

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Savannah River**

Site Summary Level: **Savannah River Site**

Project **SR-FA17 / H-Area Monitoring and Minor Facility Monitoring**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0514**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Definition of Scope: During and upon completion of facility deactivation, facilities require long-term surveillance and maintenance (S&M) per DOE Order 430.1A and the Implementation Guides. Surveillance and maintenance activities include the base activities required to monitor and maintain the safety envelope of the Area for the protection of Site personnel, the public, and the environment. These activities include: · Management of the facilities with a standard of care consistent with the hazard classification of the facility, and implementation of the guidelines of DOE Order 5480.19; · Surveillance and maintenance of facility infrastructure to guard against building deterioration; · Operation and maintenance of systems required to monitor and control contamination; · Operation and maintenance of systems necessary to alert personnel of hazards; · Control of access to hazards (high energy, radiation, chemicals, etc.); · Performance of environmental monitoring to ensure integrity of S&M plan; · Personnel training and qualifications for all required processes, systems, and functions are maintained in support of the facility S&M plan; · Completion of waste certification process; · Low Level and other waste processing, characterization, packaging, and shipment; · Maintenance of a work control system as required by DOE Order 4330.B; · Preventive and corrective maintenance of fire, safety, security, and life support systems necessary for the safe entry into facilities, or provide method for safe entry into facilities; · Oversight and maintenance of facility support services systems (steam, plant air, electricity, domestic and process water, etc.); · Work package and maintenance procedures development; · Field procurement and spare parts management; · Execution of limited scope stabilization and deactivation activities to prevent the spread of contamination or the release of any residual materials; and, · Performance of drills, maintenance of emergency response plans for affected facilities, and maintenance of associated emergency response equipment. During the deactivation period, some elements of pre-deactivation surveillance and maintenance may become unnecessary due to minimization or elimination of associated risks. As these may vary from facility to facility, pre-deactivation and deactivation period surveillance and maintenance scope and costs are assumed, for the purposes of this plan, to be the same. Post-deactivation scope and costs will be substantially reduced, although the specifics will again vary from facility to facility.

Surveillance & Maintenance (S&M) includes the base activities required to monitor and maintain the safety envelope for the protection of Site personnel, the public, and the environment. Specific S&M activities include:

- Management of the facilities with a standard of care consistent with the hazard classification of the facility, and implementation of the guidelines of DOE Order 5480.19;
- Surveillance of facility condition on a quarterly basis;
- Operation and maintenance of temporary systems required to monitor and control contamination;
- Personnel training and qualifications are maintained in support of the facility S&M plan;
- Completion of the waste certification process;
- Low level and other waste processing, characterization, packaging, and shipment;
- Providing a method for safe entry into facilities;
- Maintenance of facilities to ensure structural integrity;
- Work package and maintenance procedures development; and,

Technical Approach: Surveillance and maintenance of F Area requires no new technologies or capabilities that are not already available at SRS.

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Project Description Narratives

Project Status in FY 2006:

Current funding guidance indicates that the H Area facilities deactivation scope outlined in separate PBS will be completed after FY06. Until such time, H Area facilities surveillance and maintenance costs will be captured in the SR-NM02 PBS; these costs are commensurate with the risk posed by the operating facilities.

This does not preclude, however, the planning and implementation of smaller scale disposition actions. These actions would be initiated under this ACP project to reduce a specific risk, thereby lowering surveillance and maintenance costs associated with that particular risk. In some cases, excess site assets may be used to fund disposition actions. These excess assets may be used in a barter arrangement with a subcontractor in exchange for the demolition and removal of excess facilities (known as an "assets for services" subcontract). Any proceeds from this type of activity will be used to fund additional disposition activities at SRS. Other funding for disposition projects would be incremental to the surveillance and maintenance budget. As funding for these small-scale disposition actions is speculative, no consideration is given to them in this PBS.

Post-2006 Project Scope:

The H Area chemical separation facilities will complete the processing of identified at-risk materials prior to FY06; the facilities will initiate a phased deactivation program starting in FY05 with a scheduled completion for FY09. S&M costs for these deactivated facilities are captured in this PBS starting in FY10.

Upon completion of facility deactivation, routine of periodical surveillances will be established. These surveillances will verify the structural integrity of the H Area facilities, and verify the operational integrity of any remote monitoring equipment, sump-pumping equipment, and environmental monitoring equipment required by the surveillance and maintenance plan for H Area. This quarterly monitoring will continue until final disposition of the facilities.

