURE 5.1 FACILITY DISPOSITION PROCESS Page 3

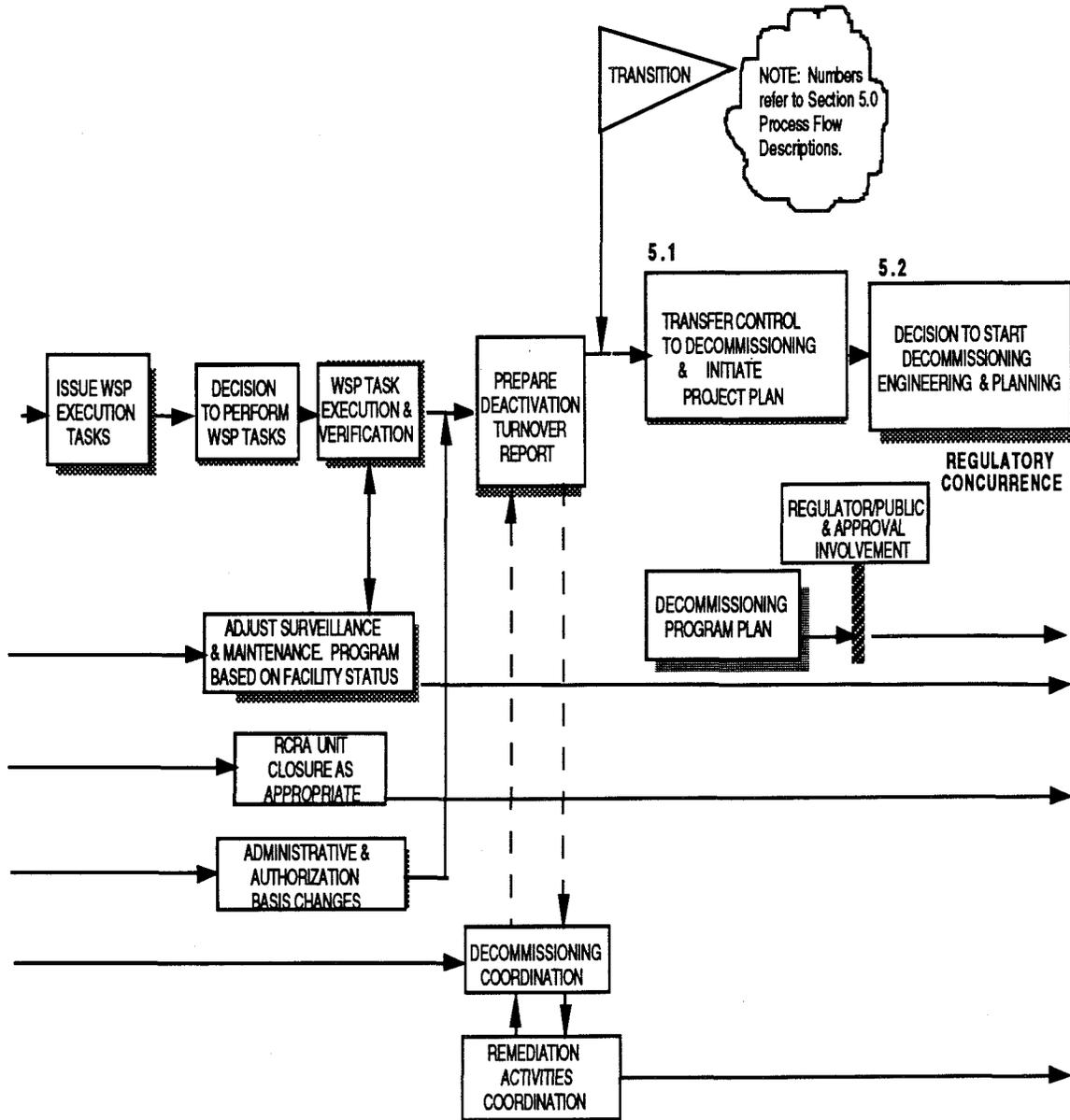


FIGURE 5.1 FACILITY DISPOSITION PROCESS

Page 4

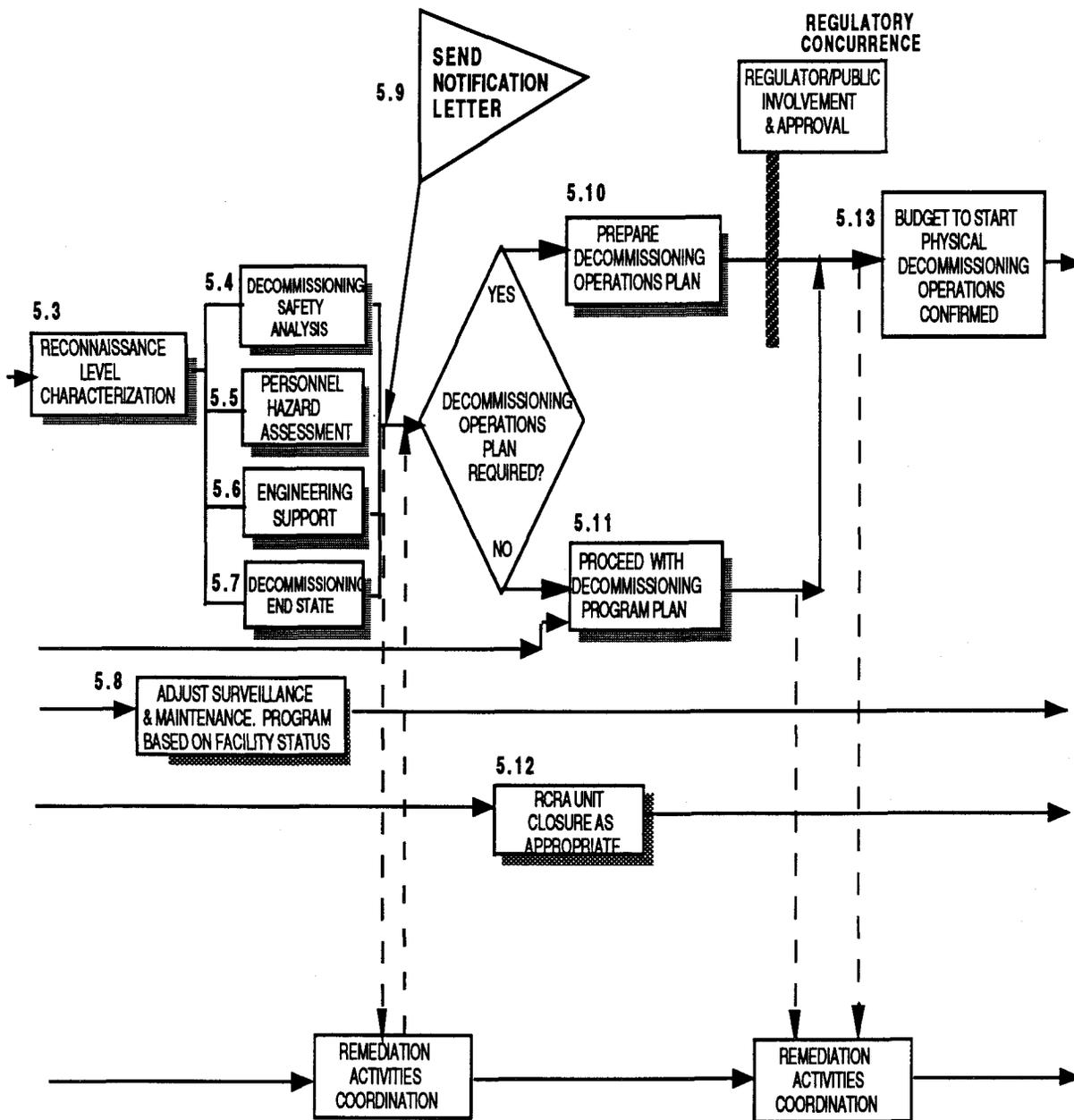


FIGURE 5.1 FACILITY DISPOSITION PROCESS Page 5

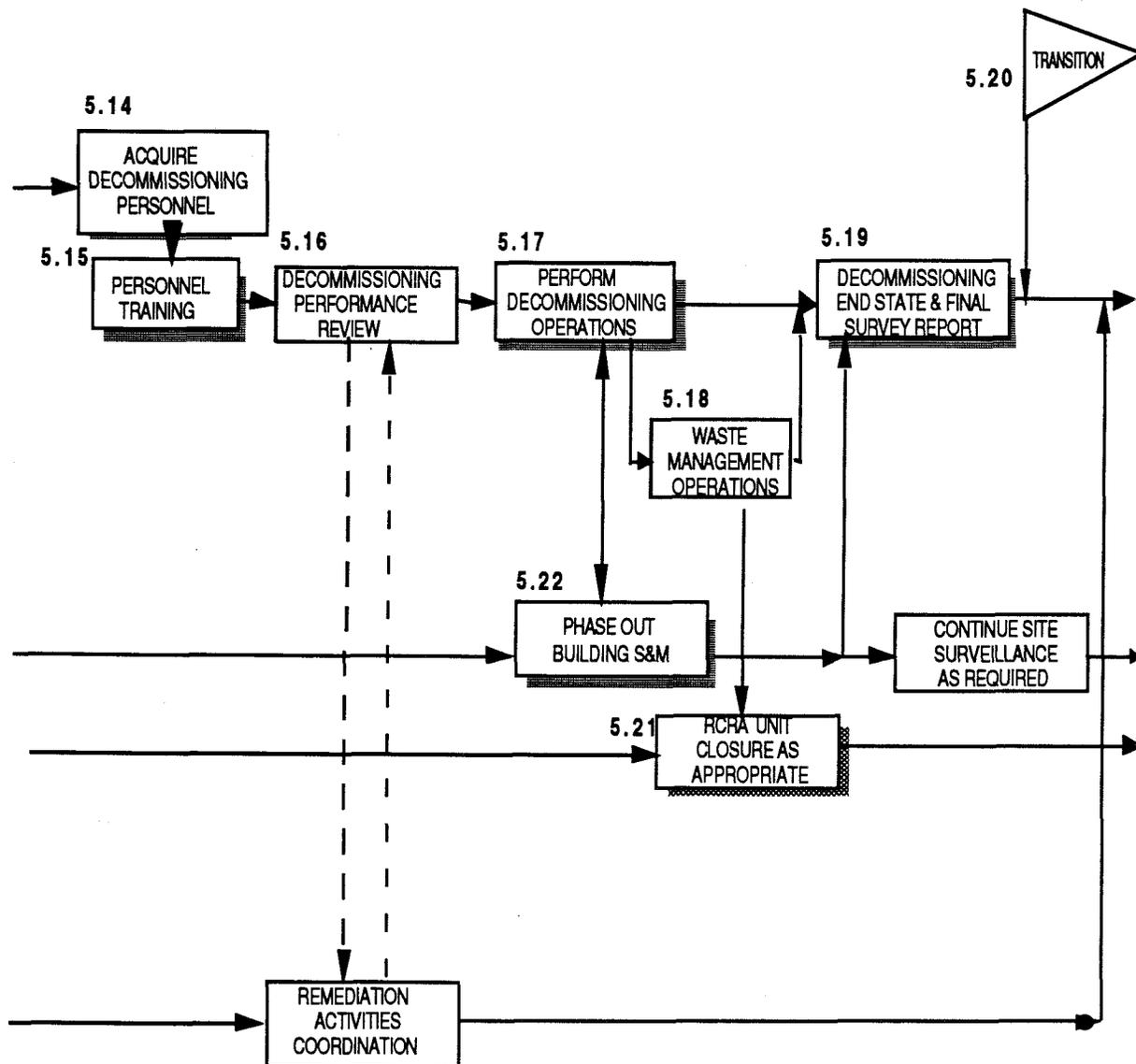
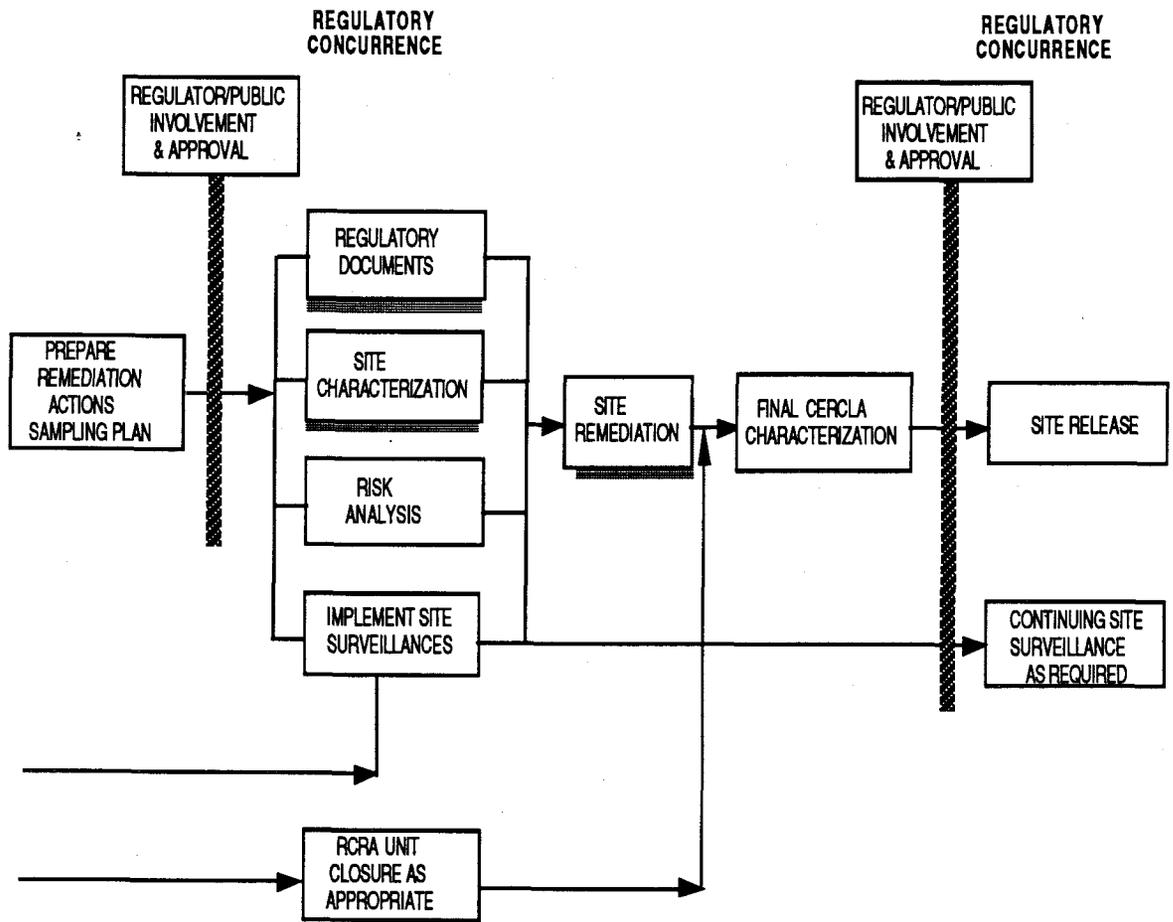


FIGURE 5.1 FACILITY DISPOSITION PROCESS



surveillance and maintenance and then to decommissioning. The facility transfers are conducted formally to ensure that no further programmatic use exists. Before facilities are turned over for decommissioning, certain conditions will be established to make best use of valuable resources and to minimize risk. A summary of facility conditions expected to exist at the start of decommissioning for a plutonium containing cluster are presented in Table 5.1 - Facility Conditions. These conditions will vary with the budgets available and with the length of delay between deactivation and decommissioning.

Transition from building deactivation to decommissioning may occur immediately upon completion of deactivation activities, many months or years later, or a combination of the above in separate rooms, areas, or modules within the same building. Facility hand-offs are conducted formally using the "Deactivation Turnover Report" which contains the Work Summary Plan, results of the Work Summary Package (WSP) implementation and the validation results. This report documents the status of the facility when it is turned over to the decommissioning organization. It also provides the justification to determine that the area will be turned over to the decommissioning organization as scheduled. The appropriation of adequate budgets for S&M activities and decommissioning determines the time of turnover.

The Deactivation Turnover Report is focused on the radioactive and hazardous material inventories that remain after completion of deactivation activities. Ideally, the majority of the nuclear and hazardous material should be removed during deactivation; however, experience at other sites has shown that many of the facilities scheduled to undergo decommissioning may still have radioactive and hazardous material present in the facilities and process lines because of the selected deactivation end point. Review of material inventories will be conducted and incorporated into the safety documentation. In addition, although deactivation focuses on removal of energy sources from the facility, occupational hazards may still exist that would influence the level of detail required for the safety documentation.

5.2 Decision to Start Decommissioning Engineering and Planning

After review of post-deactivation conditions, analysis of initial site safety conditions and project safety requirements, and comparison of initial cost estimates with the confirmed budget baseline, a decision is made whether to proceed with the decommissioning engineering and planning phase.

5.3 Reconnaissance Level Characterization

The results of characterization and the activities performed (See Section 5.4, 5.5, 5.6, and 5.7) using characterization data are documented in the Reconnaissance Level Characterization Report. This report is submitted to K-H for review and approval with the Notification Letter described in Section 5.9 prior to performing Sections 5.10 or 5.11.

The decommissioning of a nuclear facility requires that the radiological and chemical condition of the facility be assessed. Characterization can be achieved through a combination of direct measurement, sample taking with laboratory analysis, and physical observation. Because of the vintage of the Site, characterization must also include identification of hazardous materials, asbestos, mixed waste (radiological and hazardous combined), and, in some cases, biological waste.

5.4 Decommissioning Safety Analysis

After deactivation, the facility will be turned over to the Decommissioning Program using the Deactivation Turnover Report. Facility hazards will be identified and appropriate safety documentation prepared for incorporation in the authorization basis for decommissioning.

Table 5.1 - Typical Plutonium-containing Facility Conditions

FACILITY CONDITIONS	OPERATIONS	START OF DECOMMISSIONING	COMMENTS
Security and criticality alarms	Active and Operational	Security Disabled, criticality minimized	Locked doors may be used to separate security areas
Nuclear systems and equipment	Energized and operational	Drained, de-energized, tagged out but operable	Installed pumps and valve lineups may be used to flush and clean piping systems
Waste Processing	Active	Completed	Only the waste operations within the Decommissioning area need to be completed
Consolidation of stored waste	Containerized TRU, LLW, Mixed or hazardous waste stored	All containerized waste removed	Process waste in a unit must be removed prior to decommissioning that RCRA unit.
Pu consolidation	Holdup and rollup quantities may exist	Holdup and rollup quantities may exist	Removing holdup may be done more expediently by Decommissioning workers
Security	Q and L clearances required	Red Badge or L clearances required	Q cleared workers too expensive
Contamination	Loose radioactive and hazardous material may be present	Loose radioactive and hazardous material may be present	Decontamination is an essential part of decommissioning
Surveillance and Maintenance	Required	Required	Surveillance and maintenance activities will be ongoing until decommissioning is completed
Inventoried Equipment tools and supplies	Present and useable	Removed	Excess materials and Equipment should be disposed of by operator

The Health and Safety Plan (HASP) is required safety documentation for decommissioning facilities. The HASP will apply a graded approach to the requirements contained in 1-C18-HSP-24.01, *Construction Safety and Health Requirements*, the *Health and Safety Practices Manual* (K-H 96c), the Radiological Control Manual, the *Nuclear Safety Manual*, 29CFR1926 Safety and Health Regulations for Construction and 29CFR1910 Occupational Safety and Health Standards.

5.5 Personnel Hazard Assessment

Jobs involving decommissioning activities have additional risks to those associated with conventional engineering and construction. The results of the reconnaissance characterization are used to prepare appropriate safety analyses for the work to be performed.

A hazard analysis plays a crucial role in assessing the risks to the worker, the public, and the environment during decommissioning operations. If these risks are unacceptable, engineering designs and operational procedures must be changed so that risks are minimized.

A hazard analysis will be needed before decommissioning operations commence and also potentially during decommissioning activities. During the decommissioning planning and characterization stages, the hazard analysis can be performed to assure that planned activities will be conducted in a safe manner. As experience is gained at a facility, potential abnormal events become easier to identify.

5.6 Engineering Support

Engineering support will assist in identifying methodologies and equipment to be utilized during the decommissioning process. The decommissioning end state identifies if decommissioning does not remove all the chemical or radiological hazards associated with the removal action. Examples of items to be included are spills outside the building prior to the decommissioning action, underground or embedded piping, and subbasement/soil remediation.

Engineering support will be provided to decommissioning by several key members of the project team, including the Project Engineer, Decommissioning Engineer, and Cost and Schedule Planner.

The Project Engineer is responsible for all engineering activities on the decommissioning project and for complying with Engineering Department Procedures applicable to the project scope of work. He/she receives daily project direction from the Project Manager and reports to the Engineering Manager for technical overview. Responsibilities include directing and coordinating engineering activities for the project, reviewing and approving reports and studies for technical quality, reviewing and approving project specifications and material requisitions, approving design changes, and exercising operational supervision over the engineers of all disciplines assigned to the project or in support of the project.

The Cost and Schedule Planner reports to the Decommissioning Project Manager and is responsible for establishing and maintaining project costs and performance utilizing a computerized system.

Engineering support will be provided during the project review period in order to determine the engineering feasibility of the decommissioning project. The review will be accomplished by decommissioning management and the project team prior to commencement of work activities on each project. When determined by the Decommissioning Project Manager/designee, a more detailed assessment may be performed by conducting a QA assessment. The purpose of the review is to evaluate the status of the prerequisites for starting field activities and to formulate an action plan to complete the prerequisites prior to starting work.

5.7 Decommissioning End State

Decommissioning end state negotiations will be conducted with an understanding of the Site "Building Radiation Closure Standards" as identified in RFCA (DOE 96b).

A final decommissioning radiation survey will be conducted to demonstrate the effectiveness of decommissioning and to provide documentation that contaminated materials, structures, areas and components have been successfully removed/decontaminated to acceptable levels.

The Decommissioning End State description is prepared to document the end of the decommissioning project, identify the transition to remediation actions, and to define the roles of the parties involved. Key parties in the end state negotiations will include the Decommissioning Program Manager and the Remediations Activities Program Manager.

The proposed decommissioning end state is identified. This end state is dependent upon both facility characterization and the planned duration between completion of decommissioning and the subsequent start of remediation actions. The end state is also dependent upon results of the reconnaissance level characterization and the hazard assessments.

5.8 Adjust Surveillance and Maintenance Program

Existing surveillance and maintenance plans implemented after the deactivation period are reviewed and updated. Proposed program and authorization basis revisions are identified, based upon facility conditions at various states of decommissioning completion. These plans include descriptions of surveillance and maintenance activities after decommissioning is complete.

5.9 Notification Letter

A notification letter will be transmitted from the contractor to Kaiser-Hill for approval prior to DOE/RFFO transmittal to the Lead Regulatory Agency, as required, before the start of field work. This letter will forward the Reconnaissance Level Characterization Report and will confirm that the project is consistent with the Integrated Sitewide Baseline.

5.10 Decommissioning Operations Plan

Decommissioning actions for selected facilities may be implemented by utilizing a DOP in addition to the DPP in accordance with RFCA. The DOP will be approved using the IM/IRA approval process identified in the RFCA. It is intended that the DOP contain sufficient information that regulators can be satisfied that the project can proceed with a high certainty of success.

The DOP may propose to combine several similar actions in one DOP to facilitate a more efficient process. Similar actions are defined as actions which involve similar contaminants and similar response techniques. The DOP should contain the following information:

- Summary description of building or unit, detailing the areas involved.
- Characterization Report Summary including information on characterization and process knowledge.
- Summary of approaches and selected methodologies. This section will identify the decommissioning process and document the selection criteria.
- Summary of risk, hazards analysis, and Health and Safety Plan.
- Procedures - This section identifies procedures to be used to complete the action.
- Schedule - This is a proposed schedule without enforceable milestones.
- Completion criteria. This documents the cleanup level and identifies the final Site condition.
- End State Survey Plan.
- ARARs. The ARARs will be specific for the action to be taken.
- QA/QC process pertaining to the review of procedures.
- Waste generation and handling plan.
- Budget precision estimate of decommissioning costs.