Project End State

This project only provides for surveillance and maintenance during the deactivation, and post-deactivation phases of the H Area facilities life cycle (i.e., this project end state). Additional projects will be required to complete future decommissioning and /or meet the EM site end-state; the H Area facilities end states have not been defined. No plans have been made at this time to reuse H Area facilities after deactivation.

No nuclear materials, spent fuel, or high level waste will be stored in H Area following deactivation, nor will any be generated by this project. Wastes generated by this project will be primarily job control wastes from incidental decontamination, surveillance, and maintenance activities. These wastes will be disposed via other solid waste treatment facilities at SRS. Life cycle waste costs are reflected in the operating costs of those facilities.

Cost Baseline Comments:

Costs identified in this PBS are rough order of magnitude engineering estimates only. Deactivation surveillance and maintenance costs are based on historical data. It is assumed that there is a marginal decrease in expenditures during the first 3 years of post-operational S&M, however this will remain level until deactivation has been completed. Post-deactivation surveillance and maintenance costs are dependent on the deactivation end points, which in turn depend on the characterization of facility hazards. Although no facility characterization or end points determination has been made for any of the H Area facilities, it has been assumed that post deactivation costs are only a fraction (10%) of the historic operational S&M costs.

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Project Description Narratives

This estimate should be used for pre-conceptual planning, and should be considered as preliminary funding guidance only. Detailed work scopes and cost estimates will be developed as part of the Deactivation Plan development and will be a product of that work when funded.

Costs identified in this PBS are rough order of magnitude engineering estimates only. Pre-deactivation surveillance and maintenance costs are based on historical data. It is assumed that there is a marginal decrease in expenditures during the first 3 years of post-operational S&M, however this will remain level until deactivation has been completed. Post-deactivation surveillance and maintenance costs are dependent on the deactivation end points, which in turn depend on the characterization of facility hazards. Although facility characterization or end points determination has not been made for any of the H Area and other minor facilities, it has been assumed that post deactivation costs are only a fraction (10%) of the historical operational S&M costs.

Safety & Health Hazards:

The deactivation-planning projects will be funded in FY04. To-date a deactivation specific safety and hazard analysis has not been performed. Such analyses will be performed for the facilities in accordance with Site standards. The criteria for determining the radiological hazard categories are provided in DOE-STD-1027-92, and the criteria for determining the chemical hazard categorization are provided in WSRC-MS-92-206. Until modified by deactivation activities, the operational safety basis will be maintained as the controlling ASA.

Safety & Health Work Performance:

Activities and checkpoints are described by the Integrated Management System Description. The conditions and requirements are clearly established and agreed upon prior to the starting of any project and those requirements are contractually binding upon WSRC. The key elements of the WSRC Integrated Safety Program are to define the scope of work, identify and analyze hazards associated with the work, develop and implement hazard controls, perform work within controls, and provide feedback on adequacy of controls and continue to improve safety management. The WSRC Integrated Procedures Management System is the primary mechanism for implementing the objective, principles and functions of the Safety Management System. This system establishes Company-Level, Division-level, and Program-specific procedures consistent with organizational roles, and ensures a consistent, discipline site-wide approach to safety while performing work. A documented safety basis will be maintained through completion of the deactivation project.

PBS Comments:

The fundamental concept of deactivation is to reduce risks associated with surplus facilities, thereby reducing the S&M cost while maintaining safety for site employees, the public and the environment. The methodology is to use all technology available to de inventory, stabilize residual hazardous materials to the lowest manageable hazard level possible, shutdown of unnecessary systems and reduction of discretionary S&M. Upon completion of deactivation, the facility would be locked with only quarterly entry for inspection and monitoring, while awaiting a turnover to EM for a final decision on disposition (D&D, entombment, ...). The H Area Monitoring Project is established to ensure surplus H Area facilities are safely maintained while awaiting disposition decisions.

Baseline Validation Narrative:

Not Applicable.

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General PBS Information

Project Validated? **Date Validated:**
Has Headquarters reviewed and approved project? No
Date Project was Added: 12/1/1997
Baseline Submission Date: 7/3/1999
FEDPLAN Project? Yes

| | | | | | | | | |
|-----------------|---------------|-------------|--------------|------------|---------------|--------------|-------------------|--------------|
| Drivers: | CERCLA | RCRA | DNFSB | AEA | UMTRCA | State | DOE Orders | Other |
| | Y | Y | Y | N | N | Y | Y | Y |

Project Identification Information

DOE Project Manager: G. M. Nichols, Jr.
DOE Project Manager Phone Number: 803-952-2021
DOE Project Manager Fax Number: 803-952-2019
DOE Project Manager e-mail address: gordon.nichols@srs.gov
Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

| | 1997-2006 Total | 2007-2070 Total | 1997-2070 Total | 1997 | Actual 1997 | 1998 | Actual 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------------------|--------------------|--------------------|--------------------|------|----------------|------|----------------|------|------|------|------|------|------|------|------|
| PBS Baseline (current year dollars) | 0 | 3,150,300 | 3,150,300 | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PBS Baseline (constant 1999 dollars) | 0 | 1,166,317 | 1,166,317 | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PBS EM Baseline (current year dollars) | 0 | 3,150,300 | 3,150,300 | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Baseline Costs (in thousands of dollars)

| | 1997-2006 Total | 2007-2070 Total | 1997-2070 Total | 1997 | Actual 1997 | 1998 | Actual 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | |
|-----------------------------------------------|--------------------|--------------------|--------------------|--------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2007 | 2008 | 2009 | 2010 | 2011- 2015 | 2016- 2020 | 2021- 2025 | 2026- 2030 | 2031- 2035 | 2036- 2040 | 2041- 2045 | 2046- 2050 | 2051- 2055 | 2056- 2060 | 2061- 2065 | 2066- 2070 |
| PBS EM Baseline (constant 1999 dollars) | 0 | 1,166,317 | 1,166,317 | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PBS Baseline (current year dollars) | 161,500 | 131,400 | 110,100 | 79,600 | 127,400 | 108,700 | 124,200 | 141,900 | 162,100 | 185,200 | 211,600 | 241,800 | 276,300 | 315,700 | 360,700 | 412,100 |
| PBS Baseline (constant 1999 dollars) | 128,242 | 101,597 | 82,890 | 58,353 | 86,281 | 64,436 | 64,441 | 64,442 | 64,435 | 64,436 | 64,438 | 64,452 | 64,462 | 64,469 | 64,471 | 64,472 |
| PBS EM Baseline (current year dollars) | 161,500 | 131,400 | 110,100 | 79,600 | 127,400 | 108,700 | 124,200 | 141,900 | 162,100 | 185,200 | 211,600 | 241,800 | 276,300 | 315,700 | 360,700 | 412,100 |
| PBS EM Baseline (constant 1999 dollars) | 128,242 | 101,597 | 82,890 | 58,353 | 86,281 | 64,436 | 64,441 | 64,442 | 64,435 | 64,436 | 64,438 | 64,452 | 64,462 | 64,469 | 64,471 | 64,472 |

Baseline Escalation Rates

| 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | 3.60% | 3.60% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% |
| 2010 | 2011-2015 | 2016-2020 | 2021-2025 | 2026-2030 | 2031-2035 | 2036-2040 | 2041-2045 | 2046-2050 | 2051-2055 | 2056-2060 | 2061-2065 | 2066-2070 |
| 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% | 2.70% |

Project Reconciliation

Project Completion Date Changes:

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Project Reconciliation

Previously Projected End Date of Project: 9/1/2070

Current Projected End Date of Project: 9/1/2070

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

| | | | |
|-----------------------------------------------------------------------------|-----------|--------------------------------------------------------------|-------------------|
| Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars): | 1,010,036 | Actual 1997 Cost: | Actual 1998 Cost: |
| Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars): | 1,010,036 | Inflation Adjustment (2.7% to convert 1998 to 1999 dollars): | 27,271 |
| Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): | 1,037,307 | | |

Project Cost Changes

| | Cost Adjustments | Reconciliation Narratives |
|----------------------------------------------------------------------|------------------|---------------------------------------------|
| Cost Change Due to Scope Deletions (-): | 183,720 | Inactive facilities scope moved to SR-FA23. |
| Cost Reductions Due to Efficiencies (-): | | |
| Cost Associated with New Scope (+): | 312,729 | Post deactivation S&M for H Area |
| Cost Growth Associated with Scope Previously Reported (+): | | |
| Cost Reductions Due to Science & Technology Efficiencies (-): | | |
| Subtotal: | 1,166,316 | |
| Additional Amount to Reconcile (+): | 1 | |
| Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): | 1,166,317 | |