5.11 Proceed Using Decommissioning Program Plan

The DPP has been designed to accommodate decommissioning activities under CERCLA and all known regulations in the ARAR tables. If a review of the reconnaissance level characterization and the risks to workers, the public and the environment result in a decision not to prepare a project-specific DOP, the project will proceed under the general guidance provided in the DPP. The DPP will have been approved per the IM/IRA process.

For the majority of the facilities to be decommissioned, only the DPP process will be necessary, i.e. a DOP will not be required. For these (DPP) facilities, a project specific decommissioning plan will be prepared. This plan may be very simple and will reference existing site procedures for implementing the work.

5.12 Perform RCRA Unit Closure, as Appropriate

Where possible, RCRA units will have been closed during deactivation. If RCRA materials could not be removed during deactivation, RCRA closure of permitted storage units will occur during decommissioning. Examples of RCRA permitted units which may not be closed during decommissioning could include some tanks and some soil areas adjacent to or beneath the facility. Soil areas, including building slabs (floors) and subfloor components such as sewers and drain lines, will be closed during the environmental remediation phase after the completion of decommissioning. Closure documentation and permit revisions will be performed using the existing RCRA unit closure process for RCRA closure activities.

5.13 Budget to Start Physical Decommissioning Operations Confirmed

The budget to perform the planned decommissioning activity will be verified as available before starting the decommissioning operations.

5.14 Acquire Decommissioning Personnel

Decommissioning will be performed using trained, onsite workers; however, if additional personnel are required to perform the decommissioning actions, they will be obtained through the normal subcontractor bidding and selection process.

5.15 Personnel Training Preparation

Appropriate detailed procedures and plans will be prepared. Decommissioning will be performed using properly trained workers who have been trained to these procedures.

Each decommissioning project worker will receive orientation/training which will consist of instruction in jobsite radiological protection, health and safety, hazard recognition and control, fire extinguisher training, contingency plan implementation, occurrence reporting, and emergency and safety awareness. This training program will also include applicable decontamination procedures for work in areas of real or potential radiological significance, radiation effects, radiation safety, radiation dosimetry, contamination control, and the role and obligation of workers with respect to regulatory requirements.

Training will consist of classroom training and appropriate practical drills in which individuals demonstrate the ability to perform various aspects of their assigned functions. During the practical drills, on-the-spot correction of improper actions will be made and a demonstration of the proper performance offered by the instructor. Specialized training applicable to specific conditions will be given as the progress of decommissioning activities dictates. This training applies to all decommissioning and subcontractor personnel.

Supervisor safety training is an important part of the safety training program. Each team leader will receive a team leader's safety orientation detailing the safety responsibilities of his position and how to develop good safety practices among the workers. Records are kept of personnel attendances, level of accomplishment, follow-up sessions, etc., as necessary to ensure that the appropriate awareness and competency have been demonstrated.

5.16 Decommissioning Performance Review

This is a graded approach readiness review that verifies appropriate procedures and plans have been prepared and that personnel have been trained and are capable of performing the work safely.

5.17 Perform Decommissioning Operations

Once the performance review has been completed, the workers will perform the work described in the work package under the guidance of the Decommissioning Operation Manager. As the work progresses, support will be provided to the team workers concerning Occupational Health and Safety, environmental issues, radiation safety, and surveys of newly exposed surfaces resulting from the dismantling of structures and equipment. The Waste Management organization will assist with the proper handling of waste generated as a result of the work.

5.17.1 Decontamination Operations

Decontamination activities are performed to remove loose and fixed radioactive contaminants from surfaces (external and internal) of nuclear facilities and the equipment items and systems. Decontamination activities may be either remedial or preventative in nature, that is: remedial where decontamination is required to reduce existing radiation and/or contamination levels so that necessary operation, inspection, maintenance, dismantlement, disposal, or similar activities can be performed within acceptable guidelines for personnel exposure; or preventative where decontamination is performed routinely to control exposure levels so that conditions mandating remedial decontamination do not occur or are significantly delayed/retarded.

5.17.2 Dismantlement/Demolition Operations

Process equipment in facilities being decommissioned, in general, will not be salvaged for reuse. Consequently, the dismantlement objectives exclude reassembly concerns and include only efficiency of decontamination, volume reduction, and final handling based on safety and cost-effectiveness considerations. Generally, equipment dismantlement will require standard disassembly and segmenting methods which include powered and manual tools, pneumatically operated tools, and flame cutting tools. The interior structures which are contaminated are subjected to volume-reduction measures and prepared for final packaging/transportation as radioactive waste.

External structures (roof, walls, floor) are removed using standard demolition techniques only after all contamination has either been removed from the facility or is fixed in place. If the external structures are themselves contaminated, then additional measures must be taken to prevent the spread of radiological contamination during removal.

5.18 Waste Management Operations

Decommissioning wastes are defined as remediation wastes in the RFCA. This allows flexibility in transport and storage, while wastes are onsite. Additional waste storage permits are not required to stage waste onsite.

For materials that may contain radioactive or hazardous constituents, appropriate surveys, waste stream analysis and sampling will be performed. Waste materials will typically be sorted at the time of removal and will be staged for further decontamination, survey, recycling, processing, and packaging. Contaminated liquids will be treated, solidified or shipped offsite for processing. Contaminated material such as filters, components, and dismantlement material will be evaluated to determine the optimum method for disposition including unconditional release, decontamination, onsite processing, or shipment offsite for further processing or disposal.

Any recyclable materials such as metal (regulations permitting) will be cleaned and dispositioned based on existing marketing conditions. Waste streams will be solidified and packaged depending on their radiation level and dispositioned in accordance with the Ten Year Plan Assumptions.

5.19 Decommissioning End State and Final Survey Report

As work is completed, activity performance will be validated area by area until reaching the decommissioning end point. This data is assembled in a document called the "Decommissioning End State and Final Survey Report". Acceptance of this report by the Remediation Actions Program Manager is used to document the facility transfer to the Remediation Actions Group. One of the ultimate goals of the decommissioning process is to assure that future uses of a facility will not result in individuals being exposed to unacceptable levels of radioactive materials. The purpose of the final decommissioning radiation survey will be to demonstrate the effectiveness of the decommissioning and to provide documentation that contaminated materials, structures, areas and components have been successfully removed/decontaminated to acceptable levels. If, as part of the overall Site disposition process additional environmental remediation actions are required, the final survey data collected as part of decommissioning will be used to document post decommissioning conditions and compliance with release criteria; as appropriate.

Upon acceptance of the Final Survey Report, building shells that meet the Building Radiation Closure Standard could be demolished using a wrecking ball or equivalent. The objectives of the decommissioning process are to remove a facility from service, cleanup for reuse or demolition, and reduce residual radioactivity to a level that permits either unrestricted use or limited use under restricted conditions.

5.20 Transition to Remediation Actions

The Remediation Actions Program Manager accepts the "Decommissioning End State and Final Survey Report" from Decommissioning Programs, which indicates transfer of the facility is complete.

5.21 Perform RCRA Unit Closure, as Appropriate

Most RCRA storage units will be closed during decommissioning. Examples of RCRA permitted units which may not be closed during decommissioning could include some tanks and some soil areas adjacent to or beneath the facility. In any case, tanks will be drained and flushed during deactivation with ultimate disposal of the tank itself occurring during decommissioning. Soil areas, including building slabs (floors) and subfloor components such as sewers and drain lines, will be closed during the environmental remediation phase after the completion of decommissioning.

5.22 Phase Out Building Surveillance and Maintenance

Existing surveillance and maintenance plans implemented after the deactivation period are completed. The post decommissioning surveillance are turned over to the remediation activities organization after decommissioning is complete.

6 DECOMMISSIONING IMPACTS UPON ENVIRONMENTAL RESTORATION

6.1 Recent Site History and Current Mission

The end of the Cold War moved the Department of Energy's (DOE) focus from nuclear weapon production to the stabilization and cleanup of previously operating facilities. Many production facilities that once operated with a high priority are now considered surplus or excess. The Rocky Flats Environmental Technology Site (Site) was a production facility that is currently implementing a new mission. The new mission is to cleanup the Site and make it safe. This mission supports the Rocky Flats Vision to achieve accelerated cleanup and closure of Rocky Flats.

The production mission existed from 1953 until 1993. Nuclear production was terminated temporarily in 1989, but the production lines were not cleaned out and the material packaged for storage. In 1993, it was decided that no further weapons would be produced and all materials should be managed consistent with planned but unscheduled relocation offsite. This decision resulted in all "in-process" plutonium at the Site being characterized as being "in-storage." Plutonium storage conditions were characterized for the Site and the DOE Weapons Complex in the "Plutonium Working Group Report on Environmental, Safety and Health Vulnerabilities Associated with the Department's Plutonium Storage" (DOE 94)*. The Vulnerability Assessment Report identifies the then-present storage conditions of the plutonium at the site.

The Site mission provides appropriate storage configurations that support the ultimate plutonium destination. As material and terminated plant operations are reconfigured, excess facilities are being decontaminated to levels that allow decommissioning. A large portion of the Site has no radioactive material but contains industrial residues (e.g., beryllium, lead, and excess production chemicals). Some facilities contain Resource Conservation Recovery Act (RCRA) Compliance listed wastes. These wastes are planned for removal prior to decommissioning.

The Site strategy is to deactivate surplus facilities and place as many facilities as possible in a safe, stable condition. A prioritized, integrated decommissioning approach is planned which considers risk reduction and cost effectiveness for Site material stabilization and deactivation activities. This lowers the costs associated with the surveillance and maintenance (S&M) of these facilities as rapidly as possible. The facilities have been sorted into "clusters" (see Appendix 1) to facilitate review, strategy development and budget planning/management. The Site strategy considers the optimum deactivation end state and compares long-term S&M costs versus earlier decommissioning costs.

6.2 Decommissioning and Site Closure Alternatives

Decommissioning has been determined to be an integral component of all of the Site Closure alternatives. The Site Closure alternatives have been extensively discussed in various public forums as part of the development of the *Site Vision ref* and in the negotiations of the *Rocky Flats Cleanup Agreement ref*. The alternatives were presented in the various phases of the *Accelerated Site Action Plan (ASAP) ref*.

The ASAP planning process selected and evaluated eight closure alternatives. Each alternative is an integrated series of activities that addresses the entire inventory of materials, wastes, and facilities. Each alternative was developed by teams of subject matter experts in six specialized areas: *SNM Stabilization, Consolidation and Storage; Waste Management; Facility Decommissioning; Environmental Restoration; and Infrastructure*. Additionally, *Cost and Schedule, Implementation, and Risk* teams assisted in the analysis of the alternatives. Early in the planning process, meetings were held with a number of stakeholders and general agreement was reached that the alternatives selected for evaluation would bound not only the possible outcomes of the ongoing discussion of a Site Vision, but also many of the stakeholders' own personal beliefs about the future of Rocky Flats.

Eight alternatives were evaluated including, the previous Site planning vehicle, identified as BEMR I. Each of the alternatives described, among other things, the various levels of Site cleanup. The extent to which cleanup would be performed under each alternative is often described from a possible future land-use perspective to aid the reader in understanding the differences between each alternative, but it is important to note that future land use decisions would be made by local governments. See ASAP ref for descriptions of the alternatives. A listing of each alternative follows:

- Alternative 1, Unrestricted*
- Alternative 2, BEMR I*
- Alternative 3, Retrievable and Monitored Storage/Disposal*
- Alternative 3a, Phased Shipment*
- Alternative 3b, Priority Shipment*
- Alternative 3c, Excavation*
- Alternative 3d, Leveled Buildings*
- Alternative 3e, Entombment and Landfill*
- Alternative 4, Mothball*

ALTERNATIVE COMPARISON

The alternatives were compared based on a number of factors including cost, major cost drivers, schedule and comparative risk. A summary of each of the alternatives' project costs, completion dates, and operations and maintenance (O&M) costs remaining after the project is completed are shown in Table 6.2.1-*Estimated Total Alternative Cost*. Table 6.2.2 presents a summary of the impacts of each alternative including land use and waste generation types and volumes.

**Table 6.2.1
Estimated Total Alternative Cost**

Alternative	Interim End State ¹		Final End State ²		Annual O&M Cost ³
	Date	Cost	Date	Cost	
1, Unrestricted	N/A	N/A	2029	\$22.5B	\$5M
2, BEMR I*	N/A	N/A	2060	\$21.1B	\$10M
3a, Phased Shipment	2009	\$9.2B	2023	\$14.6B	\$14M
3b, Priority Shipment	2010	\$10.0B	2018	\$12.8B	\$14M
3c, Excavation	2010	\$8.9B	2015	\$9.7B	\$14M
3d, Leveled Buildings	2010	\$8.8B	2015	\$9.6B	\$14M
3e, Entombment and Landfill	2010	\$9.0B	2015	\$9.9B	\$14M
4, Mothball	2007	\$6.1B	2015	\$7.5B	\$35M

- * BEMR I was costed earlier and differently than the other alternatives.
- 1. All work complete except offsite shipment of waste and SNM, D&D of new temporary facilities (if required), and final ER activities.
- 2. All work complete except long-term monitoring. Deferred liability costs for Alternatives 3c, 3d, 3e, and 4 not included (i.e., in 3c, 3d, 3e, and 4, waste remains onsite).
- 3. Annual O&M cost for Alternatives 1, 3a, 3c, 3d, and 3e are essentially the same when escalation is factored out. Alternative 4 O&M cost is approximately four times that of the other alternatives. Annual O&M costs begin on the date specified on the Final End State.

The regulator and public discussion of these ASAP alternatives led to the development of the current planning tool, the Ten Year Plan (TYP). The TYP is based upon a combination of alternatives that essentially remove the Site skyline using an accelerated schedule of ten year period of performance.

The Ten Year Plan alternative assumes the Site Buildings are decommissioned in preparation for the final Remediation Actions. The DPP/RSOP provides the regulatory approval for the bulk of the facilities on the Site as that funding becomes available. The Ten Year Plan has organized the Site into clusters. These clusters are identified and the larger structures in the clusters identified by number for purposes of work control. While this list includes approximately 500 structures, small associated items such as fencing and above ground tankage will be decommissioned with the associated cluster.

6.3 National Environmental Policy Act Evaluation

Pursuant to the Rocky Flats Cleanup Agreement (RFCA) (§70, p. 34), decommissioning activities at the Site are to be conducted as removal actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Under the provisions of the June, 1994 DOE Secretarial Policy on the National Environmental Policy Act (NEPA), CERCLA activities do not require separate NEPA documentation, but the decision documents related to those activities must be reviewed for, and be found to satisfactorily include, NEPA values. This eliminates the requirement for separate documentation under NEPA, but creates the requirement that this *Decommissioning Program Plan*, as the initial decision document for decommissioning, include NEPA values in its consideration of how to proceed. In addition, RFCA (§95, p. 40) requires that such decision documents include NEPA values.

The applicable NEPA values are:

1. consideration of alternatives
2. effects on air quality
3. effects on water quality
4. effects on flora and fauna
5. effects on historic and cultural resources
6. effects on noise levels
7. visual effects
8. effects on human health
9. socioeconomic effects
10. irreversible and irretrievable commitments of resources
11. short-term versus long-term uses of the Site
12. indirect effects, and
13. cumulative effects

Some of the following analyses present data from the unpublished *Rocky Flats Draft Site-Wide Environmental Impact Statement (SWEIS)* currently under preparation. Of the four alternatives analyzed in that document, Alternative 3 involves decommissioning of all buildings and structures at the Site - more than any of the other alternatives. Thus, the environmental effects - adverse as well as positive - from any level of decommissioning should be no greater than those described for that Alternative. As a result, if fewer than all buildings are ultimately demolished, the negative and beneficial effects of decommissioning may be smaller than described here.

Alternatives

DOE has determined that the Site is to be closed down and cleaned up. The Site's Accelerated Site Action Project identified eight alternatives for achieving that end in its February, 1996 report *Phase II - Choices for Rocky Flats (K-H 96r)*. Those alternatives were reviewed in the preceding section. The *Ten-Year Plan (K-H 96l)* will select one of the alternatives and describe how it would be implemented. All of the alternatives involve decommissioning of all former nuclear production buildings and at least the vast majority of other Site buildings. The number of buildings partially or totally demolished, and the quantity of waste that would be removed from individual building sites rather than buried or capped there, would vary, but major demolition activities are part of all alternatives. Thus, the following discussion of the effects of decommissioning applies regardless of the selected alternative.

Effects on Air Quality

Decommissioning will result in increased emissions of chemicals (chiefly volatile organic compounds), radionuclides and particulates. Activities will be managed so that emissions are within applicable regulatory limits. Decommissioning activities at some buildings may require modifications to the Site's operating air emissions permit to account for new or additional

temporary emissions. As buildings with permitted emissions are decommissioned, those emissions points will be removed from the Site's permit.

Because they will be within health-based regulatory limits, the effects of decommissioning on air quality are expected to be minimal. The following estimates are taken from the SWEIS. Of the four alternatives analyzed in that document, Alternative 3 involves decommissioning of all buildings and structures at the Site - more than any of the other alternatives. Thus, the environmental effects from any level of decommissioning should be bounded by the effects described for that Alternative.

Impacts to air quality are expressed in terms of radiological dose to categories of persons. The annual radiological exposure of a maximally-exposed co-located (nearby) worker is estimated at 5.3 millirem (SWEIS, p. 5-21), compared to a DOE standard of up to 5000 millirem, a Site standard of 750 millirem and annual background radiation in the Denver area of in excess of 350 millirem. (Radiological impacts to workers - those directly involved in the activity - would be limited by use of appropriate respiratory protection. Co-located workers are assumed not to wear respiratory protection.) The population within 50 miles of the Site (approximately 2.7 million people projected in 2006) is estimated to receive a total, collective dose of 22.9 person-rem.

Much decommissioning will take place within buildings with functioning drainage, air filtration and other safety and environmental protection systems. During this portion of decommissioning, potential release of contaminants to the environment would be prevented by those working systems. Such activities would include removal of equipment and materials, decontamination of floors, walls and ceilings, demolition of non-load-bearing and other internal walls, removal of certain utilities and parts of the building heating/ventilation/air conditioning system. In general, they would include activities that can be accomplished while maintaining the exterior shell of the building. For buildings with HEPA filtration or other air effluent control devices, the activities would include those that can proceed while maintaining that portion of the HVAC system necessary to ensure that air pollutants do not escape the building to the environment through uncontrolled routes.

The subsequent portion of decommissioning will be demolition of the by-then-uncontaminated exterior shell of the building, probably by conventional means such as a wrecking ball or other means applicable to any other location. As with the initial portion of decommissioning, demolition would be expected to have no significant adverse impacts on the environment. The key reason for this is that decontamination of buildings will continue until contamination levels are low enough to make conventional demolition safe and appropriate.

It is expected that demolition will result in emissions of fugitive dust from the immediate locale. However, appropriate dust suppression measures will be in effect to minimize the quantity of dust that leaves the area, and workers will wear appropriate personal protective equipment to minimize potential health effects.

Effects on Water Quality

Virtually all structures are away from any drainageways or stream courses so surface water is not expected to be directly affected. Detailed plans for the decommissioning of structures near drainageways, such as Building 991, will be developed and implemented with particular care to avoid contamination of groundwater or surface water.

Many buildings and other structures would be leveled to the ground with their basement, if any, filled with building debris. Some basements would be demolished, all building material removed and replaced with clean fill to ground level. Where basements, drains or sump pumps are to be removed, it is possible that groundwater could be encountered. If this condition existed, the water would be characterized for contaminants and a regulatory determination of its status (does or does not need treatment) obtained. If the water needed treatment, it would be sent to Building 374 (if

that facility were still operating), 910, 995, 861, or another water treatment facility as appropriate. If the water did not need treatment, it would be released in accordance with the requirements of the Site's National Pollution Discharge Elimination System permit and/or RFCA.

It is expected that decommissioning activities would not contaminate groundwater because of the decontamination activities that had taken place prior to groundwater being encountered. Any disruption to ground water flows would be small and temporary.

Removal of buildings and installation of final covers or caps is expected to result in a net decrease in stormwater runoff from the Site, and a corresponding increase in the amount of precipitation that percolates into the soil. Because of the area's low average annual precipitation and dry climate, and since most precipitation evaporates or is taken up by vegetation, this reversion to the condition that existed before the Plant was constructed is not expected to have noticeable effects on groundwater at or near the Site.

Removal of buildings and their drainage systems will require modifications to the Site's National Pollution Discharge Elimination System permit. In addition, removal of building drainage systems, some of which have sump pumps that send water to the A-, B- or C-series ponds, will result in a small decrease in surface water leaving the Site.

Removal of the Site's water distribution system would reduce annual groundwater recharge by an estimated 18 million gallons, the amount of water believed to leak from the system. This water, which accrues primarily to Walnut Creek, would no longer be available. Also, closure of the Site's sewage treatment, which currently empties over 54 million gallons of treated wastewater per year to South Walnut Creek, would result in flows in the Creek being reduced by that amount. These two losses of water to Walnut Creek will alter the character of that drainage and reduce the quantity of aquatic and riparian habitat in that drainage. Though a substantial impact, the result is expected to be a return of the drainage to the condition it was in before the Plant was constructed, with levels of aquatic and riparian habitat at natural levels but reduced from those that now exist.

Effects on Flora and Fauna

Flora and fauna are expected to be essentially unaffected by decommissioning because of the industrial nature of the area. Little vegetation and few animals exist in the developed area of the Site in places that would be disrupted by decommissioning activities. Precautions will be taken to ensure compliance with the Migratory Bird Treaty Act which prohibits destruction of birds or their nests, active or inactive, without a permit, since building demolition would necessarily include destruction of attached nests. In addition to birds, small mammals, such as rats and mice, and the occasional medium-sized mammal, most notably raccoons, are known to be residents of, or visitors to, the industrial area. The larger animals and many of the smaller ones would be displaced; some small mammals would undoubtedly not survive the demolition activities. Because of the removal of buildings and paved surfaces, the post-decommissioning environment, however, would be more favorable to flora and fauna than is presently the case.

No decommissioning activities will take place in or near habitat of any known threatened or endangered species. Removal of the rail spur serving the Site would destroy a portion of a small colony of Fork-tipped Three-awn, a plant species that is a State of Colorado species of concern, but which is not listed as threatened or endangered.

Historic and Cultural Resources

Sixty-four buildings in the Site's industrial area have been identified as important to the historic role of the Site in manufacturing nuclear weapons components during the Cold War. Negotiations are underway between DOE and the State Historic Preservation Officer concerning these buildings and their future. Decommissioning activities will be consistent with the legal status of Site buildings and structures. Buildings designated as landmarks will be dealt with in a manner

consistent with that designation. Other buildings will also be managed according to the terms of any future agreement between DOE and the State. Because structures will be managed according to the terms of any such agreement, no inappropriate destruction or damage of historic structures will occur. It is expected that most of the 64 structures will be subject only to requirements for documentation (construction drawings, photographs, etc.) of the building rather than preservation. A preliminary list of the 64 buildings constitutes Appendix 2.

Effects on Noise Levels

Decommissioning will involve numerous types of activities with a variety of associated noise levels. Common industrial activities, such as wiping, disassembly, sawing, crushing and painting will occur. Many of these activities will take place inside buildings, so noise levels, if elevated over ambient levels, will be confined to the structure in which they are generated. Other, less common activities, such as scabbling (use of a machine to remove layers of concrete), blasting (use of various materials such as sand, dry ice or other abrasives to remove surficial contamination), and demolition by pneumatic hammer, wrecking ball or other devices would be expected to generate higher noise levels. Workers will use appropriate hearing-protection devices during such activities. Some of the activities will take place in buildings, shielding both other Site workers and the public from potentially-elevated noise levels. Where activities are not indoors, work locations will be cordoned off from close access by those not involved in the activity. Noise levels at locations where unprotected workers or the public would be are expected to be at safe levels due to distance.