Milestones

| Milestone/Activity | Field Milestone Code | Original Date | Baseline Date | Legal Date | Forecast Date | Actual Date | EA | DNFSB | Mgmt. Commit. | Key Decision | Intersite |
|--------------------------|----------------------|---------------|---------------|------------|---------------|-------------|----|-------|---------------|--------------|-----------|
| Project Mission Complete | SR-FA17-003 | | 9/1/2070 | | | | | | | | |
| Project Start | SR-FA17-001 | | 10/1/2010 | | | | | | | | |

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Milestones - Part II

| Milestone/Activity | Field Milestone Code | Critical Decision | Critical Closure Path | Project Start | Project End | Mission Complete | Tech Risk | Work Scope Risk | Intersite Risk | Cancelled | Milestone Description |
|--------------------------|----------------------|-------------------|-----------------------|---------------|-------------|------------------|-----------|-----------------|----------------|-----------|-----------------------|
| Project Mission Complete | SR-FA17-003 | | | | Y | | | | | | |
| Project Start | SR-FA17-001 | | | Y | | | | | | | |

Technology Needs

Site Need Code: SR99-4001

Site Need Name: Dismantlement of Large and/or Complex Equipment and Structures

Focus Area Work Package ID: DD-10

Focus Area Work Package: Production Reactor D&D

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Laser Cutting and Size Reduction

Laser Cutting and Size Reduction

Laser Cutting and Size Reduction

Dual Arm Work Platform Teleoperated Robotics System

Dual Arm Work Platform Teleoperated Robotics System

Dual Arm Work Platform Teleoperated Robotics System

Mobile Robot Worksystem (ROSIE)

Mobile Robot Worksystem (ROSIE)

Mobile Robot Worksystem (ROSIE)

High Speed Clamshell Pipe Cutter

High Speed Clamshell Pipe Cutter

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

High Speed Clamshell Pipe Cutter

Swing-Reduced Crane Control

Swing-Reduced Crane Control

Swing-Reduced Crane Control

Oxy-Gasoline Torch

Oxy-Gasoline Torch

Oxy-Gasoline Torch

Self Contained Pipe Cutting Shear

Self Contained Pipe Cutting Shear

Self Contained Pipe Cutting Shear

Remote Control Concrete Demolition System

Remote Control Concrete Demolition System

Remote Control Concrete Demolition System

Concrete Spaller

Concrete Spaller

Concrete Spaller

Track Mounted Shear/Crusher

Track Mounted Shear/Crusher

Track Mounted Shear/Crusher

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Technology Needs

Related CCP Milestones

Related Waste Streams

Agree?

Change?

| | | |
|--------------------------------------------------------------------|---|---|
| 00576: TAN - TRU Waste Segregated and Repackaged for WIPP Disposal | Y | N |
| 00522: LAC - Low Activity Bulk Waste | Y | N |
| 00528: LAE - Incinerable Low Activity Job Control Waste | Y | N |
| 00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal | Y | N |
| 00531: LAG - Contaminated Large Equip for Survey/Decon | Y | N |
| 00530: LAF - Bulk Metal for Survey/Decon | Y | N |

Site Need Code: SR99-4002
Site Need Name: Characterization of Contaminated Surfaces

Focus Area Work Package ID: DD-03

Focus Area Work Package: Canyon Disposition Initiative

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Rapid Surface Sampling and Archive Record (RSSAR) System
 Portable X-Ray, K-Edge Heavy Metal Detector
 Portable X-Ray Fluorescence Spectrometer
 Portable X-Ray Fluorescence Spectrometer

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Technology Needs

Portable X-Ray Fluorescence Spectrometer

Portable X-Ray Fluorescence Spectrometer

Gamma Ray Imaging System

Gamma Ray Imaging System

Gamma Ray Imaging System

Gamma Ray Imaging System

Mobile Automated Characterization System

Mobile Automated Characterization System

Mobile Automated Characterization System

Mobile Automated Characterization System

Gamma Cam (TM) Radiation Imaging System

Field Transportable Beta Spectrometer

Field Transportable Beta Spectrometer

Field Transportable Beta Spectrometer

Field Transportable Beta Spectrometer

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

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Technology Needs

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Ground Based Laser Induced Fluorescence Imaging

In Situ Object Counting System

Site Need Code: SR99-4003

Site Need Name: Material Recycle (Process Equipment, Metal, Steel, and Concrete)

Focus Area Work Package ID: DD-05

Focus Area Work Package: Material Recycle and Release

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Stainless Steel Beneficial Reuse

Stainless Steel Beneficial Reuse

Stainless Steel Beneficial Reuse

Stainless Steel Beneficial Reuse

Laser Decontamination and Recycle of Metals

Laser Decontamination and Recycle of Metals

Laser Decontamination and Recycle of Metals

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Technology Needs

Laser Decontamination and Recycle of Metals

Biodegradation of Concrete

Biodegradation of Concrete

Biodegradation of Concrete

Biodegradation of Concrete

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal

SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal

SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal

SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Centrifugal Shot Blast System

Centrifugal Shot Blast System

Centrifugal Shot Blast System

Centrifugal Shot Blast System

Soft Media Blast Cleaning

Soft Media Blast Cleaning

Soft Media Blast Cleaning

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Technology Needs

Soft Media Blast Cleaning

Related CCP Milestones

Related Waste Streams

| | <u>Agree?</u> | <u>Change?</u> |
|--------------------------------------------------------------------|---------------|----------------|
| 00522: LAC - Low Activity Bulk Waste | Y | N |
| 02184: AA - LLW Soil, Rubble, Debris | Y | N |
| 00528: LAE - Incinerable Low Activity Job Control Waste | Y | N |
| 00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal | Y | N |

Site Need Code: SR99-4004

Site Need Name: Decontamination of Contaminated Concrete

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Laser Surface Cleaning

Biodegradation of Concrete

2-D Linear Motion System

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

2-D Linear Motion System

2-D Linear Motion System

2-D Linear Motion System

2-D Linear Motion System

Rotary Peening with Captive Shot

Centrifugal Shot Blast System

Soft Media Blast Cleaning

ROTO PEEN Scaler and VAC PAC System

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Technology Needs

Concrete Shaver
Concrete Shaver
Concrete Shaver
Concrete Shaver
Concrete Shaver
Remotely Operated Scabbling
Concrete Grinder
Concrete Grinder
Concrete Grinder
Concrete Grinder
Concrete Grinder
Concrete Spaller
Concrete Spaller
Concrete Spaller
Concrete Spaller
Concrete Spaller

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00522: LAC - Low Activity Bulk Waste

Y

N

00528: LAE - Incinerable Low Activity Job Control Waste

Y

N

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Technology Needs

Site Need Code: SR99-4005

Site Need Name: Characterization of Inaccessible Areas

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Internal Duct Characterization System

Internal Duct Characterization System

Internal Duct Characterization System

Internal Duct Characterization System

Small Pipe Characterization System (SPCS)

Pipe Explorer (TM) System

Pipe Explorer (TM) System

Pipe Explorer (TM) System

Pipe Explorer (TM) System

Portable X-Ray, K-Edge Heavy Metal Detector

Associated Particle Imaging Development

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Technology Needs

Associated Particle Imaging Development

Associated Particle Imaging Development

Associated Particle Imaging Development

Pipe Crawler Internal Piping Characterization System

Site Need Code: SR99-4006

Site Need Name: Asbestos Treatment to Allow Reuse

Focus Area Work Package ID: DD-10

Focus Area Work Package: Production Reactor D&D

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

In Situ Chemical Treatment of Asbestos

Thermal Conversion of Asbestos

Thermal Conversion of Asbestos

Thermal Conversion of Asbestos

Thermal Conversion of Asbestos

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Site Need Code: SR99-4007

Site Need Name: Characterization of Volumetrically Contaminated Surfaces

Focus Area Work Package ID: DD-01

Focus Area Work Package: D&D of Tritium Contaminated Facilities

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Portable X-Ray, K-Edge Heavy Metal Detector

Remote Concrete Coring

Remote Concrete Coring

Remote Concrete Coring

Remote Concrete Coring

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Site Need Code: SR99-4008

Site Need Name: Dismantlement of Concrete-Encased Piping

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Oxy-Gasoline Torch

Oxy-Gasoline Torch

Oxy-Gasoline Torch

Remote Control Concrete Demolition System

Remote Control Concrete Demolition System

Remote Control Concrete Demolition System

Liquid-Nitrogen Cooled Diamond-Wire Concrete Cutting

Liquid-Nitrogen Cooled Diamond-Wire Concrete Cutting

Liquid-Nitrogen Cooled Diamond-Wire Concrete Cutting

Track Mounted Shear/Crusher

Track Mounted Shear/Crusher

Track Mounted Shear/Crusher

Related CCP Milestones

Related Waste Streams

00522: LAC - Low Activity Bulk Waste

Agree?

Y

Change?