Visual Effects

Decommissioning will result in the removal of some or all buildings from the Site, eliminating the structures that for as long as 45 years have dominated the Site and the local skyline. High profile structures, such as the water tower, numerous 2- and 3-story structures, and a multitude of single story buildings will be eliminated, resulting in the Site having a less industrial, more open and rural appearance similar to the rangeland that characterized the Site before the Plant was constructed. Former building sites will be revegetated with native grasses until future uses are decided. It should be expected that, as an eventual outgrowth of decommissioning, other uses will be introduced at the Site including open space/recreation, new industrial uses, and, possibly, other uses as well.

These changes will be highly visible from on the Site, and less visible from adjacent highways and surrounding lands. All buildings except the east and west gates and Buildings 60 and 61 are at least a mile from a public road or private property, substantially reducing the public visual impacts of any changes in the industrial area. One of the more noticeable changes is expected to be the eventual elimination of night lighting in the industrial area. This lighting exists both for general safety and security purposes and is as visible at night as are Site structures during the day.

Human Health

Decommissioning, like the deactivation that precedes it, has the potential to expose workers to radiological and other contamination because the nature of the work is to remove or fix-in-place contamination, or the items and surfaces on which it rests, in the course of removing everything else. Disruption of contaminants or hazardous materials significantly increases the chance of the contaminant or materials becoming air borne and being inhaled by or attached to people.

In response to this possibility, various precautions will be taken to prevent deleterious effects to human health. Workers will wear personal protective equipment appropriate to the situation. This may range from steel-toed shoes and hard hats to enclosed supplied-air suits, as necessary. Workers will be trained in potential workplace hazards and with operating procedures appropriate to their activities. Worker exposures to radionuclides will be held within

not only the DOE limit of 5,000 millirem per year but the more restrictive Rocky Flats limit of 750 millirem per year. Finally, all activities will be guided by the as-low-as-reasonably-achievable (ALARA) principal. The ALARA approach seeks to minimize worker exposure to radionuclides by reviewing proposed projects to first confirm that the project needs to be undertaken and, second, to determine if there are ways to accomplish the necessary work that would result in less worker radiation exposure than the techniques proposed initially.

Health effects in terms of radiological doses to workers and the public are discussed in the Air Quality section. The SWEIS analyzes radiological doses to workers from various activities. The deactivation and decommissioning activities of the SWEIS's Alternative 3 during the time of peak exposure (1997 through 2006) are estimated to result in an annual dose of 96 person-rem spread among all workers and to result in a total of less than 1 (0.04) latent cancer fatalities among all workers (SWEIS, p 5-57).

Adverse health effects to the public from decommissioning activities are also expected to be negligible because of factors mentioned earlier. Overall radiologically-based health effects under SWEIS Alternative 3, including not only decommissioning but all activities for the time of peak exposure, are estimated to result in an annual dose of 23 person-rem spread over the 2.7 million people projected to live within 50 miles of the Site in 2006, resulting in a total of less than 0.01 latent cancer fatalities in the entire population. It should be expected that the impacts of decommissioning alone would show even smaller effects. This small impact is due to several factors. First, activities that might result in release of radiological or hazardous contaminants will take place inside buildings and all but the very last phases of that work will be conducted while ventilation systems or other emissions control devices are operational. Some work, including decontamination or removal of the ventilation systems themselves, will require installation and operation of temporary, room- or area-specific filtered ventilation to prevent the release of contaminants. Secondly, decontamination of buildings and structures will continue until contamination levels are low enough, or the contaminants are sufficiently fixed in place, that demolition can proceed with minimal likelihood of releasing contaminants at levels that would pose a threat to human health.

Non-radiological health effects for SWEIS Alternative 3, for not only decommissioning but all activities, showed a hazard index of 1.4 (SWEIS, p. 5-73) for a member of the public who is chronically exposed to all chemicals of concern simultaneously, 365 days per year for 70 years and assumes that the adverse effects of the chemicals are additive - an extremely unlikely scenario. A hazard index greater than one is considered to be a basis for concern, and the greater the index is above one, the greater the level of concern. The much more likely scenario of exposure to a single chemical showed hazard indices of well below one for all chemicals. Thus, the impacts described for Alternative 3 1) include the estimated results for many more activities than simply decommissioning, and 2) are calculated very conservatively.

Excessive exposure to chemicals can result in both short-term effects (difficult breathing or other temporary conditions) and long-term effects (such as cancer). The SWEIS analyzed the probability of cancer risk to a member of the public who is chronically exposed to all chemicals of concern simultaneously, 365 days per year for 70 years. The analysis showed that such an individual would have a risk of 2 in ten million of developing cancer - a level almost an order of magnitude below the generally accepted risk level of one in one million (SWEIS, p. 5-74). As with the non-cancer risks, these estimates are for the entire range of activities that would be undertaken under Alternative 3, not just for decommissioning and are calculated using very conservative assumptions. Therefore, they would bound any impacts that might realistically be expected from decommissioning activities alone.

Socioeconomic effects

Decommissioning activities will provide employment for an unspecified number of people for at least a decade. Based on past experience at the Site, those jobs would be expected to be at

higher-than-average salaries. Many of the workers are expected to come from the current Site work force; others will be new to the Site. In addition to providing payroll, decommissioning activities will result in the purchase of goods and services, chiefly in the Denver metropolitan area. These positive impacts will not be in addition to those that presently exist, but rather variations of current patterns of employment and expenditures.

This is not to suggest that current levels of employment and expenditures will remain the same. Decommissioning activities will take place within the confines of the Site's annual budget which is expected to decline gradually over the coming years. Projections prepared for the Site's *Ten-Year Plan II*, which are for all Site activities, not just decommissioning, show direct labor expenses for the Site's four main contractors steadily declining from \$183 million in fiscal year 1997 to \$103 million in 2006 and \$17 million in 2015. Correspondingly, the projected non-labor budget (purchases of goods and services [including lower-tier contractors]) for the same companies during the period shows a similar decline from \$365 million in fiscal year 1997 to \$205 million in 2006 to \$8 million in fiscal 2015. These projections are in constant 1997 dollars. As other Site activities, such as liquid stabilization, special nuclear material consolidation, plutonium stabilization, and residues are completed, an increasing share of the declining budget would be expected to support deactivation and decommissioning, but overall expenditures will go down.

Thus, the amount of money brought into the regional economy by the activities of contractors at the Site is projected to decline by over 50% by 2006 and by over 95% by 2015. The impact of this substantial decline will be mitigated by its occurrence over an 18-year period, allowing other employers in the region to make up the losses. Because of the extended period over which the decline is expected to occur, effects to the regional economy are expected to be small if the economy remains as robust as it has in recent years. If economic indicators in the region decline during the period, declining expenditures at the Site will contribute to that condition.

Federally-owned facilities identified as unutilized, under-utilized, excess, or surplus are subject to Title V of the McKinney Act (42 U.S.C. 11411) and its implementing regulations (24 C.F.R. 581). These requirements mandate that the U. S. Department of Housing and Urban Development (HUD) be informed of status of such facilities so that the Agency may determine their suitability to assist homeless persons. However, the regulations state that a property that meets certain criteria may not be declared suitable. Among those criteria (24 CFR 581.6(a)(1) is:

"A property located in an area to which the general public is denied access in the interest of national security (e.g., where a special pass or security clearance is a condition of entry to the property) will be determined unsuitable. Where alternative access can be provided for the public without compromising national security, the property will not be determined unsuitable on this basis."

This criterion would appear to eliminate the entire Site from consideration as a source of housing at this time, but only HUD can make that determination. Requirements that HUD be informed on a quarterly basis by DOE of the status of Site buildings will be fulfilled. In the interim, buildings to be deactivated and decommissioned will be declared "under-utilized" by DOE in reports to HUD. All government property will be disposed of in accordance with government property management rules.

Irreversible and Irretrievable Commitments of Resources

Decommissioning is essentially a destruction project eliminating existing uses, not a construction project consuming land and building materials. As such, the primary resources committed by decommissioning are funds and labor. Some land and materials may be used temporarily if additional waste storage facilities are needed or if some areas are capped. The extent to which capping or on-Site waste storage or disposal are used depends on the specific alternative selected, but in general, decommissioning will have the effect of freeing up land, and perhaps some buildings, that were committed previously. In addition to funds and labor, equipment, fuel,

tools, personal protective equipment, waste storage drums and similar items will be irretrievably committed to decommissioning activities.

Short-term Versus Long-term Uses of the Site

Unlike most projects which commit a site to a particular use for a period of time, the effect of decommissioning will be to undo past commitments concerning use of the Site and open up an entirely new and broad range of potential future uses, whether for the short-term or long-term. Thus, decommissioning does not commit the Site to a particular land use for the short- or medium-term, at the expense of other possible uses that may be more desirable in the long-term. Rather, it is the major, essential component of ending one use and opening consideration for a variety of other possible future short- and long-term uses.

Indirect Effects

Decommissioning will, at its conclusion, have the direct effect of making possible new uses of the Site by removing most or all existing structures. The indirect effects of this activity will depend, in part, on what uses are made of the Site in the future. Current expectations are that portions of the Site (the buffer zone) will be kept as open space while other areas will be redeveloped for industrial uses. It is not known at this time which areas will be used in which way, but the impacts of future uses will be an indirect result of decommissioning.

In excess of 225,000 cubic meters of waste is expected to be generated by decommissioning activities. Of this, approximately 177,000 cubic meters will be uncontaminated. The remainder will be hazardous (2,000 cubic meters), low-level (30,500 cubic meters), low-level mixed (17,000 cubic meters) and transuranic or transuranic mixed (1,200 cubic meters) waste. Present plans call for all this waste to be sent to DOE off-Site disposal facilities at the Waste Isolation Pilot Plant in New Mexico, Nevada Test Site, Hanford Reservation in Washington, and to commercial facilities, most notably Envirocare in Utah. Receipt of waste from Rocky Flats will have effects at each receiving location. Analysis of such effects is part of the NEPA documentation for each DOE site and the licensing and permitting procedure for commercial sites.

Cumulative Effects

Decommissioning is but one, though a key, set of activities taking place at the Site over the coming years to remove contamination, cleanup the Site, and make it available for other productive uses in the future. All the activities taken together constitute implementation of the Site's *10-Year Plan*. The cumulative effects of all *10-Year Plan* activities are difficult to assess at this early date. The intended effects are to 1) close a facility no longer needed, 2) remove chemical and radiologic contamination and place it in a situation where it will pose minimal hazard to humans and the environment, and 3) make the Site available for future uses. These effects are positive.

On the road to achieving these positive effects, great care will be taken to ensure that potential negative effects are avoided or kept to a minimum. The previous discussion acknowledged the likelihood of temporary adverse impacts to communities of small mammals. Air emissions will be generated by continued employee commuting to the Site and use of petroleum-powered equipment, but will be within customary or permitted limits and thus should pose no threat to human health or the environment. When Site cleanup and closure is achieved, virtually all jobs that now exist at the Site will be finished and will no longer exist. Site employment levels will decrease gradually over the life of the closure activity. The effect of this job loss will be substantially mitigated by being spread over a period of years. Individual building sites will, after removal of the buildings now there, be revegetated pending a future use, creating habitat for flora and fauna communities already resident at the Site. Effects will accrue at sites to which Rocky Flats wastes are sent for disposal.

Ultimately, however, decommissioning and related activities will result in the disappearance of virtually the entire employment base that exists at the Site. More than an estimated 5,000 people, paid directly or indirectly by DOE, now work at the Site; by the time Site closure is completed, that number will approach zero. Some of these individuals will retire while some will move on to other projects with the same company or to new jobs when their work at the Site is completed, but the regional employment base will be adversely affected over a period of 10-or-more years by at least that number of jobs. According to the SWEIS, (p. 5-104) the loss of 14,900 of the 15,800 direct and secondary jobs created by activities at the Site by 2006 under Alternative 3, while substantial, represents only 1.2% of the Denver metropolitan area employment base in a time of an expanding economy. The annual economic impacts of this loss in payroll are estimated at over \$652,000,000 in the Denver metropolitan area. In addition to this decline in payroll, direct and indirect purchases in the Denver metropolitan area by DOE and Site contractors would shrink from a 1994 level of \$1.293 billion to an estimated \$6.271 million, a decline of over 99%.

Making the Site available for other uses, however, brings with it the possibility of creating new jobs at the Site. Any new jobs would be a function of the uses to which the Site is put and the extent to which private industrial and commercial activity is able to replace DOE activity. No estimates are available of the number of jobs that might exist at the Site after cleanup activities are completed or how the salaries and wages of any such jobs would compare to the salaries and wages of jobs at the Site. Future Site uses include not only employment-generating uses but also open space and residential.

Conclusion

This section has reviewed the proposed action - decommissioning of buildings at the Site - to identify its expected environmental effects and to review the project against NEPA values.

A wide variety of statutes will apply to decommissioning activities, including the Clean Water Act, Clean Air Act, Migratory Bird Treaty Act, Threatened and Endangered Species Act, Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation and Liability Act, the Occupational Safety and Health Act and a variety of other laws and their implementing regulations, plus numerous other regulations, DOE orders and policies, and Site policies and procedures, each designed to protect part of the human environment. These requirements are expected to ensure that any short-term adverse effects to the environment, including human health, from decommissioning will be minimal and well within both legal requirements and health-based standards. Consequently, it is expected that decommissioning will result in generally positive short- and long-term environmental effects as it removes buildings - some of which are contaminated - and places them in a condition which is permanently protective of the environment.

7 TECHNOLOGY

In general, decommissioning at RFETS can be accomplished with existing technology. However, this technology can always be improved upon and new technology is continually developing. The use of a technology not described in this document will not require a resubmittal of this DPP unless the environmental effects are different than a technology already described in this section. Decommissioning will continually attempt to identify decommissioning technologies that will lower costs by reducing waste, increasing productivity, reducing personnel protective equipment requirements, lowering radiation levels, and improving worker safety. The overall strategy will be to constantly look at costs associated with decommissioning and identify areas for continual improvement.

Numerous technologies are required for decontamination and decommissioning. The required technologies can be grouped into the following areas:

- Specialized Decommissioning Equipment
- Size Reduction
- Decontamination
- Contamination Control
- Non-Destructive Assay

Many studies have been performed outlining potential technologies for these areas. The following is a short summary of some of these technologies and in some cases the secondary waste generation associated with using the technology.

7.1 Specialized Decommissioning Equipment

In addition to the use of a large number of standard decommissioning and dismantlement tools, materials, equipment, and services, some specialized equipment is typically required for decommissioning activities. Some of the specialized equipment available for consideration includes:

- High Efficiency Particulate Air (HEPA)-Filtered Ventilation Systems

- Abrasive Decontamination Equipment

- Blastrac Machine

- Vacu-blast Machine

- Scabbling

- Abrasive Decontamination of Piping Internals

- High Pressure Water

- Ultra High Pressure Water

- Water Treatment Support Equipment

- CO2 High Velocity Blasting

- Crystalline Ice Blasting

- Fibre Media Blasting

7.2 Size Reduction Equipment

Volume reduction of radioactive waste can be used to minimize waste disposal costs and cost yields are evaluated on all decommissioning projects. Some of the volume reduction methods for solid radioactive waste include:

- Plasma Arc Cutting
- Mechanical Cutting Equipment
 - Power tear-off machine
 - Power-bladed covering removal (e.g., tile, roofing, tar paper)
 - Sectioning saw
- Laser
- Shredder
- Compactor
- Baler

7.3 Decontamination Processes

- High Pressure Water for Embedded/Underground Waste Drains
- Chemical Milling
- Strippable Coatings
- Electro Decontamination
- Solidification, Absorption and Filtration of Liquids

7.4 Specialized Services

Specialized services are required to support decommissioning activities and include:

- (1) Medical services to supply emergency services and to perform pre-employment, periodic, and termination physical examinations.
- (2) Health physics coverage to monitor all work activities. Analytical capabilities will support the Health Physics technician's daily activities, as well as specific sample evaluation.
- (3) Analytical services for industrial hygiene and radiological safety.
- (4) Employee training, instrument calibration, and emergency preparedness.
- (5) Respirator Cleaning Service - Self-contained breathing apparatus (SCBA), supplied air/airline and negative pressure respirators are commonly used on decommissioning projects when airborne contamination is expected or present. Respiratory devices must have been tested, approved and certified by the National Institute for Occupational Safety and Health (NIOSH), and meet the requirement of ANSI Z88.2.

Frequently used respiratory protection devices are to be cleaned, disinfected, filters replaced, and repaired, as often as necessary. This activity should take place in a clean, controlled area at the job-site. The work station is generally manned by one or two laborers, depending on the workload, and a health physics technician who monitors the radiological conditions of the equipment. This is generally a part-time operation. Contractors who provide health physics technicians generally provide this service as well.

- (6) **Laundry Service** - Considerable laundry is generated by decommissioning workers. Clothing will be shipped offsite to facilities that are licensed to process contaminated laundry. As an alternative, a portable laundry can be brought to the site. The choice is generally determined based upon the location of the job-site and the proximity to the laundry and the capabilities of other subcontractors on site.
- (7) **Bioassay** - Requires a laboratory with specialized low-level counting capabilities. Helgeson Scientific Services provides a mobile system which must generally be scheduled up to six months in advance. DOE laboratories and utilities generally have a whole body counting capability. When working in uranium contaminated facilities, it is necessary to have a uranium lung-count. Bioassay samples from decommissioning workers are also collected and must be analyzed routinely and whenever contamination through inhalation or ingestion is suspected.
- (8) **Asbestos Abatement** - Because of the vintage of the facilities being decommissioned, the presence of asbestos is virtually a certainty. The removal of asbestos requires a licensed abatement contractor and they will be required to undergo radiation training prior to beginning their work.

7.5 Contamination Control Equipment

Good radiological control practices require containment of loose contamination. During decommissioning, certain work evolutions will require the segmentation of components, the demolition of concrete, and the opening of process systems, which may disturb residual contamination. Typical contamination control measures include:

Tents - Containment tents are effective for controlling the spread of airborne and surface contamination with larger work pieces and equipment. These enclosures are maintained under negative pressure. Standard practice is to evacuate the enclosure through HEPA filters, using either the building's ventilation system or an appropriately sized auxiliary system.

Glove Bags - Glove bags can be selected from vendor catalogues or fabricated at the jobsite from Herculite or similar materials. These bags can be equipped with glove ports and sleeves for HEPA-filtered ventilation and for pouch transfer.

Surface Fixatives - Spray application of strippable coatings, such as ALARA 1146 and ISOLock 300, can be used with subsequent physical peeling of the coating from the surface to remove any loose or weakly adhering contamination.

Electrophoresis - This process removes airborne contamination by charging the airborne particles and collecting them on an oppositely charged plate/conductor.

7.6 Non-Destructive Assay (NDA)

Radiological Assay is necessary to quantify the amount of radioactive contamination that is present as either fixed or smearable. In addition, gamma and neutron scans are required to

determine the quantity and location of radioactive holdup in process equipment. For equipment that has suspected hazardous constituents, destructive analyses may be required. The secondary waste generated during characterization will consist of smears (Low Level, combustibles), alpha probes and instrumentation (Low Level, light metals) and analytical laboratory waste (Low Level Mixed, liquids and solids).

Long Range Alpha Detector - A new technique for determining alpha contamination level in pipes, ducts and closed systems is the Long Range Alpha Detector development by Los Alamos National Laboratories with industrial partners. The technology consist of flowing calibrated gas through a piping system and measuring the ionization of the gas. This technology has promise for radioactive characterization of piping, ducts and conduit systems prior to size reduction.

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8 ACRONYMS

ALARA	As Low As Reasonably Achievable
ARAR	Applicable or Relevant and Appropriate Requirement
ASAP	Accelerated Site Action Project
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COEM	Conduct of Engineering Manual
CRP	Community Relations Plan
CWA	Clean Water Act
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department of Energy
DOP	Decommissioning Operations Plan
DPP	Decommissioning Program Plan
EDE	Effective Dose Equivalent
EPA	Environmental Protection Agency
ER	Environmental Restoration
FSAR	Facility Safety Analysis Report
HASP	Health and Safety Plan
IM/IRA	Interim Measure/Interim Remedial Action
IMC	Integrating Management Contractor
IWCP	Integrated Work Control Package
LDR	Land Disposal Requirement
LLW	Low-level Waste
LRA	Lead Regulatory Agency
MAL	Master Activity List
MOU	Memorandum Of Understanding
NCP	National Contingency Plan, 40 CFR 300.415

NDA	Nondestructive Assay
NEPA	National Environmental Policy Act
PA	Protective Area
PAC	Portal Access Center
PAM	Proposed Action Memorandum
PPE	Personal Protective Equipment
PSR	Project Summary Report
QA	Quality Assurance
QC	Quality Control
RCM	Radiological Control Manual
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFFO	Rocky Flats Field Office
RPP	Radiation Protection Program
RSOP	RFCA Standard Operating Protocol
RTR	Real-Time Radiography
RWP	Radiological Work Permit
S&M	Surveillance and Maintenance
SAR	Safety Analysis Report
Site	Rocky Flats Environmental Technology Site
SNM	Special Nuclear Material
SWEIS	Sitewide Environmental Impact Statement
TRU	Transuranic
WAC	Waste Acceptance Criteria
WBS	Work Breakdown Structure
WMP	Waste Minimization Program
WSP	Work Summary Package

9 GLOSSARY

Deactivation means the process of placing a building, portion of a building, structure, system, or component (as used in the rest of this paragraph, "building") in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program in a manner that is protective of workers, the public, and the environment. Actions during deactivation could include the removal of fuel, draining and/or de-energizing of nonessential systems, removal of stored radiological and hazardous materials and related actions. As the bridge between operations and decommissioning, based upon Decommissioning Operations Plans or the Decommissioning Program Plan, deactivation can accomplish operations-like activities such as final process runs, and also decontamination activities aimed at placing the building in a safe and stable condition. Deactivation does not include decontamination necessary for the dismantlement and demolition phase of decommissioning, i.e., removal of contamination remaining in fixed structures and equipment after deactivation. Deactivation does not include removal of contaminated systems, system components, or equipment except for the purpose of accountability of SNM and nuclear safety. It also does not include removal of contamination except as incidental to other deactivation or for the purposes of accountability of SNM and nuclear safety.

Decommissioning means, for those buildings, portions of buildings, structures, systems or components (as used in the rest of this paragraph, "building") in which deactivation occurs, all activities that occur after the deactivation. It includes surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. For those buildings in which no deactivation occurs, the term includes characterization as described in Attachment 9, surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted use or, if unrestricted use is not feasible, restricted use of the buildings.

Decontamination means the removal or reduction of radioactive or hazardous contamination from facilities, equipment or soils by washing, heating, chemical or electrochemical action, mechanical cleaning or other techniques to achieve a cleaner stated objective or end condition.

Dismantlement means the demolition and removal of any building or structure or a part thereof during decommissioning.

Graded Approach means the process of basing the application of administrative and managerial controls applied to an item or activity according to the intended use of the results. Graded Approach establishes the degree of confidence needed to in the quality of the results, the value added by the increase in quality, and the risk posed by the item or activity to health, safety, and the environment.

ATTACHMENT 1 - "Building" List by Cluster

1. Facility List:

This list contains all facilities grouped by ASAP cluster.

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster SECBZO	1.1.1.1		
Building 120	1.1.1.1.4.1	West Access Guard Post	DPP
Trailer 120A	1.1.1.1.4.2	West Security Badge Trailer	DPP
Building 920	1.1.1.1.4.3	East Entrance Guard Post	DPP
Cluster INFMT	1.1.1.2		
Building 180	1.1.1.2.4.1	Meteorology Data Collection Tower	DPP
Building 181	1.1.1.2.4.2	Meteorology Data Collection Tower	DPP
Cluster 130	1.1.3.01		
Building 130	1.1.3.01.4.01	Engineering and Warehouse	DPP
Building 130C	1.1.3.01.4.02	Yard Maintenance Cargo Container	DPP
Trailer 130A	1.1.3.01.4.03	Administration	DPP
Trailer 130B	1.1.3.01.4.04	Administration	DPP
Trailer 130C	1.1.3.01.4.05	Administration	DPP
Trailer 130D	1.1.3.01.4.06	Administration	DPP
Trailer 130E	1.1.3.01.4.07	Administration	DPP
Trailer 130F	1.1.3.01.4.08	Administration	DPP
Trailer 130G	1.1.3.01.4.09	Administration	DPP
Trailer 130H	1.1.3.01.4.10	Administration	DPP
Trailer 130I	1.1.3.01.4.11	Administration	DPP
Trailer 130J	1.1.3.01.4.12	Administration	DPP
Building 131	1.1.3.01.4.13	DOE Office Building	DPP
Trailer 131A	1.1.3.01.4.14	Administration	DPP
Building 132	1.1.3.01.4.15	Electrical Substation # 9	DPP
Cluster H2OGBZ	1.1.3.02		
Building 308A	1.1.3.02.4.1	Interceptor Trench Pump House	DPP
Building 308B	1.1.3.02.4.2	Waste Storage Tank	DPP
Building 308C	1.1.3.02.4.3	Waste Storage Tank	DPP
Cluster H2OSBZ	1.1.3.03		
Building 306	1.1.3.03.4.1	Water Sampling Station	DPP
Building 933	1.1.3.03.4.2	Eff Monitoring Sta Ind. & Walnut Cr.	DPP
Building 934	1.1.3.03.4.3	Eff Monitoring Sta. Women Creek	DPP
Building 994	1.1.3.03.4.4	Eff Monitoring Sta Pond B-4	DPP
Cluster H2OSIZ	1.1.3.04		
Building 930	1.1.3.04.4.1	Eff Monitoring Sta Bldg. 990	DPP
Building 931	1.1.3.04.4.2	Eff Monitoring Sta Bldg. 995	DPP
Cluster SECBZI	1.1.3.05		
Building 302	1.1.3.05.4.1	Pistol Range	DPP
Building 303	1.1.3.05.4.2	Rifle Range	DPP
Building 307	1.1.3.05.4.3	Pistol Range	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster 111 Building 111 Trailer 111A Trailer 112A Trailer 112B Trailer 112C Building 113 Trailer 115A Trailer 115B Trailer 115C Building 116 Trailer 117A Trailer 119A Trailer 119B Trailer 121A	1.1.5.01 1.1.5.01.4.01 1.1.5.01.4.02 1.1.5.01.4.03 1.1.5.01.4.04 1.1.5.01.4.05 1.1.5.01.4.06 1.1.5.01.4.07 1.1.5.01.4.08 1.1.5.01.4.09 1.1.5.01.4.10 1.1.5.01.4.11 1.1.5.01.4.12 1.1.5.01.4.13 1.1.5.01.4.14	General Staff Administration Admin General Staff Administration Administration Administration Administration Administration DOE Duty Officer Administration DOE Administration DOE Administration Administration State of Colorado Administration Wackenhut Administration	DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP
Cluster 125/441 Building 114 Building 122S Building 123 Building 123S Building 125 Building 126 Building 441 Trailer 441A	1.1.5.02 1.1.5.02.4.1 1.1.5.02.4.2 1.1.5.02.4.3 1.1.5.02.4.4 1.1.5.02.4.5 1.1.5.02.4.6 1.1.5.02.4.7 1.1.5.02.4.8	Car Pool Shelter Shredder Shed Health Physics Building Hazardous Waste Storage Standards Laboratory Source Storage Building Administration Construction Coordination	DPP DPP DPP DPP DPP DPP DPP DPP DPP
Cluster 221/224 Building 221 Building 224	1.1.5.03 1.1.5.03.4.1 1.1.5.03.4.2	Storage Tank Central Fuel Central Fuel Storage Tank	DPP DPP
Cluster 223 Building 223 Building 223A	1.1.5.04 1.1.5.04.4.1 1.1.5.04.4.2	Nitrogen Supply Farm ERM Storage Facility	DPP DPP
Cluster 300/500 Building 333 Building 334 Trailer 334B Trailer 334C Trailer 334D Building 549 Building 551 Trailer 551A Building 552 Building 553 Building 554 Building 556 Building 556B Building 510CC	1.1.5.05 1.1.5.05.4.01 1.1.5.05.4.02 1.1.5.05.4.03 1.1.5.05.4.04 1.1.5.05.4.05 1.1.5.05.4.06 1.1.5.05.4.07 1.1.5.05.4.08 1.1.5.05.4.09 1.1.5.05.4.10 1.1.5.05.4.11 1.1.5.05.4.12 1.1.5.05.4.13 1.1.5.05.4.18	Paint Shop & Sandblast Facility General Maintenance Shops Administration Administration Administration Contractor Storage General Supply Warehouse Administration Gas Storage Welding Shop Storage Building Metal Cutton Building Carpenter Shop Shed Storage Unit	DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP DPP
Cluster 331 Building 331	1.1.5.06 1.1.5.06.4.1	Garage and Maintenance Shop	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Building 331C	1.1.5.06.4.2	Cargo Container Shed	DPP
Building 331S	1.1.5.06.4.3	Storage Shed	DPP
Trailer 331A	1.1.5.06.4.4	Fire Department Storage	DPP
Building 335	1.1.5.06.4.5	Fire Training Building	DPP
Cluster 371T	1.1.5.07		
Building 367	1.1.5.07.4.1	Storage Shed	DPP
Trailer 371A	1.1.5.07.4.2	Administration	DPP
Trailer 371C	1.1.5.07.4.3	Administration	DPP
Trailer 371D	1.1.5.07.4.4	Administration	DPP
Trailer 371E	1.1.5.07.4.5	Rest Rooms	DPP
Trailer 371F	1.1.5.07.4.6	Administration	DPP
Trailer 371G	1.1.5.07.4.7	Administration	DPP
Cluster 440	1.1.5.08		
Building 439	1.1.5.08.4.1	Maintenance Shop	DPP
Trailer 439A	1.1.5.08.4.2	Construction Coordination	DPP
Trailer 439D	1.1.5.08.4.3	Remote Engineering	DPP
Building 440	1.1.5.08.4.4	Modification Center	DPP
Trailer 447A	1.1.5.08.4.5	Lockers	DPP
Cluster 442/452	1.1.5.09		
Building 218	1.1.5.09.4.01	Nitric Acid Farm	DPP
Trailer 428A	1.1.5.09.4.02	Tool Shed (Called A or B)	DPP
Building 442	1.1.5.09.4.03	Filter Test Lab.	DPP
Trailer 442A	1.1.5.09.4.04	Construction Coordination	DPP
Building 452	1.1.5.09.4.05	Engineering Administration	DPP
Trailer 452A	1.1.5.09.4.06	Administration	DPP
Trailer 452B	1.1.5.09.4.07	Health Effects Research Trailer	DPP
Trailer 452C	1.1.5.09.4.08	Health Effects Research Trailer	DPP
Trailer 452D	1.1.5.09.4.09	Health Effects Research Trailer	DPP
Trailer 452E	1.1.5.09.4.10	Restrooms	DPP
Trailer 452F	1.1.5.09.4.11	Health Effects Research Trailer	DPP
Trailer 452G	1.1.5.09.4.12	Respirator Fit Facility	DPP
Cluster 444	1.1.5.10		
Building 427	1.1.5.10.4.01	Emergency Generator for Building 444	DPP
Building 427A	1.1.5.10.4.02	Diesel Storage Tank for Building 427	DPP
Building 444	1.1.5.10.4.03	Privatization (NCPP), Metal Recycle	DPP
Trailer 444A	1.1.5.10.4.04	Showers/Lockers	DPP
Building 445	1.1.5.10.4.05	Carbon Storage	DPP
Building 447	1.1.5.10.4.06	Privatization (NCPP), Metal Recycle	DPP
Building 448	1.1.5.10.4.07	Storage	DPP
Building 449	1.1.5.10.4.08	Oil and Paint Storage	DPP
Building 450	1.1.5.10.4.09	Filter Plenum for Building 444	DPP
Building 451	1.1.5.10.4.10	Filter Plenum for Building 447	DPP
Building 453	1.1.5.10.4.11	Oil Storage	DPP
Building 454	1.1.5.10.4.12	Cooling Tower for Building 444	DPP
Building 455	1.1.5.10.4.13	Filter Plenum, Plating Lab, Building 444	DPP
Building 457	1.1.5.10.4.14	Cooling Tower for Building 447	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster 460	1.1.5.11		
Trailer 124A	1.1.5.11.4.1	Administration	DPP
Building 460	1.1.5.11.4.2	DOE Administration	DPP
Building 462	1.1.5.11.4.3	Cooling Tower for Building 460	DPP
Cluster 664	1.1.5.12		
Building 664	1.1.5.12.4.1	Waste Storage/Shipping	DPP
Trailer 664A	1.1.5.12.4.2	Administration	DPP
Building 666	1.1.5.12.4.3	TSCA Storage Building	DPP
Building 668	1.1.5.12.4.4	Drum Certification Building	DPP
Building 667	1.1.5.12.4.5	Contractor Storage	DPP
Cluster 690T	1.1.5.13		
Building 662	1.1.5.13.4.01	Plant Power Shop	DPP
Building 663	1.1.5.13.4.02	Contractor Storage	DPP
Trailer 690A	1.1.5.13.4.03	Administration	DPP
Trailer 690B	1.1.5.13.4.04	Administration	DPP
Trailer 690C	1.1.5.13.4.05	Administration	DPP
Trailer 690D	1.1.5.13.4.06	Administration	DPP
Trailer 690E	1.1.5.13.4.07	Administration	DPP
Trailer 690F	1.1.5.13.4.08	Administration	DPP
Trailer 690G	1.1.5.13.4.09	Administration	DPP
Trailer 690H	1.1.5.13.4.10	Administration	DPP
Trailer 690J	1.1.5.13.4.11	Administration	DPP
Trailer 690K	1.1.5.13.4.12	Administration	DPP
Trailer 690L	1.1.5.13.4.13	Administration	DPP
Trailer 690M	1.1.5.13.4.14	Administration	DPP
Trailer 690N	1.1.5.13.4.15	Logistics Administration Building	DPP
Cluster 750HAZ	1.1.5.14		
Building 750HAZ	1.1.5.14.4.1	Hazardous Storage Unit	DPP
Tent 01	1.1.5.14.4.2	Storage Tent B551 Pad	DPP
Cluster 850	1.1.5.15		
Building 850	1.1.5.15.4.1	Administration	DPP
Cluster 891T	1.1.5.16		
Trailer 886B	1.1.5.16.4.01	Administration	DPP
Trailer 886C	1.1.5.16.4.02	Administration	DPP
Trailer 891A	1.1.5.16.4.03	Administration	DPP
Trailer 891B	1.1.5.16.4.04	Administration	DPP
Trailer 891C	1.1.5.16.4.05	Administration	DPP
Trailer 891D	1.1.5.16.4.06	Administration	DPP
Trailer 891E	1.1.5.16.4.07	Administration	DPP
Trailer 891F	1.1.5.16.4.08	Administration	DPP
Trailer 891G	1.1.5.16.4.09	Administration	DPP
Trailer 891H	1.1.5.16.4.10	Administration	DPP
Trailer 891I	1.1.5.16.4.11	Administration	DPP
Trailer 891J	1.1.5.16.4.12	Administration	DPP
Trailer 891K	1.1.5.16.4.13	Administration	DPP
Trailer 891L	1.1.5.16.4.14	Administration	DPP
Trailer 891M	1.1.5.16.4.15	Administration	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Trailer 891N	1.1.5.16.4.16	Administration	DPP
Trailer 891O	1.1.5.16.4.17	Administration	DPP
Trailer 891P	1.1.5.16.4.18	Administration	DPP
Trailer 891Q	1.1.5.16.4.19	Administration	DPP
Trailer 891R	1.1.5.16.4.20	Administration	DPP
Trailer 893A	1.1.5.16.4.21	Administration	DPP
Trailer 893B	1.1.5.16.4.22	Administration	DPP
Cluster 903/905	1.1.5.17		
Building 903PAD	1.1.5.17.4.01	Contamination Barrier Pad	DPP
Building 903A	1.1.5.17.4.02	ER Decontamination Pad	DPP
Building 903D	1.1.5.17.4.03	Liquid Dumping Station	DPP
Building 903T	1.1.5.17.4.04.	Air Sampling Station	DPP
Trailer 903A	1.1.5.17.4.05	Laboratory	DPP
Building 905PAD	1.1.5.17.4.07	Field Operations Yard	DPP
Building 952	1.1.5.17.4.08	Gas Cylinder Storage	DPP
Trailer 952A	1.1.5.17.4.09	Break Trailer	DPP
Building 960	1.1.5.17.4.10	Contractor Storage	DPP
Cluster 904/906	1.1.5.18		
Trailer 760A	1.1.5.18.4.01	Shower Room	DPP
Trailer 760B	1.1.5.18.4.02	Carpool Shelter	DPP
Building 904PAD	1.1.5.18.4.04	Storage PAD w/Tents	DPP
Building 904P	1.1.5.18.4.05	Propane Tank Farm	DPP
Trailer 904A	1.1.5.18.4.06	Break Trailer	DPP
Building 906	1.1.5.18.4.07	Central Waste Storage	DPP
Tent 07	1.1.5.18.4.08	Storage Tent Pad 902 (aka B902)	DPP
Tent 08	1.1.5.18.4.09	Storage Tent Pad 904	DPP
Tent 09	1.1.5.18.4.10	Pondcrete Tent Pad 904	DPP
Tent 10	1.1.5.18.4.11	Pondcrete Tent Pad 904	DPP
Tent 11	1.1.5.18.4.12	Pondcrete Tent Pad 904	DPP
Cluster SECIZ	1.1.5.20		
Building 121	1.1.5.20.4.01	Plant Protection	DPP
Building 127	1.1.5.20.4.02	Emergency Generator Bldg. 121/112	DPP
Building 128	1.1.5.20.4.03	Vehicle Shelter	DPP
Building 446	1.1.5.20.4.04	Guard post	DPP
Building 461	1.1.5.20.4.05	Guard Post	DPP
Building 864	1.1.5.20.4.06	Guard Post 881/850	DPP
Building 987	1.1.5.20.4.07	Building 987	DPP
Building 993	1.1.5.20.4.08	Storage Vault	DPP
Building 993A	1.1.5.20.4.09	Firing Position	DPP
Building 119	1.1.5.20.4.10	Plant Security Building	DPP
Cluster INFELI	1.1.5.21		
Building 212	1.1.5.21.4.1	Electrical Distribution System	DPP
Building 214	1.1.5.21.4.2	Fence & Street Lighting System	DPP
Building 555	1.1.5.21.4.3	Electrical Substation # 2	DPP
Building 558	1.1.5.21.4.4	Electrical Substation # 4	DPP
Building 661	1.1.5.21.4.5	Electrical Substation # 1	DPP
Building 675	1.1.5.21.4.6	Electrical Substation #3	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster INFGAS	1.1.5.22		
Building 210	1.1.5.22.4.1	Gas Distribution System	DPP
Building 869	1.1.5.22.4.2	Gas Distribution House	DPP
Cluster H20GIZ	1.1.5.23		
Building 891	1.1.5.23.4.01	Ground Water Treatment Building	DPP
Tank 200	1.1.5.23.4.02	Untreated Water Storage	DPP
Tank 201	1.1.5.23.4.03	Effluent Equalization Tank	DPP
Tank 202	1.1.5.23.4.04	Effluent Equalization Tank	DPP
Tank 203	1.1.5.23.4.05	Ion Exchange Tank	DPP
Tank 204	1.1.5.23.4.06	Clean Water Tank	DPP
Tank 205	1.1.5.23.4.07	Treated Ground Water Tank	DPP
Tank 206	1.1.5.23.4.08	Treated Ground Water Tank	DPP
Tank 207	1.1.5.23.4.09	Treated Ground Water Tank	DPP
Trailer 900A	1.1.5.23.4.13	Surface Water Treatment Trailer	DPP
Trailer 900B	1.1.5.23.4.14	Surface Water Treatment Trailer	DPP
Trailer 900C	1.1.5.23.4.15	Surface Water Treatment Trailer	DPP
Trailer 900D	1.1.5.23.4.16	Administration	DPP
Trailer 900E	1.1.5.23.4.17	Surface Water Treatment Trailer	DPP
Cluster INFWTI	1.1.5.24		
Building 124	1.1.5.24.4.1	Waste Treatment Plant	DPP
Building 129	1.1.5.24.4.2	Raw Water Strainer	DPP
Building 206	1.1.5.24.4.3	Domestic Water System	DPP
Building 215A	1.1.5.24.4.4	Water Tower	DPP
Building 215B	1.1.5.24.4.5	Domestic Water Storage	DPP
Building 216	1.1.5.24.4.6	Raw Water Supply & Pump	DPP
Cluster PWTS	1.1.5.25		
Building 231	1.1.5.25.4.1	Process Waste Tank Pump	DPP
Building 429	1.1.5.25.4.16	Process Waste Pit Building 441	DPP
Building 231A	1.1.5.25.4.2	Waste Tank 250K Gal.	DPP
Building 231B	1.1.5.25.4.3	Waste Tank 950K Gal.	DPP
Building 428	1.1.5.25.4.4	Waste Collection Tank & Pump	DPP
Cluster INFRDS	1.1.5.26		
Building 201	1.1.5.26.3.1	Railroad	DPP
Building 202	1.1.5.26.4.2	Roads	DPP
Building 203	1.1.5.26.4.3	Buffer zone Cattle Access	DPP
Building 204	1.1.5.26.4.4	Walkways	DPP
Building 205	1.1.5.26.4.5	Parking areas	DPP
Building 304	1.1.5.26.4.6	Fire Control Crossing	DPP
Cluster INFSEW	1.1.5.27		
Building 208	1.1.5.27.4.01	Sanitary Sewer System	DPP
Building 209	1.1.5.27.4.02	Storm Drain System	DPP
Building 971	1.1.5.27.4.03	Sludge Drying Bed	DPP
Building 972	1.1.5.27.4.04	Sludge Drying Bed	DPP
Building 973	1.1.5.27.4.05	Sludge Drying Bed	DPP
Building 974	1.1.5.27.4.06	Sludge Drying Bed	DPP
Trailer 974A	1.1.5.27.4.07	Water Treatment Unit	DPP
Building 988	1.1.5.27.4.08	Tertiary Treatment Unit	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Building 990	1.1.5.27.4.09	Waste Water Treatment Unit	DPP
Building 990A	1.1.5.27.4.10	Waste Water Treatment	DPP
Building 995	1.1.5.27.4.11	Sewage Treatment Facility	DPP
Cluster INFSTM	1.1.5.28		
Building 211	1.1.5.28.4.1	Steam Distribution System	DPP
Building 240	1.1.5.28.4.2	Steam CONDENSATE Tank	DPP
Building 443	1.1.5.28.4.3	Heating Plant	DPP
Building 710	1.1.5.28.4.4	Steam Valve House	DPP
Cluster INFTC	1.1.5.29		
Building 112	1.1.5.29.4.1	Cafeteria & Telecenter	DPP
Building 115	1.1.5.29.4.2	DOE Administration & EOC	DPP
Building 122	1.1.5.29.4.3	Medical Center	DPP
Building 220	1.1.5.29.4.4	Telecommunications Center	DPP
Building 222	1.1.5.29.4.5	Data Lines	DPP
Cluster 207	1.1.6.01		
Building 788	1.1.6.01.4.6	Cementation Process Facility	DPP
Cluster 371/374	1.1.6.02		
Building 262	1.1.6.02.4.1	Diesel fuel storage for Bldg. 371	DPP
Building 371	1.1.6.02.4.2	Caustic waste treatment, waste storage,	<u>DOP</u>
Building 373	1.1.6.02.4.3	Cooling tower for Bldg. 371/374	DPP
Building 374	1.1.6.02.4.4	Complete Liquid Waste Treatment Plant	<u>DOP</u>
Building 374A	1.1.6.02.4.5	Carpenter shop	DPP
Building 384	1.1.6.02.4.6	Cooling Tower for Building 371/374	DPP
Building 377	1.1.6.02.4.6	Air Compressor Building	DPP
Building 378	1.1.6.02.4.7	Waste Collection Pump House	DPP
Building 381	1.1.6.02.4.8	Storage Building	DPP
Building 383	1.1.6.02.4.9	Cooling Tower for Building 371/374	DPP
Cluster 371A	1.1.6.03		
Trailer 371H	1.1.6.03.4.1	Administration	DPP
Trailer 371J	1.1.6.03.4.2	Radiography Trailer	DPP
Trailer 371K	1.1.6.03.4.3	Administration	DPP
Building 376	1.1.6.03.4.4	Technical Support for Building 371	DPP
Trailer 376A	1.1.6.03.4.5	Administration	DPP
Cluster 559	1.1.6.04		
Building 559	1.1.6.04.3.1	Sample Analysis, Waste Research, Waste	<u>DOP</u>
Building 560	1.1.6.04.3.2	Cooling Tower for Building 559	DPP
Building 561	1.1.6.04.3.3	Filter Plenum for Building 559	DPP
Building 562	1.1.6.04.3.4	Emergency Generator for Building 559	DPP
Building 563	1.1.6.04.3.5	Cooling Tower for Building 559	DPP
Building 564	1.1.6.04.3.6	Administration Chemical Storage for B	DPP
Cluster 566	1.1.6.05		
Building 566	1.1.6.05.4.1	Protective Clothing Facility	DPP
Building 566A	1.1.6.05.4.2	Protective Clothing Plenum	DPP
Building 566B	1.1.6.05.4.3	Carp Shop Storage Shed	DPP
Cluster 569	1.1.6.06		
Building 569	1.1.6.06.4.1	Crate Counter Facility	DPP
Building 570	1.1.6.06.4.2	Filter Plenum for Building 569	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster 707	1.1.6.07		
Building 707	1.1.6.07.4.01	PU Stabilization, Metal Storage, Residue	<u>DOP</u>
Building 708	1.1.6.07.4.02	Compressor Building for Building 707	DPP
Building 711	1.1.6.07.4.03	Cooling Tower for Building 707	DPP
Building 711A	1.1.6.07.4.04	Emergency Generator for Building 711	DPP
Building 718	1.1.6.07.4.05	Service Building for Building 711	DPP
Building 731A	1.1.6.07.4.26	Emergency Pump for Building 707	DPP
Cluster 750	1.1.6.08		
Building 705	1.1.6.08.4.01	Coatings Laboratory	DPP
Building 706	1.1.6.08.4.02	Library	DPP
Trailer 706A	1.1.6.08.4.03	Administration	DPP
Trailer 707B	1.1.6.08.4.04	Administration	DPP
Trailer 707S	1.1.6.08.4.05	Oil Storage Shed	DPP
Building 709	1.1.6.08.4.06	Cooling Tower for Building 707	DPP
Building 709A	1.1.6.08.4.07	Pump & Generator Building for Building	DPP
Building 750	1.1.6.08.4.08	Engineering Offices	DPP
Trailer 750A	1.1.6.08.4.09	Administration	DPP
Trailer 750B	1.1.6.08.4.10	Administration	DPP
Trailer 750C	1.1.6.08.4.11	Administration	DPP
Trailer 750D	1.1.6.08.4.12	Administration	DPP
Building 763	1.1.6.08.4.13	South Breezeway	DPP
Trailer 764A	1.1.6.08.4.14	Administration	DPP
Trailer 764B	1.1.6.08.4.15	Administration	DPP
Trailer 779A	1.1.6.08.4.16	Administration	DPP
Cluster 750PAD	1.1.6.09		
Building 750PAD	1.1.6.09.4.01	Waste Storage Pad	DPP
Building 750P	1.1.6.09.4.02	Propane Tank Farm	DPP
Trailer 750E	1.1.6.09.4.03	Restrooms	DPP
Trailer 750F	1.1.6.09.4.04	Locker Room	DPP
Trailer 750G	1.1.6.09.4.05	Break Room	DPP
Tent 02	1.1.6.09.4.06	Pondcrete Tent Building 750	DPP
Tent 03	1.1.6.09.4.07	Pondcrete Tent Building 750	DPP
Tent 04	1.1.6.09.4.08	Pondcrete Tent Building 750	DPP
Tent 05	1.1.6.09.4.09	Pondcrete Tent Building 750	DPP
Tent 06	1.1.6.09.4.10	Pondcrete Tent	DPP
Tent 12	1.1.6.09.4.11	Pondcrete Tent	DPP
Cluster 771/774	1.1.6.10		
Building 714	1.1.6.10.4.01	HF Storage Building	DPP
Building 714A	1.1.6.10.4.02	HE Storage Building	DPP
Building 714B	1.1.6.10.4.03	Emergency Breathing Air for Bldg.	DPP
Building 715	1.1.6.10.4.04	Emergency Generator for Bldg. 771/774	DPP
Building 715A	1.1.6.10.4.05	Emergency Generator for Bldg. 771/774	DPP
Building 717	1.1.6.10.4.07	Magnahelic Gauge Building	DPP
Building 771	1.1.6.10.4.08	High/Low Activity Liquid Treatment,	<u>DOP</u>
Building 771C	1.1.6.10.4.09	Drum Counter, Waste Storage "771	DPP
Building 772	1.1.6.10.4.10	Fluorine Storage Building	DPP
Building 772A	1.1.6.10.4.11	Acid Storage Building	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Building 774	1.1.6.10.4.12	Aqueous/Organic Waste Treatment,	<u>DOP</u>
Building 774A	1.1.6.10.4.13	Condensate Tank	DPP
Building 774B	1.1.6.10.4.14	Condensate Tank	DPP
Building 775	1.1.6.10.4.15	Sewage Lift Station	DPP
Building 716	1.1.6.10.4.16	Emergency Generator for Bldg. 771/772	DPP
Cluster 771A	1.1.6.11		
Building 712A	1.1.6.11.4.01	Natural Gas Building	DPP
Building 713A	1.1.6.11.4.02	Valve/Tank Pit	DPP
Building 770	1.1.6.11.4.03	Carpenter Shop Storage	DPP
Building 771B	1.1.6.11.4.04	Carpenter Shop	DPP
Trailer 771A	1.1.6.11.4.05	Administration	DPP
Trailer 771B	1.1.6.11.4.06	Administration	DPP
Trailer 771C	1.1.6.11.4.07	Shower/Locker Room	DPP
Trailer 771D	1.1.6.11.4.08	Administration	DPP
Trailer 771E	1.1.6.11.4.09	Administration	DPP
Trailer 771F	1.1.6.11.4.10	Administration	DPP
Trailer 771G	1.1.6.11.4.11	Showers	DPP
Trailer 771H	1.1.6.11.4.12	Administration	DPP
Trailer 771J	1.1.6.11.4.13	Administration	DPP
Trailer 771K	1.1.6.11.4.14	Administration	DPP
Trailer 771L	1.1.6.11.4.15	Restrooms	DPP
Building 771A	1.1.6.11.4.16	Administration	DPP
Cluster 776/777	1.1.6.12		
Building 701	1.1.6.12.4.01	Waste Management Research	DPP
Building 702	1.1.6.12.4.02	Pumphouse for Building 712	DPP
Building 703	1.1.6.12.4.03	Pumphouse for Building 713	DPP
Building 712	1.1.6.12.4.04	Cooling Tower for Buildings	DPP
Building 713	1.1.6.12.4.05	Cooling Tower for Buildings	DPP
Building 776	1.1.6.12.4.06	RCRA Waste Storage, Waste Processing,	<u>DOP</u>
Building 777	1.1.6.12.4.07	Waste Storage	<u>DOP</u>
Building 781	1.1.6.12.4.08	Compressor for Building 777	DPP
Cluster 778	1.1.6.13		
Building 778	1.1.6.13.4.01	Service Building	DPP
Cluster 779	1.1.6.14		
Building 727	1.1.6.14.4.01	Emergency Generator for Building 782	DPP
Building 729	1.1.6.14.4.02	Filter Plenum for Building 779 Zone 1	DPP
Building 779	1.1.6.14.4.03	In Deactivation & Decommissioning	<u>DOP</u>
Building 780	1.1.6.14.4.04	Flammable Storage	DPP
Building 780A	1.1.6.14.4.05	Metal Storage	DPP
Building 780B	1.1.6.14.4.06	Gas Bottle Storage	DPP
Building 782	1.1.6.14.4.07	Filter Plenum for Building 779 Zone 2	DPP
Building 783	1.1.6.14.4.08	Pump House for Bldgs 784-787	DPP
Building 784	1.1.6.14.4.09	Standby Cooling Tower for Building 779	DPP
Building 785	1.1.6.14.4.10	Process Water Cooling Tower for Bldg	DPP
Building 786	1.1.6.14.4.11	Cooling tower for Building 779	DPP
Building 787	1.1.6.14.4.12	Cooling tower for Building 779 East	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster 790	1.1.6.15		
Building 790	1.1.6.15.4.1	Radiation Calibration Laboratory	DPP
Cluster 800A	1.1.6.16		
Building 830	1.1.6.16.4.01	Isolated Power Supply	DPP
Trailer 881A	1.1.6.16.4.02	Administration	DPP
Trailer 881B	1.1.6.16.4.03	Administration	DPP
Building 882	1.1.6.16.4.04	Gas Storage Shed	DPP
Trailer 883A	1.1.6.16.4.05	Administration	DPP
Trailer 883B	1.1.6.16.4.06	Administration	DPP
Trailer 883C	1.1.6.16.4.07	Administration	DPP
Trailer 883D	1.1.6.16.4.08	Restroom	DPP
Trailer 883E	1.1.6.16.4.09	Administration	DPP
Building 884	1.1.6.16.4.10	Warehouse Waste Storage	DPP
Building 885	1.1.6.16.4.11	Paint & Oil Storage	DPP
Building 889	1.1.6.16.4.12	In Decommissioning Process	DPP
Trailer 889A	1.1.6.16.4.13	Decommissioned (Removed)	DPP
Building 890	1.1.6.16.4.14	Pump House	DPP
Cluster 881	1.1.6.17		
Building 881	1.1.6.17.4.1	Laboratory , Offices, Waste Storage	DPP
Building 881C	1.1.6.17.4.2	Cooling Tower for Building 881	DPP
Building 881F	1.1.6.17.4.3	Filter Plenum for Building 881	DPP
Building 881G	1.1.6.17.4.4	Emergency Generator for Building 881	DPP
Cluster 865/883	1.1.6.18		
Building 827	1.1.6.18.4.1	Emergency Generator for	DPP
Building 863	1.1.6.18.4.2	Electric Transformers for Building 865	DPP
Building 865	1.1.6.18.4.3	Privatization (NCPP), Metal Recycle	DPP
Building 865A	1.1.6.18.4.4	Cooling Tower for Building 865	DPP
Building 867	1.1.6.18.4.5	Filter Plenum for Building 865 Zone 1	DPP
Building 868	1.1.6.18.4.6	Filter Plenum for Building 865 Zone 2	DPP
Building 879	1.1.6.18.4.7	Filter Plenum for Building 883 Zone 1	DPP
Building 883	1.1.6.18.4.8	Privatization (NCPP), Metal Recycle	DPP
Building 883C	1.1.6.18.4.9	Cooling Tower for Building 883	DPP
Cluster 886	1.1.6.19		
Building 875	1.1.6.19.4.1	Filter Plenum for Building 886	DPP
Building 880	1.1.6.19.4.2	Storage Building	DPP
Building 886	1.1.6.19.4.3	Nuclear Safety Building	DPP
Trailer 886A	1.1.6.19.4.4	Administration	DPP
Building 888A	1.1.6.19.4.5	Electrical Substation	DPP
Cluster 910	1.1.6.20		
Building 215D	1.1.6.20.4.1	Distillate Storage Tank	DPP
Building 226	1.1.6.20.4.2	NACL Tank Near Building 910	DPP
Building 227	1.1.6.20.4.3	SULF Acid Tank Near Building 910	DPP
Building 228A	1.1.6.20.4.4	Drying Beds Near Building 910	DPP
Building 228B	1.1.6.20.4.5	Drying Beds Near Building 910	DPP
Building 910	1.1.6.20.4.6	Reverse Osmosis Plant	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Cluster 964	1.1.6.21		
Building 964	1.1.6.21.4.1	Hazardous Waste Storage	DPP
Building 964P	1.1.6.21.4.2	PA Decon Pad	DPP
Cluster 980	1.1.6.22		
Building 965	1.1.6.22.4.1	Contractor Storage	DPP
Building 967	1.1.6.22.4.2	Contractor Locker Room	DPP
Building 968	1.1.6.22.4.3	Contractor Warehouse	DPP
Building 980	1.1.6.22.4.4	Contractor Storage	DPP
Cluster 991	1.1.6.23		
Building 984	1.1.6.23.4.1	Shipping Container Storage	DPP
Building 985	1.1.6.23.4.2	Filter Plenum for Storage Vaults	DPP
Building 989	1.1.6.23.4.3	Emergency Generator for Building 991	DPP
Building 991	1.1.6.23.4.4	Product Warehouse, Offices, Waste	DPP
Building 996	1.1.6.23.4.5	Storage Vault	DPP
Building 997	1.1.6.23.4.6	Storage Vault	DPP
Building 998	1.1.6.23.4.7	Storage Vault	DPP
Building 999	1.1.6.23.4.8	Storage Vault	DPP
Cluster PWTSN	1.1.6.24		
Building 207	1.1.6.24.4.1	Industrial Waste Storage	DPP
Building 528	1.1.6.24.4.2	Process Waste Pit for Building 559	DPP
Building 728	1.1.6.24.4.3	Waste Pit for Building 771	DPP
Building 730	1.1.6.24.4.4	Process Waste Pit for Building 776	DPP
Building 731	1.1.6.24.4.5	Process Waste Pit for Building 707	DPP
Building 732	1.1.6.24.4.6	Laundry Waste Pit	DPP
Building 828	1.1.6.24.4.7	Process Waste Pit for Building 886	DPP
Building 866	1.1.6.24.4.8	Waste Transfer For Building 865	DPP
Building 887	1.1.6.24.4.9	Sewage Lift Station	DPP
Cluster SECNPZ	1.1.6.25		
Building 213	1.1.6.25.4.01	Alarms & Communications System Bldg.	DPP
Building 260	1.1.6.25.4.02	Perimeter Security Zone	DPP
Building 372	1.1.6.25.4.03	Guard Post for Portal #2	DPP
Building 372A	1.1.6.25.4.04	PAC Portal #2	DPP
Building 375	1.1.6.25.4.05	Guard Tower T-4	DPP
Building 519	1.1.6.25.4.06	Allarms System Storage	DPP
Building 550	1.1.6.25.4.07	Guard Tower T-3	DPP
Building 557	1.1.6.25.4.08	Guard Post	DPP
Building 761	1.1.6.25.4.09	Guard Tower	DPP
Building 762	1.1.6.25.4.10	Guard Post Portal #1	DPP
Building 762A	1.1.6.25.4.11	PAC Portal #1	DPP
Building 764	1.1.6.25.4.12	PIDAS System	DPP
Building 765	1.1.6.25.4.13	Secondary Alarm Center	DPP
Building 765A	1.1.6.25.4.14	Emergency Pump/ Radio Tower	DPP
Building 773	1.1.6.25.4.15	Guard Post	DPP
Building 792	1.1.6.25.4.16	Guard Post Portal #3	DPP
Building 792A	1.1.6.25.4.17	PAC Portal #3	DPP
Building 888	1.1.6.25.4.18	Guard Post Building 886	DPP
Building 901	1.1.6.25.4.19	Guard Tower T-2	DPP