N

02184: AA - LLW Soil, Rubble, Debris

Y

N

00528: LAE - Incinerable Low Activity Job Control Waste

Y

N

00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal

Y

N

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Technology Needs

Site Need Code: SR99-4009
Site Need Name: Improved Exhaust Treatment Systems
Focus Area Work Package ID: DD-11
Focus Area: DDFA
Benefits (Cost, Risk Reduction, Both): Cost

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility
Agree with Technology Link: N

Technologies

Cost Savings (in thousands of dollars) **Range of Estimate**

Related CCP Milestones

Related Waste Streams

Agree? **Change?**

| | | |
|----------------------------------------------------------------|---|---|
| 00528: LAE - Incinerable Low Activity Job Control Waste | Y | N |
| 00578: TAP - Drums Segregated and Repackaged for WIPP Disposal | Y | N |

Site Need Code: SR99-4010
Site Need Name: Characterization Data Management
Focus Area Work Package ID: DD-10
Focus Area: DDFA
Benefits (Cost, Risk Reduction, Both): Cost

Focus Area Work Package: Production Reactor D&D
Agree with Technology Link: Y

Technologies

Cost Savings (in thousands of dollars) **Range of Estimate**

Rapid Surface Sampling and Archive Record (RSSAR) System
 Rapid Surface Sampling and Archive Record (RSSAR) System
 Rapid Surface Sampling and Archive Record (RSSAR) System
 Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)
 Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)

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Technology Needs

Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)

Mobile Automated Characterization System

Mobile Automated Characterization System

Mobile Automated Characterization System

Gamma Cam (TM) Radiation Imaging System

Gamma Cam (TM) Radiation Imaging System

Gamma Cam (TM) Radiation Imaging System

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

System for Tracking Remediation, Exposure, Activities and Materials (STREAM)

System for Tracking Remediation, Exposure, Activities and Materials (STREAM)

System for Tracking Remediation, Exposure, Activities and Materials (STREAM)

Site Need Code: SR99-4011

Site Need Name: Waste Characterization

Focus Area Work Package ID: DD-03

Focus Area Work Package: Canyon Disposition Initiative

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Portable X-Ray, K-Edge Heavy Metal Detector

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Portable X-Ray, K-Edge Heavy Metal Detector

Portable X-Ray, K-Edge Heavy Metal Detector

Waste Inspection Tomography (WIT)

Waste Inspection Tomography (WIT)

Waste Inspection Tomography (WIT)

Characterization Development

Characterization Development

Characterization Development

Associated Particle Imaging Development

Associated Particle Imaging Development

Associated Particle Imaging Development

WIPP Certifiable TRU Standard Waste Box Counter

WIPP Certifiable TRU Standard Waste Box Counter

WIPP Certifiable TRU Standard Waste Box Counter

Site Need Code: SR99-4012

Site Need Name: Stabilization of Contaminated Equipment / Components/ Surfaces

Focus Area Work Package ID: DD-10

Focus Area Work Package: Production Reactor D&D

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Reactor Surface Contamination Stabilization

Reactor Surface Contamination Stabilization

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Reactor Surface Contamination Stabilization

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Site Need Code: SR99-4013

Site Need Name: Containment / Confinement Technologies

Focus Area Work Package ID: DD-03

Focus Area Work Package: Canyon Disposition Initiative

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: SR99-4015

Site Need Name: Decontamination of Small Components

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

CORPEX Nuclear Decontamination Process

CORPEX Nuclear Decontamination Process

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Technology Needs

CORPEX Nuclear Decontamination Process

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Soft Media Blast Cleaning

Soft Media Blast Cleaning

Soft Media Blast Cleaning

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00583: -

Y

N

00528: LAE - Incinerable Low Activity Job Control Waste

Y

N

00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal

Y

N

00530: LAF - Bulk Metal for Survey/Decon

Y

N

Site Need Code: SR99-4016

Site Need Name: Health and Safety Technologies

Focus Area Work Package ID: DD-10

Focus Area Work Package: Production Reactor D&D

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Advanced Worker Protection System

Advanced Worker Protection System

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Advanced Worker Protection System

Personal Ice Cooling System (PICS)

Personal Ice Cooling System (PICS)

Personal Ice Cooling System (PICS)

Heat Stress Monitoring System

Heat Stress Monitoring System

Heat Stress Monitoring System

Wireless Remote Monitoring System

Wireless Remote Monitoring System

Wireless Remote Monitoring System

Heat Stress Mitigation

Heat Stress Mitigation

Heat Stress Mitigation