Complex & Building	WBS Number	Near Term Use	REGULATORY DOCUMENT
Building 992	1.1.6.25.4.20	Guard Post Building 991	DPP
Building 900	1.1.6.25.4.28	Decommissioned	DPP
Cluster INFELN	1.1.6.26		
Building 515	1.1.6.26.4.1	Electrical Substation # 5	DPP
Building 516	1.1.6.26.4.2	Electrical Substation # 6	DPP
Building 517	1.1.6.26.4.3	Electrical Substation # 7	DPP
Building 518	1.1.6.26.4.4	Electrical Substation # 8	DPP
Building 520	1.1.6.26.4.5	Switch Gear Building	DPP
Building 575	1.1.6.26.4.6	Power Station	DPP
Cluster INFWTN	1.1.6.27		
Building 215C	1.1.6.27.4.1	Domestic Water Storage	DPP
Building 928	1.1.6.27.4.2	Firewater Pumping Station	DPP

Regulatory Document Legend:

DPP = Decommissioning Program Plan

DOP = Decommissioning Operations Plan (Cluster Specific)

ATTACHMENT 2 - Building Disposition Baseline

ID	Task Name	Dur	Start	Finish
175	INFRDS Cluster Decommissioning	1d	9/16/96	9/16/96
346	779 Cluster Decommissioning	762d	10/1/96	9/30/99
227	886 Cluster Decommissioning	508d	10/1/97	9/30/99
134	891T Cluster Decommissioning	254d	10/1/98	9/30/99
273	371A Cluster Decommissioning	112d	10/1/98	3/11/99
121	690T Trailers Decommissioning	255d	10/4/99	10/2/00
237	964 Cluster Decommissioning	127d	10/4/99	4/3/00
288	750PAD Cluster Decommissioning	252d	10/4/99	9/28/00
222	800A Cluster Decommissioning	208d	12/7/99	9/28/00
338	991 Cluster Decommissioning	166d	2/7/00	9/28/00
96	371T Cluster Decommissioning	225d	10/2/00	8/20/01
242	980 Cluster Decommissioning	252d	10/2/00	9/27/01
284	750 Cluster Decommissioning	163d	10/3/00	5/23/01
307	771A Cluster Decommissioning	208d	12/5/00	9/27/01
217	790 Cluster Decommissioning	45d	12/4/01	2/6/02
22	130 Trailer Facilities Decommissioning	261d	10/1/02	9/30/03
113	460 Cluster Decommissioning	523d	10/1/02	9/30/04
329	865/883 Cluster Decommissioning	523d	10/1/02	9/30/04
6	SECBZO Cluster Decommissioning (partial)	183d	10/1/03	6/11/04
72	111 Cluster Decommissioning	523d	10/1/03	9/30/05
76	125/441 Cluster Decommissioning	262d	10/1/03	9/30/04
83	223 Cluster Decommissioning	261d	10/1/03	9/29/04
104	442/452 Cluster Decommissioning	262d	10/1/03	9/30/04
183	INFSTM Cluster Decommissioning	261d	10/1/03	9/29/04

183	INFSTM Cluster Decommissioning	261d	10/1/03	9/29/04
324	881 Cluster Decommissioning	523d	10/1/03	9/30/05
316	Bldg 776 Cluster Decommissioning	781d	10/3/03	9/29/06
317	Bldg 777 Cluster Decommissioning	781d	10/3/03	9/29/06
196	207 Cluster Decommissioning	214d	12/8/03	9/30/04
108	444 Cluster Decommissioning	521d	10/1/04	9/29/06
151	SECIZ Cluster Decommissioning	260d	10/1/04	9/29/05
280	707 Cluster Decommissioning	781d	10/1/04	9/28/07
251	SECNPZ Cluster Decommissioning	168d	2/9/05	9/30/05
208	566 Cluster Decommissioning	158d	2/23/05	9/30/05
67	Final Cap Construction	1043d	10/3/05	9/30/09
188	INFFCM Cluster Decommissioning	259d	10/3/05	9/28/06
292	778 Cluster Decommissioning	167d	12/7/05	7/27/06
130	850 Cluster Decommissioning	260d	10/2/06	9/28/07
143	904/906 Cluster Decommissioning	260d	10/2/06	9/28/07
171	PWTS Cluster Decommissioning	260d	10/2/06	9/28/07
179	INFSEW Cluster Decommissioning	521d	10/2/06	9/29/08
255	INFELN Cluster Decommissioning	130d	10/2/06	3/30/07
259	INFWTN Cluster Decommissioning	172d	10/2/06	5/29/07
268	371/374 Cluster Decommissioning	783d	10/2/06	9/30/09
47	TRU Waste Staging/Shipping Facility D&D	262d	10/1/07	9/30/08
51	Decommission New LLW/LLMW Storage Facility	261d	10/1/07	9/29/08
87	300/500 Cluster Decommissioning	260d	10/1/07	9/26/08
100	440 Cluster Decommissioning	203d	10/1/07	7/9/08
117	664 Cluster Decommissioning	261d	10/1/07	9/29/08

ID	Task Name	Dur	Start	Finish
126	750HAZ Cluster Decommissioning	261d	10/1/07	9/29/08
138	903/905 Cluster Decommissioning	260d	10/1/07	9/26/08
167	INFWTI Cluster Decommissioning	260d	10/1/07	9/26/08
247	PWTSN Cluster Decommissioning	264d	10/1/07	10/2/08
301	Bldg 771 Decommissioning	784d	10/1/07	9/30/10
302	Bldg 774 Decommissioning	784d	10/1/07	9/30/10
203	559 Cluster Decommissioning	522d	10/2/07	9/30/09
212	569 Cluster Decommissioning	167d	12/5/07	7/24/08
233	910 Cluster Decommissioning	160d	12/5/07	7/15/08
27	H2OGBZ Cluster Decommissioning	158d	10/1/08	5/8/09
122	B663/662 Decommissioning	261d	9/30/09	9/29/10
91	331 Cluster Decommissioning	260d	10/1/09	9/29/10
32	H2OSBZ Cluster Decommissioning	170d	10/4/10	5/27/11
36	H2OSIZ Cluster Decommissioning	170d	10/4/10	5/27/11
147	AIRMON Cluster Decommissioning	238d	10/4/10	8/31/11
163	H2OGIZ Cluster Decommissioning	260d	10/4/10	9/30/11
7	SECBZO Cluster Decommissioning (remainder)	160d	2/19/14	9/30/14
12	INFMT Cluster Decommissioning	160d	10/1/14	5/12/15
23	Building 130 Decommissioning	261d	10/1/14	9/30/15
40	SECBZI Cluster Decommissioning	140d	10/1/14	4/14/15
155	INFELJ Cluster Decommissioning	261d	10/1/14	9/30/15
159	INFGAS Cluster Decommissioning	261d	10/1/14	9/30/15

APPENDIX 1 -Building and Other Structures Decommissioning Proposed Start Dates

In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
	111	GENERAL STAFF ADMINISTRATION	111	10/1/03	9/30/05
	T111A	OFFICES	111	10/1/03	9/30/05
	112	TELECOM CENTER & OFFICES	INFFCM	10/4/04	9/29/05
	T112A	OFFICES & EMPLOYEE STORE	111	10/1/03	9/30/05
	T112B	OFFICES	111	10/1/03	9/30/05
	T112C	OFFICES	111	10/1/03	9/30/05
	113	OFFICES (FORMER GUARD POST)	111	10/1/03	9/30/05
	114	BUS STOP/CAR POOL SHELTER (E of 123)	125/441	10/1/03	9/30/04
	115	DOE ADMINISTRATION & EOC	INFFCM	10/4/04	9/29/05
	T115A	OFFICES	111	10/1/03	9/30/05
	T115B	OFFICES	111	10/1/03	9/30/05
	T115C	OFFICES	111	10/1/03	9/30/05
	116	OFFICES (DOE)	111	10/1/03	9/30/05
	T117A	OFFICES	111	10/1/03	9/30/05
	119	SECURITY REPAIR & FITNESS	SECIZ	10/1/04	9/29/05
	T119A	OFFICES (DOE/CDPHE)	111	10/1/03	9/30/05
	T119B	OFFICES	111	10/1/03	9/30/05
	120	GUARD POST (WEST ACCESS)	SECBZO	2/19/14	9/30/14
	T120A	TRAILER (ACCESS CONTROL/BADGING)	SECBZO	2/19/14	9/30/14
	121	SECURITY COMMAND CENTER	SECIZ	10/1/04	9/29/05
	T121A	OFFICES	111	10/1/03	9/30/05
	122	MEDICAL/OCCUPATIONAL HEALTH	INFFCM	10/4/04	9/29/05
	122S	PAPER SHREDDER/UTILITIES SHED	125/441	10/1/03	9/30/04
	123	HEALTH PHYSICS	125/441	10/1/03	9/30/04
	123S	HAZARDOUS WASTE STORAGE SHED	125/441	10/1/03	9/30/04
	124	WATER TREATMENT PLANT	INFWTI	10/1/07	9/26/08
	T124A	OFFICES (DOE)	460	10/1/04	9/30/06
	125	STANDARDS LABORATORY	125/441	10/1/03	9/30/04
	126	SOURCE STORAGE	125/441	10/1/03	9/30/04
	127	EMERGENCY GENERATOR BUILDING (121 and 115)	SECIZ	10/1/04	9/29/05
	128	VEHICLE SHELTER, PLANT PROTECTION	SECIZ	10/1/04	9/29/05
	129	WATER TREATMENT (RAW WATER STRAINER)	INFWTI	10/1/07	9/26/08
	130	PLANT ENGINEERING OFFICES & WAREHOUSE & CAFETERIA	130	10/1/14	9/30/05
	C130	MAINTENANCE STORAGE YARD (N of 130)	130	10/1/14	9/30/05
	T130A	OFFICES	130	10/1/14	9/30/05
	T130B	OFFICES	130	10/1/14	9/30/05
	T130C	OFFICES	130	10/1/14	9/30/05

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In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
	T130D	OFFICES	130	10/1/14	9/30/05
	T130E	OFFICES & COMPUTER-BASED TRAINING CENTER	130	10/1/14	9/30/05
	T130F	OFFICES	130	10/1/14	9/30/05
	T130G	OFFICES	130	10/1/14	9/30/05
	T130H	OFFICES	130	10/1/14	9/30/05
	T130I	OFFICES	130	10/1/14	9/30/05
	T130J	OFFICES	130	10/1/14	9/30/05
	131	OFFICES	130	10/1/14	9/30/05
	T131A	OFFICES	130	10/1/14	9/30/05
	132	SUBSTATION NO. 9	130	10/1/14	9/30/05
	180	METEOROLOGICAL TOWERS & SUPPORT BLDG. (NW)	INFMT	11/27/13	9/30/14
	181	METEOROLOGICAL TOWER (WOMAN CREEK)	INFMT	11/27/13	9/30/14
	201	RAILROADS	INFRDS	--	--
	202	ROADS	INFRDS	--	--
	203	CATTLE & LIMITED AREA FENCES	INFRDS	--	--
	204	WALKWAYS	INFRDS	--	--
	205	PARKING AREAS & ACCESS ROADS	INFRDS	--	--
	206	DOMESTIC WATER (ON SITE)	INFWTI	10/1/07	9/26/08
X	207	BLDG 774 UNTREATED WASTE STORAGE TANK 207 (aka Tank 198; aka T-207; aka T-29), 121,600 gal (RCRA Unit 40)	PWTSN	10/1/07	10/2/08
X	207A	INDUSTRIAL WASTE SOLAR EVAP POND	207	12/5/00	9/27/01
X	207B	INDUSTRIAL WASTE SOLAR EVAP PONDS (3 ponds: north, center, south)	207	12/5/00	9/27/01
X	207C	INDUSTRIAL WASTE SOLAR EVAP POND	207	12/5/00	9/27/01
	208	SANITARY SEWER SYSTEM	INFSEW	10/2/06	9/29/08
	209	STORM DRAINAGE SYSTEM	INFSEW	10/2/06	9/29/08
	210	NATURAL GAS DISTRIBUTION SYSTEM	INFGAS	10/1/14	9/30/15
	211	STEAM DISTRIBUTION SYSTEM	INFSTM	10/1/04	9/30/05
	212	ELECTRICAL DISTRIBUTION SYSTEM	INFELI	10/1/14	9/30/15
	213	PROTECTION ALARM & COMMUNICATION SYSTEM	SECNPZ	2/9/05	9/30/05
	214	FENCE & STREET LIGHTING	INFELI	10/1/14	9/30/15
	215A	DOMESTIC WATER STORAGE (TOWER), 300,000 gal (aka Tank 084)	INFWTI	10/1/07	9/26/08
	215B	DOMESTIC WATER STORAGE (aka Tank 085), 500,000 gal	INFWTI	10/1/07	9/26/08
X	215C	DOMESTIC WATER STORAGE (aka Tank 141), 500,000 gal	INFWTN	10/2/06	5/29/07

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In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
X	215D	EVAPORATION DISTILLATE STORAGE TANK, 500,000 gal (910) (aka Tank 142)	910	12/5/07	7/15/08
	216	RAW WATER SUPPLY & PUMP HOUSE	INFWTI	10/1/07	9/26/08
	217	NEW SANITARY LANDFILL CELL #1	INFLFN	--	--
	219	SOLID WASTES LANDFILL	INFLFO	--	--
	220	TELEPHONE & COMMUNICATION SYSTEM	INFFCM	10/4/04	9/29/05
	222	DATA LINE	INFFCM	10/4/04	9/29/05
	223	NITROGEN SUPPLY FACILITY, INCL. STORAGE TANKS (Tanks 233, 234)	223	10/1/03	9/29/04
	223A	ERM STORAGE FACILITY (NE of 549)	223	10/1/03	9/29/04
X	226	EDTA STORAGE TANK (N of 910) (aka Tank 336; aka D-51)	910	12/5/07	7/15/08
X	227	NITRIC ACID STORAGE TANK (E of 910) (aka Tank 335; aka D-54)	910	12/5/07	7/15/08
X	228A	DRYING BED (910)	910	12/5/07	7/15/08
X	228B	DRYING BED (910)	910	12/5/07	7/15/08
	231	PROCESS WASTE HOLDING TANK PUMP HOUSE (aka PS-231) (RCRA Unit 40)	PWTS	9/28/06	9/28/07
	231A	PROCESS WASTE HOLDING TANK 250,000 GAL (aka Tank 241) (RCRA Unit 43)	PWTS	9/28/06	9/28/07
	231B	PROCESS WASTE HOLDING TANK 950,000 GAL (aka Tank 242) (RCRA Unit 43)	PWTS	9/28/06	9/28/07
	240	STEAM CONDENSATE STORAGE TANK, 300,000 gal (aka Tank 073)	INFSTM	10/1/04	9/30/05
X	260	PERIMETER SECURITY ZONE	SECNPZ	2/9/05	9/30/05
X	262	NO. 2 DIESEL FUEL TANK (50,000 GAL) (aka D-262) (UST 4) (NE of 381)	371/374	10/1/04	9/28/07
	280	NEW SANITARY LANDFILL MAIN SUPPORT BUILDING	INFLFN	--	--
	281	NEW SANITARY LANDFILL LEACHATE VALVE BLDG	INFLFN	--	--
	S281	NEW SANITARY LANDFILL BALE STORAGE BLDG	INFLFN	--	--
	282	NEW SANITARY LANDFILL FIRE PROTECTION BLDG (incl. 120,000 GAL WATER TANK)	INFLFN	--	--
	283	NEW SANITARY LANDFILL EVAPORATION POND	INFLFN	--	--
	301	AMBIENT AIR MONITORING STATION (N of Central Ave, W of Gate 10)	AIRMON	10/4/10	8/31/11
	303	NORTH LIVE FIRE RANGE	SECBZI	10/1/14	1/6/15
	T303A	SHOOTING RANGE OFFICE	SECBZI	10/1/14	1/6/15
	T303B	SHOOTING RANGE OFFICE	SECBZI	10/1/14	1/6/15
	T303C	STORAGE YARD OFFICE	H2OGBZ	10/4/10	4/26/11
	304	FIRE PATROL CROSSINGS	INFRDS	--	--

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	306	WATER SAMPLING/MEASUREMENT STA. (WALNUT CR.)	H2OSBZ	10/4/10	9/30/11
X	308A	SOLAR PONDS PUMP HOUSE (207)	207	12/5/00	9/27/01
	308B	INTERECEPTOR TRENCH PUMP HOUSE (E of 308B-C)	H2OGBZ	10/4/10	4/26/11
	308B-A	INTERCEPTOR TRENCH WASTE STORAGE TANK, 500,000 gal (aka Tank 341)	H2OGBZ	10/4/10	4/26/11
	308B-B	INTERCEPTOR TRENCH WASTE STORAGE TANK, 500,000 gal (aka Tank 343)	H2OGBZ	10/4/10	4/26/11
	308B-C	INTERCEPTOR TRENCH WASTE STORAGE TANK, 500,000 gal (aka Tank 344)	H2OGBZ	10/4/10	4/26/11
	331	GARAGE & FIRE STATION	331	10/1/09	9/29/10
	331A	STORAGE (N of 335)	331	10/1/09	9/29/10
	331S	STORAGE SHED	331	10/1/09	9/29/10
	C331	STORAGE (N of 331)	331	10/1/09	9/29/10
	T331A	TRAILER (BARRACKS)	331	10/1/09	9/29/10
	333	PAINT SHOP & SAND BLAST FACILITY	300/500	10/1/07	9/26/08
	334	GENERAL SHOP (MAINTENANCE), OFFICES, & CREDIT UNION	300/500	10/1/07	9/26/08
	T334B	OFFICES	300/500	10/1/07	9/26/08
	T334C	OFFICES	300/500	10/1/07	9/26/08
	T334D	OFFICES	300/500	10/1/07	9/26/08
	335	FIRE TRAINING BLDG.	331	10/1/09	9/29/10
	367	STORAGE SHED, ROAD MTCE & SNOW REMOVAL	371T	10/2/00	8/20/01
X	371	PLUTONIUM RECOVERY BUILDING	371/374	10/1/04	9/28/07
	T371A	OFFICES	371T	10/2/00	8/20/01
	T371C	OFFICES	371T	10/2/00	8/20/01
	T371D	OFFICES	371T	10/2/00	8/20/01
	T371E	RESTROOMS	371T	10/2/00	8/20/01
	T371F	OFFICES	371T	10/2/00	8/20/01
	T371G	OFFICES	371T	10/2/00	8/20/01
X	T371H	OFFICES	371A	10/1/98	3/11/99
X	T371I	OFFICES (between T371H and T371J)	371A	10/1/98	3/11/99
X	T371J	OFFICES	371A	10/1/98	3/11/99
X	T371K	OFFICES	371A	10/1/98	3/11/99
X	372	GUARD POST (PORTAL 2)	SECNPZ	2/9/05	9/30/05
	372A	PERSONNEL ACCESS CONTROL (PACS-2) (PORTAL 2)	SECNPZ	2/9/05	9/30/05
X	373	COOLING TOWERS AND PUMP HOUSE (371/374)	371/374	10/1/04	9/28/07
X	374	PROCESS WASTE TREATMENT FACILITY (Unit 42)	371/374	10/1/04	9/28/07

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X	374A	371-374 CARPENTER SHOP (S of 374)	371/374	10/1/04	9/28/07
X	375	GUARD TOWER T -4	SECNPZ	2/9/05	9/30/05
X	376	OFFICES	371A	10/1/98	3/11/99
X	T376A	OFFICES	371A	10/1/98	3/11/99
X	377	AIR COMPRESSOR BUILDING	371/374	10/1/04	9/28/07
X	378	WASTE COLLECTION PUMP HOUSE	371/374	10/1/04	9/28/07
X	381	FLUORINE STORAGE BUILDING	371/374	10/1/04	9/28/07
	427	EMERGENCY GENERATOR BUILDING (444)	444	10/1/03	9/27/05
	427A	FUEL STORAGE TANK (DIESEL) (aka Tank 068)	444	10/1/03	9/27/05
	428	WASTE COLLECTION TANK AND PUMP HOUSE (Unit 40) (aka Process Waste Pump Station 1)	PWTS	9/28/06	9/28/07
T428B		TOOL SHED (E of 428)	442/452	10/1/03	9/30/04
	429	UNDERGROUND PROCESS WASTE PIT (441) (UST 36) (aka Tank 077; aka T-3, see also Tank 076)	PWTS	9/28/06	9/28/07
	439	MOD CENTER MACHINE SHOP	440	10/1/07	7/9/08
T439A		OFFICES (N of 439)	440	10/1/07	7/9/08
T439D		OFFICES (W of 439)	440	10/1/07	7/9/08
	440	MODIFICATION CENTER	440	10/1/07	7/9/08
	441	OFFICES	125/441	10/1/03	9/30/04
T441A		OFFICES	125/441	10/1/03	9/30/04
	442	HEPA FILTER TEST LABORATORY & WAREHOUSE	442/452	10/1/03	9/30/04
T442A		OFFICES	442/452	10/1/03	9/30/04
	443	HEATING PLANT	INFSTM	10/1/04	9/30/05
	444	MANUFACTURING BUILDING	444	10/1/03	9/27/05
T444A		SHOWER/LOCKERS (JAJ) (E of 444)	444	10/1/03	9/27/05
	445	CARBON STORAGE	444	10/1/03	9/27/05
	447	MANUFACTURING BUILDING	444	10/1/03	9/27/05
	448	U MATERIAL STORAGE	444	10/1/03	9/27/05
	449	OIL & PAINT STORAGE	444	10/1/03	9/27/05
	450	FILTER PLENUM BUILDING (444)	444	10/1/03	9/27/05
	451	FILTER PLENUM BUILDING (447)	444	10/1/03	9/27/05
	452	OFFICES	442/452	10/1/03	9/30/04
T452A		OFFICES	442/452	10/1/03	9/30/04
T452B		OFFICES	442/452	10/1/03	9/30/04
T452C		OFFICES	442/452	10/1/03	9/30/04
T452D		OFFICES	442/452	10/1/03	9/30/04
T452E		RESTROOMS	442/452	10/1/03	9/30/04
T452F		OFFICES	442/452	10/1/03	9/30/04

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	T452G	RESPIRATOR FIT FACILITY	442/452	10/1/03	9/30/04
	453	OIL STORAGE	444	10/1/03	9/27/05
	454	COOLING TOWER (444)	444	10/1/03	9/27/05
	455	FILTER PLENUM BUILDING (444 PLATING LAB)	444	10/1/03	9/27/05
	457	COOLING TOWER (447)	444	10/1/03	9/27/05
	460	CONSOLIDATED NON-NUC. MFG BLDG.	460	10/1/04	9/30/06
	462	COOLING TOWER (460)	460	10/1/04	9/30/06
X	515	SUBSTATION NO. 5	INFELN	10/2/06	3/30/07
X	516	SUBSTATION NO. 6	INFELN	10/2/06	3/30/07
X	517	SUBSTATION NO. 7	INFELN	10/2/06	3/30/07
X	518	SUBSTATION NO. 8	INFELN	10/2/06	3/30/07
X	519	ALARM SYSTEMS STORAGE	SECNPZ	2/9/05	9/30/05
X	520	SUBSTN 517-518 SWITCHGEAR BLDG	INFELN	10/2/06	3/30/07
X	528	PROCESS WASTE PIT (559) (aka PS-528; aka T-7)	PWTSN	10/1/07	10/2/08
	549	RCT SHOP & OFFICES	300/500	10/1/07	9/26/08
X	550	GUARD TOWER	SECNPZ	2/9/05	9/30/05
	551	GENERAL WAREHOUSE & CONTRACTOR SHOP	300/500	10/1/07	9/26/08
	551PAD	WASTE STORAGE PAD	750HAZ	10/1/07	9/29/08
	T551A	OFFICES & LOCKERS (JAJ)	300/500	10/1/07	9/26/08
	552	BOTTLED GAS STORAGE BUILDING	223	10/1/03	9/29/04
	553	WELDING SHOP (JAJ)	300/500	10/1/07	9/26/08
	554	STORAGE BUILDING & SHIPPING DOCK	300/500	10/1/07	9/26/08
	556	METAL CUTTING BUILDING	300/500	10/1/07	9/26/08
X	557	GUARD POST	SECNPZ	2/9/05	9/30/05
X	559	PLUTONIUM ANALYTICAL LABORATORY	559	10/2/07	9/30/09
X	560	COOLING TOWER (559)	559	10/2/07	9/30/09
X	561	FILTER PLENUM BUILDING (559)	559	10/2/07	9/30/09
X	562	EMERGENCY GENERATOR BUILDING (561)	559	10/2/07	9/30/09
X	563	COOLING TOWER (559)	559	10/2/07	9/30/09
X	564	OFFICES	559	10/2/07	9/30/09
X	566	PROTECTIVE CLOTHING DECON FACILITY	566	12/5/07	7/14/08
X	566A	PROTECTIVE CLOTHING PLENUM	566	12/5/07	7/14/08
X	566B	CARPENTER'S CARGO CARRIER (E of 566)	566	12/5/07	7/14/08
X	569	CRATE COUNTER AND WASTE STORAGE FACILITY (Unit 59)	569	12/6/06	7/26/07
X	570	FILTER PLENUM BUILDING (CRATE COUNTER)	569	12/6/06	7/26/07
X	575	POWER STATION	INFELN	10/2/06	3/30/07
	662	PLANT POWER WAREHOUSE & OFFICES	690T	10/4/99	10/2/00

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	663	STORAGE & SHIPPING BUILDING (JAJ)	690T	10/4/99	10/2/00
	664	WASTE STORAGE & SHIP FACIL- PACKAGED WASTE (Unit 20)	664	10/1/07	9/29/08
	C664	WASTE STORAGE YARD	664	10/1/07	9/29/08
	T664A	OFFICES	664	10/1/07	9/29/08
	666	TSCA STORAGE BUILDING	664	10/1/07	9/29/08
	668	DRUM STORAGE & CERTIFICATION BUILDING	664	10/1/07	9/29/08
	679	ELECTRICAL SUBSTATION	INFELI	10/1/14	9/30/15
	680	ELECTRICAL SUBSTATION	INFELI	10/1/14	9/30/15
	681	ELECTRICAL SUBSTATION BUILDING	INFELI	10/1/14	9/30/15
	T690A	OFFICES	690T	10/4/99	10/2/00
	T690B	OFFICES & COMPUTER-BASED TRAINING CENTER	690T	10/4/99	10/2/00
	T690C	OFFICES	690T	10/4/99	10/2/00
	T690D	OFFICES	690T	10/4/99	10/2/00
	T690E	OFFICES	690T	10/4/99	10/2/00
	T690F	OFFICES	690T	10/4/99	10/2/00
	T690G	OFFICES	690T	10/4/99	10/2/00
	T690H	OFFICES	690T	10/4/99	10/2/00
	T690J	TRAILER (LABS)	690T	10/4/99	10/2/00
	T690K	TRAILER (OUT-OF-SERVICE LABS)	690T	10/4/99	10/2/00
	T690L	OFFICES & OUT-OF-SERVICE LABS	690T	10/4/99	10/2/00
	T690M	OFFICES	690T	10/4/99	10/2/00
	T690N	OFFICES	690T	10/4/99	10/2/00
X	701	WASTE MGMT R&D	776/777	10/4/99	9/27/01
X	702	PUMP HOUSE (COOLING TOWER 712)	776/777	10/4/99	9/27/01
X	703	PUMP HOUSE (COOLING TOWER 713)	776/777	10/4/99	9/27/01
X	705	COATINGS LABORATORY	750	10/3/00	5/23/01
X	706	LIBRARY & OFFICES	750	10/3/00	5/23/01
X	T706A	OFFICES	750	10/3/00	5/23/01
X	707	PU MANUFACTURING BUILDING	707	10/1/03	9/29/06
X	T707B	OFFICES	750	10/3/00	5/23/01
X	T707S	FLAMMABLE LIQUIDS STORAGE SHED (S of 707)	750	10/3/00	5/23/01
X	708	COMPRESSOR BUILDING	707	10/1/03	9/29/06
X	709	COOLING TOWER (707) (OUT OF SERVICE)	750	10/3/00	5/23/01
X	709A	COOLING TOWER EMERGENCY DIESEL PUMP (OUT OF SERVICE)	750	10/3/00	5/23/01
X	710	STEAM VALVE HOUSE	INFSTM	10/1/04	9/30/05
X	711	COOLING TOWER (707)	707	10/1/03	9/29/06

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X	711A	COOLING TOWER EMERGENCY DIESEL PUMP	707	10/1/03	9/29/06
X	712	COOLING TOWER (776, 777, 779A)	776/777	10/4/99	9/27/01
X	712A	NATURAL GAS BUILDING	771A	12/5/00	9/27/01
X	713	COOLING TOWER (776, 777, 779A)	776/777	10/4/99	9/27/01
X	713A	STORAGE TANK (PROPANE, 18,377 gal; OUT OF SERVICE) (SE of B774, NE of 207) (aka Tank 197)	771A	12/5/00	9/27/01
X	714	HF ACID STORAGE BUILDING	771/774	3/5/09	1/9/12
X	714A	HF GAS STORAGE SHED	771/774	3/5/09	1/9/12
X	714B	EMERGENCY BREATHING AIR BUILDING	771/774	3/5/09	1/9/12
X	715	EMERGENCY GENERATOR #1 BUILDING (771,774)	771/774	3/5/09	1/9/12
X	715A	EMERGENCY GENERATOR FOR 771	771/774	3/5/09	1/9/12
X	716	EMERGENCY GENERATOR #2 BUILDING (771,774)	771/774	3/5/09	1/9/12
X	717	MAGNEHELIC GAUGE BUILDING (NE of 772)	771/774	3/5/09	1/9/12
X	718	SERVICE BUILDING, COOLING TOWER 711	707	10/1/03	9/29/06
X	727	EMERGENCY GENERATOR BUILDING (782)	779	10/1/96	9/30/99
X	728	PROCESS WASTE PIT (771) - INACTIVE (aka T-8; aka Tanks 292 and 293; aka T1 and T2)	PWTSN	10/1/07	10/2/08
X	729	FILTER PLENUM BUILDING (779)	779	10/1/96	9/30/99
X	730	PROCESS WASTE PIT (776) (aka Tank 300; aka T-9; aka 776A & 776B)	PWTSN	10/1/07	10/2/08
X	731	PROCESS WASTE PIT (707) (aka PS-731) (2 tanks, aka T-11; sump aka T-30)	PWTSN	10/1/07	10/2/08
X	732	LAUNDRY WASTE PIT (778) (aka Tank 302; aka T-10; aka 776C & 776D)	PWTSN	10/1/07	10/2/08
X	750	OFFICES & CAFETERIA	750	10/3/00	5/23/01
	750HAZ	MAIN HAZARDOUS WASTE STORAGE FACILITY (Unit 1)	750HAZ	10/1/07	9/29/08
X	750PAD	WASTE STORAGE PAD	750PAD	10/4/99	9/28/00
X	P750	PROPANE TANK FARM (aka Tanks 145, 146, 147, 148, 248, 249, 250, 251)	750PAD	10/4/99	9/28/00
X	T750A	OFFICES	750	10/3/00	5/23/01
X	T750B	OFFICES & COMPUTER-BASED TRAINING CENTER	750	10/3/00	5/23/01
X	T750C	OFFICES	750	10/3/00	5/23/01
X	T750D	OFFICES	750	10/3/00	5/23/01
X	T750F	LOCKER TRAILER (PONDCRETE)	750PAD	10/4/99	9/28/00
X	T750G	BREAK TRAILER (PONDCRETE)	750PAD	10/4/99	9/28/00
	T760A	SHOWER TRAILER (PONDCRETE)	904/906	10/2/06	9/28/07
	T760B	BUS STOP/CAR POOL SHELTER	904/906	10/2/06	9/28/07
X	761	GUARD TOWER	SECNPZ	2/9/05	9/30/05
X	762	GUARD POST (PORTAL 1)	SECNPZ	2/9/05	9/30/05

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	762A	PERSONNEL ACCESS CONTROL (PACS-1) (PORTAL 1)	SECNPZ	2/9/05	9/30/05
X	763	PA BREEZEWAY	750	10/3/00	5/23/01
X	764	PIDAS DATA COLLECTION BLDG.	SECNPZ	2/9/05	9/30/05
X	T764A	OFFICES	750	10/3/00	5/23/01
X	T764B	OFFICES (JAJ)	750	10/3/00	5/23/01
X	765	SECONDARY ALARM CENTER	SECNPZ	2/9/05	9/30/05
X	765A	RADIO TOWER	SECNPZ	2/9/05	9/30/05
X	770	MAINTENANCE ACTION CENTER/STORAGE	771A	12/5/00	9/27/01
X	770B	CARPENTER SHOP (sign says 771B)	771A	12/5/00	9/27/01
X	771	PLUTONIUM RECOVERY FACILITY	771/774	3/5/09	1/9/12
X	771C	NUCLEAR WASTE PACKAGING FACILITY/DRUM COUNTING - ADDITION BETWEEN B771 & B774 ("THE ANNEX")	771/774	3/5/09	1/9/12
X	T771A	OFFICES	771A	12/5/00	9/27/01
X	T771B	OFFICES	771A	12/5/00	9/27/01
X	T771C	SHOWER/LOCKER (JAJ)	771A	12/5/00	9/27/01
X	T771D	OFFICES	771A	12/5/00	9/27/01
X	T771E	OFFICES	771A	12/5/00	9/27/01
X	T771F	OFFICES	771A	12/5/00	9/27/01
X	T771G	SHOWER TRAILER	771A	12/5/00	9/27/01
X	T771H	OFFICES (JAJ)	771A	12/5/00	9/27/01
X	T771J	OFFICES	771A	12/5/00	9/27/01
X	T771K	OFFICES	771A	12/5/00	9/27/01
X	T771L	RESTROOMS	771A	12/5/00	9/27/01
X	772	FLUORINE STORAGE BUILDING	771/774	3/5/09	1/9/12
X	772A	ACID STORAGE	771/774	3/5/09	1/9/12
X	773	GUARD POST	SECNPZ	2/9/05	9/30/05
X	774	LIQUID WASTE TREATMENT PLANT (Units 55 and 56)	771/774	3/5/09	1/9/12
X	774A	STEAM CONDENSATE HOLDING TANK (aka Tank 178, aka 108T)	771/774	3/5/09	1/9/12
X	774B	STEAM CONDENSATE HOLDING TANK (aka Tank 177; aka 107T)	771/774	3/5/09	1/9/12
X	775	SEWAGE LIFT STATION	771/774	3/5/09	1/9/12
X	776	MFG BUILDING	776/777	10/4/99	9/27/01
X	777	ASSEMBLY BUILDING	776/777	10/4/99	9/27/01
X	778	SERVICE BUILDING - LOCKERS & MAINTCE SHOP & FORMER CONTAMINATED CLOTHING LAUNDRY	778	12/7/05	7/27/06
X	779	PU PROCESS DEVELOPMENT BLDG	779	10/1/96	9/30/99

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X	T779A	OFFICES	750	10/3/00	5/23/01
X	780	FLAMMABLE STORAGE	779	10/1/96	9/30/99
X	780A	METAL STORAGE	779	10/1/96	9/30/99
X	780B	GAS BOTTLE STORAGE	779	10/1/96	9/30/99
X	781	COMPRESSOR BLDG (777)	776/777	10/4/99	9/27/01
X	782	FILTER PLENUM BUILDING (779)	779	10/1/96	9/30/99
X	783	PUMP HOUSE, TOWER WATER (779)	779	10/1/96	9/30/99
X	784	COOLING TOWER, STANDBY (A, B, C, D)	779	10/1/96	9/30/99
X	785	COOLING TOWER, PROCESS WATER	779	10/1/96	9/30/99
X	786	COOLING TOWER, WEST CHILLER (A, B)	779	10/1/96	9/30/99
X	787	COOLING TOWER, EAST CHILLER (A, B, C, D)	779	10/1/96	9/30/99
X	788	CEMENTATION PROCESS BLDG. - PONDCRETE OPNS (Unit 48)	207	12/5/00	9/27/01
X	788A	WASTE STORAGE BLDG (Unit 21) (aka ER in WEMS)	207	12/5/00	9/27/01
X	790	RADIATION CALIBRATION LABORATORY	790	12/4/01	2/6/02
X	792	GUARD POST (PORTAL 3)	SECNPZ	2/9/05	9/30/05
	792A	PERSONNEL ACCESS CONTROL (PACS-3) (PORTAL 3)	SECNPZ	2/9/05	9/30/05
	827	EMERGENCY GENERATOR BLDG. (865,875,883,886)	865/883	9/30/98	9/27/00
	828	PROCESS WASTE PIT (886) - INACTIVE (aka T-21, T-22)	PWTSN	10/1/07	10/2/08
	830	STORAGE	800A	12/4/01	2/6/02
	850	OFFICES & CAFETERIA	850	10/2/06	0/28/07
	863	ELECTRICAL TRANSFORMER BUILDING	865/883	9/30/98	9/27/00
	864	GUARD POST (OUT OF SERVICE)	SECIZ	10/1/04	9/29/05
	865	MATERIAL & PROCESS DEVELOPMENT LAB	865/883	9/30/98	9/27/00
	865A	COOLING TOWER (865)	865/883	9/30/98	9/27/00
	866	PROCESS WASTE TRANSFER BUILDING	PWTSN	10/1/07	10/2/08
	867	FILTER PLENUM BUILDING (865)	865/883	9/30/98	9/27/00
	868	FILTER PLENUM BUILDING (865)	865/883	9/30/98	9/27/00
	869	NATURAL GAS METER HOUSE	INFGAS	10/1/14	9/30/15
	875	FILTER PLENUM BUILDING (886)	886	10/1/97	9/30/99
	879	FILTER PLENUM BUILDING (883)	865/883	9/30/98	9/27/00
	880	STORAGE BUILDING	886	10/1/97	9/30/99
	881	MANUFACTURING & GENERAL SUPPORT	881	10/1/02	9/30/04
	881CT	COOLING TOWER (E of 881)	881	10/1/02	9/30/04
	881F	FILTER PLENUM BUILDING	881	10/1/02	9/30/04
	881G	EMERGENCY GENERATOR BUILDING	881	10/1/02	9/30/04

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	881H	ELECTRICAL EQUIPMENT	881	10/1/02	9/30/04
	T881A	OFFICES	800A	12/4/01	2/6/02
	T881B	OFFICES	800A	12/4/01	2/6/02
	882	CONCRETE SLAB	800A	12/4/01	2/6/02
	883	ROLLING & FORMING FACILITY	865/883	9/30/98	9/27/00
	883CT	COOLING TOWER (N of 881)	865/883	9/30/98	9/27/00
	T883A	OFFICES	800A	12/4/01	2/6/02
	T883B	OFFICES	800A	12/4/01	2/6/02
	T883C	OFFICES	800A	12/4/01	2/6/02
	T883D	RESTROOMS	800A	12/4/01	2/6/02
	884	WASTE STORAGE FACILITY (Unit 13)	800A	12/4/01	2/6/02
	885	MAINTENANCE/PAINT & OIL STORAGE	800A	12/4/01	2/6/02
	886	NUCLEAR SAFETY/CRITICALITY FACILITY	886	10/1/97	9/30/99
	T886A	OFFICES	886	10/1/97	9/30/99
	T886B	OFFICES	891T	10/1/98	9/30/99
	T886C	OFFICES	891T	10/1/98	9/30/99
	887	SEWAGE & PROCESS WASTE PUMPING/LIFT STATION (S of 881) (aka PS-887) (aka T-24, T-32)	PWTSN	10/1/07	10/2/08
	888	GUARD POST	SECNPZ	2/9/05	9/30/05
	888A	SUBSTATION	886	10/1/97	9/30/99
	889Slab	CONCRETE SLAB	800A	12/4/01	2/6/02
	890	PUMP HOUSE	800A	12/4/01	2/6/02
	891	GROUND WATER TREATMENT FACILITY	H2OGIZ	10/3/11	8/14/12
	891-T-200	UNTREATED WATER STORAGE TANK (SE of 891) (aka Tank 329)	H2OGIZ	10/3/11	8/14/12
	891-T-201	INFLUENT EQUALIZATION TANK (S of 891) (aka Tank 316; aka 201T)	H2OGIZ	10/3/11	8/14/12
	891-T-202	INFLUENT EQUALIZATION TANK (S of 891) (aka Tank 315; aka 202T)	H2OGIZ	10/3/11	8/14/12
	891-T-203	ION EXCHANGE TANK (S of 891) (aka Tank 253; aka 203T)	H2OGIZ	10/3/11	8/14/12
	891-T-204	CLEAN WATER TANK (S of 891) (aka Tank 317; aka 204T)	H2OGIZ	10/3/11	8/14/12
	891-T-205	TREATED GROUND WATER STORAGE TANK, 144,000 gal (W of 981; aka Tank 322; aka 205T)	H2OGIZ	10/3/11	8/14/12
	891-T-206	TREATED GROUND WATER STORAGE TANK, 144,000 gal (W of 981; aka Tank 321; aka 206T)	H2OGIZ	10/3/11	8/14/12
	891-T-207	TREATED GROUND WATER STORAGE TANK, 144,000 gal (W of 981; aka Tank 320; aka 207T)	H2OGIZ	10/3/11	8/14/12
	T891A	OFFICES	891T	10/1/98	9/30/99

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	T891B	OFFICES	891T	10/1/98	9/30/99
	T891C	OFFICES	891T	10/1/98	9/30/99
	T891D	OFFICES	891T	10/1/98	9/30/99
	T891E	OFFICES	891T	10/1/98	9/30/99
	T891F	OFFICES	891T	10/1/98	9/30/99
	T891G	OFFICES	891T	10/1/98	9/30/99
	T891L	OFFICES	891T	10/1/98	9/30/99
	T891M	OFFICES	891T	10/1/98	9/30/99
	T891N	OFFICES	891T	10/1/98	9/30/99
	T891O	OFFICES	891T	10/1/98	9/30/99
	T891P	OFFICES	891T	10/1/98	9/30/99
	T891Q	RESTROOMS	891T	10/1/98	9/30/99
	T891R	OFFICES	891T	10/1/98	9/30/99
	T893A	OFFICES	891T	10/1/98	9/30/99
	T893B	OFFICES	891T	10/1/98	9/30/99
	T900A	GROUND WATER TREATMENT FACILITY	H2OGIZ	10/3/11	8/14/12
	T900B	GROUND WATER TREATMENT FACILITY	H2OGIZ	10/3/11	8/14/12
	T900C	GROUND WATER TREATMENT FACILITY	H2OGBZ	10/4/10	4/26/11
	T900D	OFFICES	H2OGBZ	10/4/10	4/26/11
	T900E	GROUND WATER TREATMENT FACILITY	H2OGIZ	10/3/11	8/14/12
X	901	GUARD TOWER	SECNPZ	2/9/05	9/30/05
	902	SLUDGE STORAGE PAD	904/906	10/2/06	9/28/07
	903	CONTAMINATION BARRIER/PAD	903/905	10/1/07	9/26/08
	903A	ER DECONTAMINATION PAD (incl. SHEDS)	903/905	10/1/07	9/26/08
	903B	DECON PAD SEDIMENTATION TANKS & WATER HOLDING TANKS BLDG	903/905	10/1/07	9/26/08
	904	LL MIXED WASTE STORAGE PAD (Tents & Cargo Containers) (Cargo Containers = RCRA Unit 15A)	904/906	10/2/06	9/28/07
	P904	PROPANE TANK FARM (aka Tanks 254, 255, 256, 257, 258, 259, 260, 261, 339, 340, 345, 361)	904/906	10/2/06	9/28/07
	T904A	BREAK TRAILER (PONDCRETE)	904/906	10/2/06	9/28/07
	905	FIELD OPERATIONS YARD (formerly Contractors Yard or CYARD, Unit 18.04)	903/905	10/1/07	9/26/08
	906	CENTRAL WASTE STORAGE FACILITY	904/906	10/2/06	9/28/07
X	910	REVERSE OSMOSIS - EVAPORATOR BLDG	910	12/5/07	7/15/08
	920	GUARD POST (EAST ACCESS)	SECBZO	2/19/14	9/30/14
X	928	FIRE WATER PUMP HOUSE	INFWTN	10/2/06	5/29/07
	930	EFFLUENT MONITOR STATION (990)	H2OSIZ	10/4/10	5/27/11

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	931	EFFLUENT MONITOR STATION (995, aka Gaging Station #10)	H2OSIZ	10/4/10	5/27/11
	933	EFFLUENT MONITOR STA. (INDIANA,WALNUT CR.)	H2OSBZ	10/4/10	9/30/11
	934	EFFLUENT MONITOR STATION (WOMAN CREEK)	H2OSBZ	10/4/10	9/30/11
	952	ISOLATED TOXIC GAS STORAGE BUILDING (Unit 23)	903/905	10/1/07	9/26/08
X	964	WASTE STORAGE BUILDING (Unit 24)	964	10/4/99	4/3/00
X	965	STORAGE BUILDING	980	10/2/00	9/27/01
X	966	PA DECON PAD (aka 964P) (includes Tanks 337, 338, 350, 351, 353, 354, 355, 356, 357)	903/905	10/1/07	9/26/08
X	968	WAREHOUSE	980	10/2/00	9/27/01
	971	SLUDGE DRYING BED	INFSEW	10/2/06	9/29/08
	972	SLUDGE DRYING BED	INFSEW	10/2/06	9/29/08
	973	SLUDGE DRYING BED	INFSEW	10/2/06	9/29/08
	974	SLUDGE DRYING BED	INFSEW	10/2/06	9/29/08
	T974A	TREATMENT TRAILER	INFSEW	10/2/06	9/29/08
X	980	GENERAL METAL SHOP	980	10/2/00	9/27/01
X	984	SHIPPING CONTAINER STORAGE FACILITY	991	2/7/00	9/28/00
X	985	FILTER PLENUM BUILDING (996,997,999)	991	2/7/00	9/28/00
	987	STORAGE VAULT - PLANT PROTECTION	SECIZ	10/1/04	9/29/05
	988	TERTIARY TREATMENT PUMP HOUSE	INFSEW	10/2/06	9/29/08
X	989	EMERGENCY GENERATOR BUILDING (991)	991	2/7/00	9/28/00
X	990	PRE-AERATION BUILDING	INFSEW	10/2/06	9/29/08
X	990A	WASTE WATER TREATMENT	INFSEW	10/2/06	9/29/08
X	991	PRODUCT WAREHOUSE	991	2/7/00	9/28/00
X	992	GUARD POST	SECNPZ	2/9/05	9/30/05
	993	SECURITY STORAGE	SECIZ	10/1/04	9/29/05
	993A	WASTE STORAGE VAULT	904/906	10/2/06	9/28/07
	994	EFFLUENT MEASURING STATION (Pond B-4)	H2OSBZ	10/4/10	9/30/11
	995	SEWAGE TREATMENT FACILITY	INFSEW	10/2/06	9/29/08
	T995A	OFFICE/LOCKER ROOM	INFSEW	10/2/06	9/29/08
X	996	STORAGE VAULT	991	2/7/00	9/28/00
X	997	STORAGE VAULT	991	2/7/00	9/28/00
X	998	STORAGE VAULT	991	2/7/00	9/28/00
X	999	STORAGE VAULT	991	2/7/00	9/28/00
	S-xxx	RADIOLOGICAL AMBIENT AIR MONITORING NETWORK (24 ONSITE LOCATIONS, 13 AT PERIMETER, 4 IN SURROUNDING COMMUNITIES)	AIRMON	10/4/10	8/31/11
X	TENT 2	MIXED WASTE STORAGE	750PAD	10/4/99	9/28/00

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X	TENT 3	MIXED WASTE STORAGE (SOLAR PONDS)	750PAD	10/4/99	9/28/00
X	TENT 4	MIXED WASTE STORAGE (SOLAR PONDS)	750PAD	10/4/99	9/28/00
X	TENT 5	MIXED WASTE STORAGE	750PAD	10/4/99	9/28/00
X	TENT 6	MIXED WASTE STORAGE (SOLAR PONDS)	750PAD	10/4/99	9/28/00
	TENT 7	PONDCRETE STORAGE ON 902 PAD (RCRA Unit 15B)	904/906	10/2/06	9/28/07
	TENT 8	PONDCRETE STORAGE ON 904 PAD (RCRA Unit 15B)	904/906	10/2/06	9/28/07
	TENT 9	PONDCRETE STORAGE ON 904 PAD (RCRA Unit 15B)	904/906	10/2/06	9/28/07
	TENT10	PONDCRETE STORAGE ON 904 PAD (RCRA Unit 15B)	904/906	10/2/06	9/28/07
	TENT11	PONDCRETE STORAGE ON 904 PAD (RCRA Unit 15B)	904/906	10/2/06	9/28/07
X	TENT12	PONDCRETE STORAGE	750PAD	10/4/99	9/28/00
	TENT14	A-4 POND TENT	H2OSBZ	10/4/10	9/30/11
	no #	BUS STOP/CAR POOL SHELTER (SW of 119B)	111	10/1/03	9/30/05
	no #	GUARD POST, CLOSED (NW of T111A)	111	10/1/03	9/30/05
	no #	MATERIALS SHELTER (SE of 551)	300/500	10/1/07	9/26/08
	no #	BUS STOP/CAR POOL SHELTER (S of 372A)	331	10/1/09	9/29/10
	no #	BUS STOP/CAR POOL SHELTER (N of 444)	442/452	10/1/03	9/30/04
	no #	STORAGE (W of 452)	442/452	10/1/03	9/30/04
	no #	MAINTENANCE CARPENTER SHOP (NE of 439)	444	10/1/03	9/27/05
	no #	MAINTENANCE STORAGE (NE of 439)	444	10/1/03	9/27/05
	no #	RMRS MAINTENANCE ANNEX (NE of 439)	444	10/1/03	9/27/05
X	no #	559-561 TUNNEL	559	10/2/07	9/30/09
	no #	MORGAN STORAGE SHED (-1) (NE of 663)	690T	10/4/99	10/2/00
	no #	MORGAN STORAGE SHED (-2) (NE of 663)	690T	10/4/99	10/2/00
X	no #	CUSTODIAL STORAGE CLOSET (E of T750B)	750	10/3/00	5/23/01
	no #	"BLDG 374 STORAGE" (N of 750HAZ)	750HAZ	10/1/07	9/29/08
X	no #	750 PAD DECON PAD	750PAD	10/4/99	9/28/00
X	no #	771 STACK	771/774	3/5/09	1/9/12
X	no #	STORAGE BLDG (N of 770B)	771/774	3/5/09	1/9/12
X	no #	700 AREA TUNNELS	776/777	10/4/99	9/27/01
X	no #	PAINT SUPPLIES STORAGE (NW of B783)	779	10/1/96	9/30/99
	no #	CARPENTER SHOP (S of 865)	865/883	9/30/98	9/27/00
	no #	881-883 STACKS (2 N of 881; 1 S of 881)	881	10/1/02	9/30/04
	no #	881-883 TUNNEL	881	10/1/02	9/30/04
	no #	BUS STOP/CAR POOL SHELTER (N of 886)	891T	10/1/98	9/30/99

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In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
	no #	NORTH STORAGE YARDS	903/905	10/1/07	9/26/08
	no #	SUPPORT BLDG ADJACENT TO ER DECONTAMATION PAD	903/905	10/1/07	9/26/08
X	no #	STORAGE YARDS IN PA	910	12/5/07	7/15/08
	no #	CFFCU AUTOMATED TELLER MACHINE (E Gate)	H2OGBZ	10/4/10	4/26/11
	no #	INTERCEPTOR TRENCH SYSTEM PIPELINES	H2OGBZ	10/4/10	4/26/11
	no #	PU&D YARD	H2OGBZ	10/4/10	4/26/11
	no #	NEW CLOSURE CAP	INFCAP	--	--
	no #	ORIGINAL (CLOSED) LANDFILL (S of Bldg 460 & Cactus Ave)	INFLFC	--	--
	no #	NEW SANITARY LANDFILL LEACHATE COLLECTION & STORAGE TANK FARM	INFLFN	--	--
	no #	NEW LLW STORAGE FACILITY	INFLLS	10/1/07	9/29/08
	no #	NEW PU STORAGE FACILITY	INFPUS	10/1/13	9/15/14
	no #	HELIPORT	INFRDS	--	--
	no #	443 STEAM SHED (EIGHTH ST)	INFSTM	10/1/04	9/30/05
	no #	NEW TRU STORAGE FACILITY	INFTRS	10/1/07	9/30/08
	no #	FIRE HYDRANTS	INFWTI	10/1/07	9/26/08
	no #	OLD PROCESS WASTE LINES & TANKS	PWTS	9/28/06	9/28/07
	Tank 002	UNDERGROUND STORAGE TANK (DIESEL) (UST 66) (SE of 881)	881	10/1/02	9/30/04
	Tank 010	UNDERGROUND STORAGE TANK (DIESEL) (UST 25) (S of 827)	865/883	9/30/98	9/27/00
	Tank 011	UNDERGROUND STORAGE TANK (DIESEL, OUT OF SERVICE) (UST 31) (N of 883)	865/883	9/30/98	9/27/00
	Tank 012	LIQUID ARGON STORAGE TANK (N of 883)	865/883	9/30/98	9/27/00
	Tank 013	UNDERGROUND CONCRETE FOUNDATION DRAIN TANK) (N of 881)	881	10/1/02	9/30/04
	Tank 014	LIQUID NITROGEN STORAGE TANK (N of 881)	881	10/1/02	9/30/04
	Tank 015	DRIOX ARGON STORAGE TANK (N of 881)	881	10/1/02	9/30/04
	Tank 016	UNDERGROUND FOUNDATION SUMP TANK (N of 881)	881	10/1/02	9/30/04
	Tank 017	MOLECULAR SIEVE ABSORBER TANK (E of 223)	223	10/1/03	9/29/04
	Tank 018	UNDERGROUND OLD PROCESS WASTE TANK (S of 884)	PWTSN	10/1/07	10/2/08
	Tank 019	UNDERGROUND OLD PROCESS WASTE TANK (S of 884)	PWTSN	10/1/07	10/2/08
	Tank 022	MOLECULAR SIEVE ABSORBER TANK (E of 223)	223	10/1/03	9/29/04
X	Tank 023	PROPANE STORAGE TANK (OUT OF SERVICE) (W of 788A)	207	12/5/00	9/27/01
	Tank 024	PROPANE STORAGE TANK (W of 866)	865/883	9/30/98	9/27/00

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	Tank 025	STORAGE TANK (#6 FUEL OIL) (W of 443)	INFSTM	10/1/04	9/30/05
	Tank 026	CO2 STORAGE TANK - CHEMTRON FIRE SYSTEM TANK (S of 865)	865/883	9/30/98	9/27/00
	Tank 027	STORAGE TANK (#6 FUEL OIL) (W of 443)	INFSTM	10/1/04	9/30/05
	Tank 028	STORAGE TANK (DIESEL FUEL) (443)	INFSTM	10/1/04	9/30/05
	Tank 029	HELIUM STORAGE TANK (N of 882)	881	10/1/02	9/30/04
	Tank 030	UNDERGROUND PRESSURE TANK (CONDENSATE OILS OF NAT. GAS LINE) (S of 869)	INFSTM	10/1/04	9/30/05
	Tank 031	STORAGE TANK (DIESEL FUEL) (443)	INFSTM	10/1/04	9/30/05
	Tank 036	STORAGE TANK (DIESEL No. 1) (W of 663)	690T	10/4/99	10/2/00
	Tank 037	PROPANE STORAGE TANK (OUT OF SERVICE) (W of 663)	690T	10/4/99	10/2/00
	Tank 039	UNDERGROUND U CONTAMINATED WASTEWATER TANK (UST 57) (W of 886)	886	10/1/97	9/30/99
	Tank 040	STORAGE TANK (OUT OF SERVICE) (N of 880)	886	10/1/97	9/30/99
	Tank 043	SEPTIC TANK (SE of 120)	SECBZO	2/19/14	9/30/14
	Tank 057	LIQUID NITROGEN STORAGE TANK (N of 460)	460	10/1/04	9/30/06
	Tank 058	DRIOX ARGON STORAGE TANK (S of 460)	460	10/1/04	9/30/06
	Tank 059	LIQUID NITROGEN STORAGE TANK (S of 460)	460	10/1/04	9/30/06
	Tank 064	PROPANE STORAGE TANK (W of T439A)	444	10/1/03	9/27/05
	Tank 066	LIQUID NITROGEN STORAGE TANK (E of 444)	444	10/1/03	9/27/05
	Tank 067	LIQUID NITROGEN STORAGE TANK (S of 444)	444	10/1/03	9/27/05
	Tank 069	LIQUID ARGON STORAGE TANK (E of 444)	444	10/1/03	9/27/05
	Tank 070	LIQUID NITROGEN STORAGE TANK (N of 444)	444	10/1/03	9/27/05
	Tank 076	PROCESS WASTE TANK, STEEL (441) (aka T-3, see also Bldg 429/Tank 077)	PWTS	9/28/06	9/28/07
	Tank 079	LIQUID NITROGEN STORAGE TANK (E of 125)	125/441	10/1/03	9/30/04
	Tank 080	LIQUID NITROGEN STORAGE TANK (S of 123)	125/441	10/1/03	9/30/04
	Tank 081	LIQUID NITROGEN STORAGE TANK (S of 123)	125/441	10/1/03	9/30/04
	Tank 086	UNDERGROUND CONCRETE STORAGE TANK (RAW WATER & SLUDGE), 256,000 gal (E of 129)	INFWTI	10/1/07	9/26/08
	Tank 087	UNDERGROUND CONCRETE SETTING BED (RAW WATER & SLUDGE) (E of 129)	INFWTI	10/1/07	9/26/08
	Tank 088	UNDERGROUND CONCRETE SETTLING BED (RAW WATER & SLUDGE) (E of 129)	INFWTI	10/1/07	9/26/08
	Tank 090	UNDERGROUND STORAGE TANK (DIESEL; FOAMED IN PLACE) (UST 9) (SE of 443)	INFSTM	10/1/04	9/30/05
	Tank 091	UNDERGROUND STORAGE TANK (DIESEL; FOAMED IN PLACE) (UST 13) (NE of 443)	INFSTM	10/1/04	9/30/05
	Tank 092	UNDERGROUND STORAGE TANK (NO 6 FUEL OIL; OUT OF SERVICE) (UST 10) (E of 443)	INFSTM	10/1/04	9/30/05

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	Tank 093	UNDERGROUND STORAGE TANK (NO 6 FUEL OIL; OUT OF SERVICE) (UST 11) (E of 443)	INFSTM	10/1/04	9/30/05
	Tank 094	UNDERGROUND STORAGE TANK (NO 6 FUEL OIL; OUT OF SERVICE) (UST 12) (E of 443)	INFSTM	10/1/04	9/30/05
	Tank 095	UNDERGROUND STORAGE TANK (NO 6 FUEL OIL; OUT OF SERVICE) (UST 65) (E of 443)	INFSTM	10/1/04	9/30/05
	Tank 096	SULFURIC ACID STORAGE TANK (E of 443)	INFSTM	10/1/04	9/30/05
	Tank 097	NaOH STORAGE TANK (E of 443)	INFSTM	10/1/04	9/30/05
	Tank 098	BOILER BLOWDOWN TANK (E of 443)	INFSTM	10/1/04	9/30/05
	Tank 100	PROPANE STORAGE TANK (N of 331S)	331	10/1/09	9/29/10
	Tank 101	ABANDONED STORAGE TANK (DIESEL BLEND) (UST 5) (FOAMED INPLACE) (N of 331,N-1A)	331	10/1/09	9/29/10
	Tank 102	ABANDONED STORAGE TANK (DIESEL BLEND) (FOAMED IN PLACE) (UST 6) (N of 331, N-1)	331	10/1/09	9/29/10
	Tank 103	ABANDONED STORAGE TANK (GASOLINE) (FOAMED IN PLACE) (UST 8) (N of 331,N-3)	331	10/1/09	9/29/10
	Tank 104	ABANDONED STORAGE TANK (GASOLINE) (FOAMED IN PLACE) (UST 7) (N of 331,N-2)	331	10/1/09	9/29/10
	Tank 106	DRIOX ARGON STORAGE TANK (NW OF 334)	300/500	10/1/07	9/26/08
	Tank 108	AIR COMPRESSOR TANK (N OF 556)	300/500	10/1/07	9/26/08
	Tank 109	LIQUID NITROGEN STORAGE TANK (W OF 552)	300/500	10/1/07	9/26/08
	Tank 115	PROPANE STORAGE TANK (N of 335)	331	10/1/09	9/29/10
X	Tank 117	STORAGE TANK (E of 750P)	750PAD	10/4/99	9/28/00
X	Tank 128	LIQUID NITROGEN STORAGE TANK (S OF 559)	559	10/2/07	9/30/09
X	Tank 129	LIQUID ARGON STORAGE TANK (S of 559)	559	10/2/07	9/30/09
X	Tank 130	UNDERGROUND STORAGE TANK (DIESEL) (UST 14) (NE of 559)	559	10/2/07	9/30/09
X	Tank 131	UNDERGROUND STORAGE TANK (DIESEL) (UST 15) (E of 562)	559	10/2/07	9/30/09
X	Tank 132	STORAGE TANK (DIESEL) (N of 566)	566	12/5/07	7/14/08
X	Tank 133	GLYCOL FILL TANK (N of 727)	779	10/1/96	9/30/99
X	Tank 134	LIQUID NITROGEN STORAGE TANK (E of 779)	779	10/1/96	9/30/99
X	Tank 135	UNDERGROUND STORAGE TANK (DIESEL) (UST 24) (NE of 779)	779	10/1/96	9/30/99
X	Tank 136	CEMENT SILO (OUT OF SERVICE) (SW of 788)	207	12/5/00	9/27/01
X	Tank 137	CEMENT SILO (OUT OF SERVICE) (W of 788A)	207	12/5/00	9/27/01
X	Tank 138	SLUDGE THICKENER TANK (OUT OF SERVICE) (E of 788)	207	12/5/00	9/27/01
X	Tank 139	PROPANE STORAGE TANK (W of 788A)	207	12/5/00	9/27/01
X	Tank 140	STORAGE TANK (#2 FUEL OIL) (W of 928)	INFWTN	10/2/06	5/29/07
X	Tank 143	STORAGE TANK 450-05A (SE of 910)	910	12/5/07	7/15/08

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X	Tank 144	UNDERGROUND STORAGE TANK D-15 (E of 910)	910	12/5/07	7/15/08
X	Tank 149	LIQUID WASTE CHROMIUM STORAGE TANK (S of 991)	991	2/7/00	9/28/00
X	Tank 150	GLYCOL STORAGE TANK (E of 989)	991	2/7/00	9/28/00
X	Tank 151	UNDERGROUND STORAGE TANK (DIESEL) (UST 33) (E of 989)	991	2/7/00	9/28/00
	Tank 152	PROPANE STORAGE TANK (W of 792A)	SECNPZ	2/9/05	9/30/05
	Tank 153	STORAGE TANK (DIESEL FOR EMERGENCY GENERATOR) (W of 792A)	SECNPZ	2/9/05	9/30/05
	Tank 154	PROPANE STORAGE TANK (W of 372A)	SECNPZ	2/9/05	9/30/05
	Tank 155	STORAGE TANK (DIESEL FUEL FOR EMERGENCY GENERATOR) (W of 372A)	SECNPZ	2/9/05	9/30/05
	Tank 161	FREON 12 ACCUMULATOR TANK (N of 549)	300/500	10/1/07	9/26/08
X	Tank 162	PROPANE STORAGE TANK (W of 762A)	SECNPZ	2/9/05	9/30/05
X	Tank 163	100,000 GAL PRODUCT WATER TANK (N of 374, west tank)	371/374	10/1/04	9/28/07
X	Tank 164	100,000 GAL PRODUCT WATER TANK (N of 374, east tank)	371/374	10/1/04	9/28/07
X	Tank 165	CEMENT SILO (W of 377)	371/374	10/1/04	9/28/07
X	Tank 166	LIQUID ARGON STORAGE TANK (N of 374)	371/374	10/1/04	9/28/07
X	Tank 167	NITRIC ACID STORAGE TANK (aka D-222) (N of 374)	371/374	10/1/04	9/28/07
X	Tank 168	KOH STORAGE TANK (N of 374) (aka D-225)	371/374	10/1/04	9/28/07
X	Tank 169	KOH STORAGE TANK (N of 374) (aka D-842)	371/374	10/1/04	9/28/07
X	Tank 170	LIQUID NITROGEN STORAGE TANK (N of 374, door 17D)	371/374	10/1/04	9/28/07
X	Tank 173	PROPANE STORAGE TANK (E of T770B)	771/774	3/5/09	1/9/12
X	Tank 174	LIQUID ARGON STORAGE TANK (N of 771C)	771/774	3/5/09	1/9/12
X	Tank 175	LIQUID NITROGEN STORAGE TANK (N of 771C)	771/774	3/5/09	1/9/12
X	Tank 176	NaOH STORAGE TANK (N of B774; aka 774T)	771/774	3/5/09	1/9/12
X	Tank 179	PROPANE STORAGE TANK (SE of T771G)	771/774	3/5/09	1/9/12
X	Tank 180	COOLING WATER STORAGE TANK (S of 774)	771/774	3/5/09	1/9/12
X	Tank 182	UNDERGROUND CONCRETE TANK #66 (OUT OF SERVICE) (UST 51) (S of 774) (aka T-16; see also Tank 183) (RCRA Unit 55.14)	PWTSN	10/1/07	10/2/08
X	Tank 183	UNDERGROUND CONCRETE TANK #67 (OUT OF SERVICE) (UST 52) (S of 774) (aka T-16; see also Tank 182) (RCRA Unit 55.15)	PWTSN	10/1/07	10/2/08
X	Tank 184	UNDERGROUND CONCRETE TANK #68 (OUT OF SERVICE) (UST 53) (S of 774) (aka T-14) (RCRA Unit 55.16)	PWTSN	10/1/07	10/2/08
X	Tank 185	KOH STORAGE TANK (SE of 714)	771/774	3/5/09	1/9/12

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X	Tank 192	UNDERGROUND STORAGE TANK (DIESEL; OUT OF SERVICE) (UST 20) (W of 714A)	771/774	3/5/09	1/9/12
X	Tank 193	UNDERGROUND STORAGE TANK (DIESEL) (UST 21) (S of 771)	771/774	3/5/09	1/9/12
X	Tank 194	HYDROFLUORIC ACID STORAGE TANK D-44 (E of 714A)	771/774	3/5/09	1/9/12
X	Tank 195	HYDROFLUORIC ACID STORAGE TANK D-45 (NE of 714A)	771/774	3/5/09	1/9/12
X	Tank 199	LIQUID NITROGEN STORAGE TANK (N of 777)	776/777	10/4/99	9/27/01
X	Tank 200	LIQUID ARGON STORAGE TANK (N of 777)	776/777	10/4/99	9/27/01
X	Tank 201	BREATHING AIR TANK 455-641 (N of 777)	776/777	10/4/99	9/27/01
X	Tank 202	STORAGE TANK (DIESEL) (N of 777)	776/777	10/4/99	9/27/01
X	Tank 203	WATER/COOLANT STORAGE TANK (E of 777)	776/777	10/4/99	9/27/01
X	Tank 204	UNDERGROUND STORAGE TANK (DIESEL) (UST 19) (E of 729)	779	10/1/96	9/30/99
X	Tank 205	LIQUID NITROGEN STORAGE TANK (NW of 705)	750	10/3/00	5/23/01
X	Tank 206	CARBON TETRACHLORIDE STORAGE TANK D-2 (N of 707)	707	10/1/03	9/29/06
X	Tank 207	LIQUID ARGON STORAGE TANK (S of 776)	776/777	10/4/99	9/27/01
X	Tank 208	LIQUID ARGON STORAGE TANK (S of 707)	707	10/1/03	9/29/06
X	Tank 209	HELIUM STORAGE TANK V-41 (S of 707)	707	10/1/03	9/29/06
X	Tank 210	HELIUM STORAGE TANK V-41 (S of 707)	707	10/1/03	9/29/06
X	Tank 211	HELIUM STORAGE TANK V-41 (S of 707)	707	10/1/03	9/29/06
X	Tank 212	HELIUM STORAGE TANK V-41 (S of 707)	707	10/1/03	9/29/06
X	Tank 213	HELIUM STORAGE TANK V-42 (S of 707)	707	10/1/03	9/29/06
X	Tank 214	HELIUM STORAGE TANK V-42 (S of 707)	707	10/1/03	9/29/06
X	Tank 215	HELIUM STORAGE TANK V-42 (S of 707)	707	10/1/03	9/29/06
X	Tank 216	HELIUM STORAGE TANK V-42 (S of 707)	707	10/1/03	9/29/06
X	Tank 217	HELIUM STORAGE TANK V-40 (S of 707)	707	10/1/03	9/29/06
X	Tank 218	HELIUM STORAGE TANK V-40 (S of 707)	707	10/1/03	9/29/06
X	Tank 219	HELIUM STORAGE TANK V-40 (S of 707)	707	10/1/03	9/29/06
X	Tank 220	HELIUM STORAGE TANK V-40 (S of 707)	707	10/1/03	9/29/06
X	Tank 221	HELIUM STORAGE TANK V-40 (S of 707)	707	10/1/03	9/29/06
X	Tank 222	LIQUID NITROGEN STORAGE TANK (SE of 707)	707	10/1/03	9/29/06
X	Tank 224	1ST EFFECT VAPOR BODY TANK (H2O with NaOH) (N of 374) (RCRA Unit 42.19)	371/374	10/1/04	9/28/07
X	Tank 225	2ND EFFECT VAPOR BODY TANK (H2O with NaOH) (N of 374) (RCRA Unit 42.20)	371/374	10/1/04	9/28/07
X	Tank 226	3RD EFFECT VAPOR BODY TANK (H2O with NaOH) (N of 374) (RCRA Unit 42.21)	371/374	10/1/04	9/28/07

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X	Tank 227	4TH EFFECT VAPOR BODY TANK (H2O with NaOH) (N of 374) (RCRA Unit 42.22)	371/374	10/1/04	9/28/07
X	Tank 228	SPRAY DRYER TANK (N of 374)	371/374	10/1/04	9/28/07
X	Tank 230	GLYCOL STORAGE TANK (E of 764)	SECNPZ	2/9/05	9/30/05
X	Tank 231	LIQUID ARGON STORAGE TANK (E of 779)	779	10/1/96	9/30/99
X	Tank 232	UNDERGROUND STORAGE TANK (DIESEL) (UST 18) (W of 727)	779	10/1/96	9/30/99
	Tank 235	STORAGE TANK (DIESEL FUEL FOR EMERGENCY GENERATOR) (N of 762A)	SECNPZ	2/9/05	9/30/05
	Tank 237	PROPANE STORAGE TANK (W of T760A)	904/906	10/2/06	9/28/07
	Tank 238	STP EFFLUENT SAND FILTER TANK (N of 988)	INFSEW	10/2/06	9/29/08
	Tank 239	STP EFFLUENT SAND FILTER TANK (N of 988)	INFSEW	10/2/06	9/29/08
	Tank 240	STP EFFLUENT SAND FILTER TANK (N of 988)	INFSEW	10/2/06	9/29/08
	Tank 243	ABANDONED STORAGE TANK (DIESEL) (FOAMED IN PLACE) (UST 32) (NW of 920)	SECBZO	2/19/14	9/30/14
X	Tank 244	UNDERGROUND STORAGE TANK (OUT OF SERVICE) (UST 22) (N of 776)	776/777	10/4/99	9/27/01
X	Tank 245	UNDERGROUND STORAGE TANK (DIESEL) (UST 23) (NW of 776)	776/777	10/4/99	9/27/01
	Tank 247	UNDERGROUND SEPTIC TANK (NE of 920)	SECBZO	2/19/14	9/30/14
	Tank 252	LIQUID ARGON STORAGE TANK (SE of 865)	865/883	9/30/98	9/27/00
	Tank 262	DECONTAMINATION WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 263	DECONTAMINATION WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 264	DECONTAMINATION WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 265	DECONTAMINATION WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 266	DECONTAMINATION WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 268	DECONTAMINATION SEDIMENT/WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 269	DECONTAMINATION WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07
	Tank 271	DECONTAMINATION WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07
	Tank 272	DECONTAMINATION WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07
	Tank 273	DECONTAMINATION WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07
	Tank 274	DECONTAMINATION SEDIMENT/WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07

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 * Dates per draft Ten-Year Plan schedule for clusters, Plot Date 02DEC96, and subject to change. Earlier removal of "targets of opportunity" subject to funding availability.

In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
	Tank 275	DECONTAMINATION SEDIMENT/WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07
	Tank 278	COMPRESSED AIR TANK (S of 126)	125/441	10/1/03	9/30/04
	Tank 279	UNDERGROUND CONCRETE SUMP TANK (RAW WATER FROM DRYING BED) (S of 129)	INFWTI	10/1/07	9/26/08
	Tank 280	LIQUID NITROGEN STORAGE TANK (E of 122)	INFFCM	10/4/04	9/29/05
	Tank 281	UNDERGROUND CONCRETE SUMP (RAW WATER) (S of 129)	INFWTI	10/1/07	9/26/08
X	Tank 284	HELIUM STORAGE TANK (S of 707)	707	10/1/03	9/29/06
	Tank 287	ABANDONED STORAGE TANK (DIESEL BLEND) (FOAMED IN PLACE) (SE of 120)	SECBZO	2/19/14	9/30/14
	Tank 288	ABANDONED STORAGE TANK (DIESEL BLEND) (FOAMED IN PLACE) (UST 3) (W of 127)	INFWTI	10/1/07	9/26/08
	Tank 289	UNDERGROUND STORAGE TANK (DIESEL BLEND) (FOAMED IN PLACE) (UST 2) (S of 124)	460	10/1/04	9/30/06
X	Tank 290	UNDERGROUND STORAGE TANK (DIESEL BLEND) (UST 16) (NW of 709)	707	10/1/03	9/29/06
X	Tank 292	UNDERGROUND FIREWATER COLLECTION TANK (UST 38) (N of 728)	771/774	3/5/09	1/9/12
X	Tank 293	UNDERGROUND FIREWATER COLLECTION TANK (UST 39) (N of 728)	771/774	3/5/09	1/9/12
	Tank 294	UNDERGROUND STORAGE TANK (UST 58) (W of 886)	886	10/1/97	9/30/99
X	Tank 304	UNDERGROUND PROCESS WASTE STORAGE TANK (UST 45) (731)	PWTSN	10/1/07	10/2/08
X	Tank 305	UNDERGROUND PROCESS WASTE STORAGE TANK (UST 46) (731)	PWTSN	10/1/07	10/2/08
X	Tank 306	UNDERGROUND PROCESS WASTE STORAGE TANK (UST 47) (731)	PWTSN	10/1/07	10/2/08
	Tank 312	UNDERGROUND PROCESS WASTE SUMP (UST 62) (889)	PWTSN	10/1/07	10/2/08
	Tank 313	UNDERGROUND PROCESS WASTE SUMP (UST 63) (889)	PWTSN	10/1/07	10/2/08
	Tank 318	STORAGE TANK (DIESEL BLEND) (E of 120)	SECBZO	2/19/14	9/30/14
	Tank 319	STORAGE TANK (DIESEL BLEND) (NW of 920)	SECBZO	2/19/14	9/30/14
	Tank 323	CARBON DIOXIDE STORAGE TANK (E of 865)	865/883	9/30/98	9/27/00
X	Tank 324	STORAGE TANK (DIESEL) (W of 707)	707	10/1/03	9/29/06
X	Tank 325	STORAGE TANK (DIESEL) (S of 707)	707	10/1/03	9/29/06
	Tank 330	STORAGE TANK (DIESEL BLEND) (OU2)	H2OGBZ	10/4/10	4/26/11
	Tank 331	STORAGE TANK (DIESEL BLEND) (Pond A-4)	H2OSBZ	10/4/10	9/30/11
	Tank 332	PROPANE TANK (Pond A-4)	H2OSBZ	10/4/10	9/30/11
	Tank 333	PROPANE TANK (Pond A-4)	H2OSBZ	10/4/10	9/30/11

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In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
X	Tank 334	MET LAB WASTE WATER STORAGE TANK (S of 991)	991	2/7/00	9/28/00
	Tank 346	DECONTAMINATION SEDIMENT/WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 347	DECONTAMINATION WATER STORAGE TANK (S of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 348	DECONTAMINATION SEDIMENT/WATER STORAGE TANK (N of D903) (RCRA Unit 18.01)	903/905	10/1/07	9/26/08
	Tank 349	STORAGE TANK (DIESEL) (S of D903)	903/905	10/1/07	9/26/08
	Tank 359	WASTE WATER STORAGE TANK (OU2)	904/906	10/2/06	9/28/07
	Tank 360	WASTE WATER STORAGE TANK (OU2)	904/906	10/2/06	9/28/07
	Tank 362	CYCLED WATER STORAGE TANK (C POND)	H2OSBZ	10/4/10	9/30/11
	Tank 363	CYCLED WATER STORAGE TANK (C POND)	H2OSBZ	10/4/10	9/30/11
	Tank 364	DECONTAMINATION WATER STORAGE TANK (S of T893A)	904/906	10/2/06	9/28/07
	Tank 365	CHEMICAL WASTE STORAGE TANK (S of 460)	460	10/1/04	9/30/06
	Tank 366	CHEMICAL WASTE STORAGE TANK (S of 460)	460	10/1/04	9/30/06
	Tank, no AQI #	ABOVEGROUND STORAGE TANKS (DIESEL BLEND) (TK-5A and TK-5B, REPLACEMENTS FOR UST 5/TANK 101) (N of 331,N-1A)	331	10/1/09	9/29/10
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL BLEND) (TK-6A, REPLACEMENT FOR UST 6/Tank 102) (N of 331, N-1)	331	10/1/09	9/29/10
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (GASOLINE) (TK-7A, REPLACEMENT FOR UST 7/Tank 104) (N of 331,N-2)	331	10/1/09	9/29/10
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (GASOLINE) (TK-8A, REPLACEMENT FOR UST 8/Tank 103) (N of 331,N-3)	331	10/1/09	9/29/10
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL) (TK-2A, REPLACEMENT FOR UST 2/Tank 289) (S of 124)	460	10/1/04	9/30/06
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL) (TK-9A, REPLACEMENT FOR UST 9/Tank 090) (SE of 443)	INFSTM	10/1/04	9/30/05
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL) (TK-13A, REPLACEMENT FOR UST 13/Tank 091) (NE of 443)	INFSTM	10/1/04	9/30/05

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In PA?	Bldg #	Name	Cluster	TYP* Decomm Start	TYP* Decomm Finish
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL BLEND) (TK-3A, REPLACEMENT FOR UST 3/Tank 288) (W of 127)	INFWTI	10/1/07	9/26/08
	Tank, no AQI #	UNDERGROUND PROCESS WASTE TANK, CONCRETE (441) (aka T-2)	PWTS	9/28/06	9/28/07
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL BLEND) (TK-1A, REPLACEMENT FOR UST 1/Tank 287) (SE of 120)	SECBZO	2/19/14	9/30/14
	Tank, no AQI #	ABOVEGROUND STORAGE TANK (DIESEL) (TK-32A, REPLACEMENT FOR UST 32/Tank 243) (NW of 920)	SECBZO	2/19/14	9/30/14
	VV001	PROCESS WASTE VALVE VAULT (W of 881)	PWTSN	10/1/07	10/2/08
	VV002	PROCESS WASTE VALVE VAULT (W of 883)	PWTSN	10/1/07	10/2/08
	VV003	PROCESS WASTE VALVE VAULT (NW of 889)	PWTSN	10/1/07	10/2/08
	VV004	PROCESS WASTE VALVE VAULT (NW of 889)	PWTSN	10/1/07	10/2/08
	VV005	PROCESS WASTE VALVE VAULT (NE of 889)	PWTSN	10/1/07	10/2/08
	VV006	PROCESS WASTE VALVE VAULT (E of 889)	PWTSN	10/1/07	10/2/08
X	VV007	PROCESS WASTE VALVE VAULT (SW of 707)	PWTSN	10/1/07	10/2/08
X	VV008	PROCESS WASTE VALVE VAULT (W of 707)	PWTSN	10/1/07	10/2/08
X	VV009	PROCESS WASTE VALVE VAULT (W of 778)	PWTSN	10/1/07	10/2/08
X	VV010	PROCESS WASTE VALVE VAULT (S of 528)	PWTSN	10/1/07	10/2/08
	VV011	PROCESS WASTE VALVE VAULT (E of 549)	PWTS	9/28/06	9/28/07
	VV012	PROCESS WASTE VALVE VAULT (SE of 231)	PWTS	9/28/06	9/28/07
	VV013	PROCESS WASTE VALVE VAULT (W of 231)	PWTS	9/28/06	9/28/07
	VV014	PROCESS WASTE VALVE VAULT (S of 372A)	PWTS	9/28/06	9/28/07
	VV015	PROCESS WASTE VALVE VAULT (W of 334)	PWTS	9/28/06	9/28/07
	VV016	PROCESS WASTE VALVE VAULT (E of 443)	PWTS	9/28/06	9/28/07
	VV017	PROCESS WASTE VALVE VAULT (SE of 443)	PWTS	9/28/06	9/28/07
	VV018	PROCESS WASTE VALVE VAULT (S of 123)	PWTS	9/28/06	9/28/07
	VV019	PROCESS WASTE VALVE VAULT (SW of 452)	PWTS	9/28/06	9/28/07
	VV020	PROCESS WASTE VALVE VAULT (W of 452)	PWTS	9/28/06	9/28/07

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APPENDIX 2 -Potentially Historic Structures

The following buildings and structures have been preliminarily identified and having contributed to the Site's historic role in nuclear weapons production during the Cold War. Some or all of these buildings may be subject to the terms of an agreement between the Department of Energy and the Colorado State Historic Preservation Officer specifying terms for their recordation and/or preservation.

Resources Eligible for the NRHP

	<i>1951-1955</i>	<i>1956-1963</i>	<i>1964-1989</i>
	<u>Building No.</u>	<u>Building No.</u>	<u>Building No.</u>
Primary			
Production	444, 771, 881, 991, 996, 997, 998	701, 776/777, 883, 999	371, 460, 707
Worker Safety/Health/Life	112, 122, 123, 331, 442	114, 778	886
Security	111, 121, 446, 773, 864, 992		100, 113, 120, 133, 372, 372A, 375, 440, 461, 550, 557, 761, 762, 762A, 764, 792, 792A, 888, 900, 901, 920
Secondary			
Administration	441		
Production Waste Treatment	774		374
Heating, Water, Sewage	124, 215A, 443, 995		
Storage	551		
Maintenance	333, 334		
Laboratories			125, 126, 559, 779, 865

APPENDIX 3 References

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- DOE 95b Facility Deactivation End Points Handbook, Volume 1, Method and Examples, and Volume 2, Deactivation Practices, DOE, DRAFT November 16, 1995
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- K-H 95g Radioactive Material Transfer and Unrestricted Release of Property and Waste, K-H, 1-P73-HSP-18.10, May 4, 1995
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- K-H 96c Conduct of Operations Policy, K-H, January 1996)
- K-H 96c Conduct of Operations Manual, K-H, TOC September 15, 1996
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