

**Y-12
NATIONAL
SECURITY
COMPLEX**

Limited Report

In Lieu of 2015 Ten-Year Site Plan

MANAGED BY
B&W Y-12, LLC
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

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ACRONYMS

AM	Actual Maintenance
AHU	Air Handling Unit
CM	Corrective Maintenance
DER	Direct Electrolytic Reduction
DM	Deferred Maintenance
DOE	U.S. Department of Energy
DNS	Defense Nuclear Security
DSW	Directed Stockpile Work
DU	Depleted Uranium
EAC	Estimate at Completion
EINO	Electrical Improvements for Nuclear Operations
EU	Enriched Uranium
FCI	Facility Condition Index
FIRP	Facilities and Infrastructure Recapitalization Program
FY	fiscal year
FRR	Facility Risk Review
FYNISP	Future Years National Security Program
GPP	General Plant Project
GSF	gross square feet
NFRR	Nuclear Facility Risk Reduction
NNSA	National Nuclear Security Administration
NPE	Normal Project Expense
NPO	NNSA Production Office
O&M	operation and maintenance
OPC	Other Project Cost
PA	Protected Area
PIDAS	Perimeter Intrusion Detection and Assessment System
PM	Preventive Maintenance
RAMP	Roof Asset Management Program
RTBF	Readiness in Technical Base and Facilities
SSMP	Stockpile Stewardship and Management Plan
TYSP	Ten-Year Site Plan
UPF	Uranium Processing Facility
WEPAR	West End Protected Area Reduction
Y-12	Y-12 National Security Complex

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1. EXECUTIVE SUMMARY

This Limited Report is provided in response to the Jim McConnell memorandum dated March 27, 2014, and is provided in lieu of the annual update for the Ten-Year Site Plan. The FY2013 Ten-Year Site Plan is considered the Y-12 plan of record and will remain so until the next full version is submitted. As requested, this report contains the information related to the following three requests:

- Significant changes since the last submission;
- A prioritized list of proposed real property investments anticipated over the FY2014-2016; and,
- A two-year projected accounting of office and warehouse space in support of the Office of Management and Budget's Freeze the Footprint initiative.

The following major elements define the significant changes at Y-12 from the FY2013 submittal:

1.1 Uranium Processing Facility (UPF)

The Uranium Processing Facility continues to be needed to ensure the long-term viability, safety, and security of the Nation's enriched uranium capability. However, significant work has been done since the release of the 2014-2023 Ten Year Site Plan with regard to the strategy, scope and timing associated with UPF. Following are 3 key activities associated with the eventual UPF strategy:

- Beginning in the fall of 2013, Y-12 developed a Building 9212 Transition Evaluation that looked at reducing risk in Building 9212, utilizing existing facilities to support both risk reduction and bridging certain Enriched Uranium (EU) operations until Phases 2 and 3 of UPF, and optimizing the transition from Building 9212 to Phase 1 of UPF.
- In January 2014, the Acting National Nuclear Security Administration (NNSA) Administrator tasked a Red Team to develop and recommend an alternative approach to UPF that delivers replacement of the Building 9212 capabilities by 2025 and at a cost not to exceed \$6.5 billion. That recommendation was provided on April 15, 2014.
- In February 2014, the Deputy Administrator for Defense Programs (DP) tasked the NNSA Production Office (NPO) and Y-12 to develop a Uranium Infrastructure Strategy that would build on the Building 9212 Transition Evaluation and accelerate transition out of Building 9212 by 2025, integrate evaluation of alternatives for delivery of UPF, improve the needed Y-12 infrastructure over the next decade, and prioritize replacement capabilities. The initial draft of this strategy was completed in early April.

It is expected that the outcome and integration of these key activities will result in an updated UPF implementation strategy during FY-14.

1.2 Electrical Improvements for Nuclear Operations (EINO)

The EINO line item has been identified in the FY2015 Stockpile Stewardship and Management Plan (SSMP) as a proposed project for FY2016 – FY2021. This project will provide necessary electrical system investments for 9215 and 9204-02E to maintain safe operations through FY2030. These projects are required in support of the recent decision to indefinitely defer transition of 9215 and 9204-02E scope for UPF, and implement recommendations from the Facility Risk Review (FRR).

This effort will greatly reduce risks in the following areas:

- Providing reliable power for compliant facilities, including dehumidification systems and Emergency Notification
- Providing reliable power for production equipment for dismantlement and life extension activities

1.3 Protected Area Upgrades and Reduction

The West End Protected Area Reduction (WEPAR) subproject of the Uranium Processing Facility has been canceled. This project, along with other proposed Defense Nuclear Security (DNS) projects, was part of the Y-12 initiative to replace the Perimeter Intrusion Detection and Assessment System (PIDAS) and ultimately reduce the Protected Area (PA) at Y-12 to 20 acres consistent with the construction of UPF. Y-12 is currently providing input and alternatives to DNS to address the needed upgrades to the aging PIDAS system, to complete full implementation of ARGUS, and to reduce the PA consistent with the ultimate UPF implementation strategy.

2. SITE OVERVIEW AND PRIORITIZED PROJECT LISTING

Location: Oak Ridge, Tenn.

Type: Multi-Program Site

Web site: <http://www.y12.doe.gov/>

Site Overview:

The Y-12 National Security Complex is a 3,018-acre site in Oak Ridge, Tenn., operated by B&W Y-12 for the NNSA. Since 1943, Y-12 has played a key role in strengthening our country’s national security. Today, Y-12 has three missions: maintaining the safety, security and effectiveness of the U.S. nuclear weapons stockpile; providing safe and effective nuclear propulsion systems for the U.S. Navy; and reducing the global threat posed by nuclear proliferation and terrorism.

Capabilities

- C3 - Uranium
- C9 - Special Nuclear Material Accountability, Storage, Protection, Handling and Disposition
- C10 – Enabling Infrastructure
- C11 – Counterterrorism and Counterproliferation
- C12 – Support of Other Missions/Program Capability

Real Property

- 3,024 acres (owned)
- 348 Buildings/Trailers
 - 4,748,373 GSF Active and Operational
 - 1,129,564 GSF Non-Operational
 - 774,659 GSF Leased
- Replacement Plant Value: \$8,923.6M
- Deferred Maintenance: \$506M
- Facility Condition Index:
 - Mission Critical: 4.5%
 - Mission Dependent: 6.6%
 - Asset Utilization Index: 76.11%

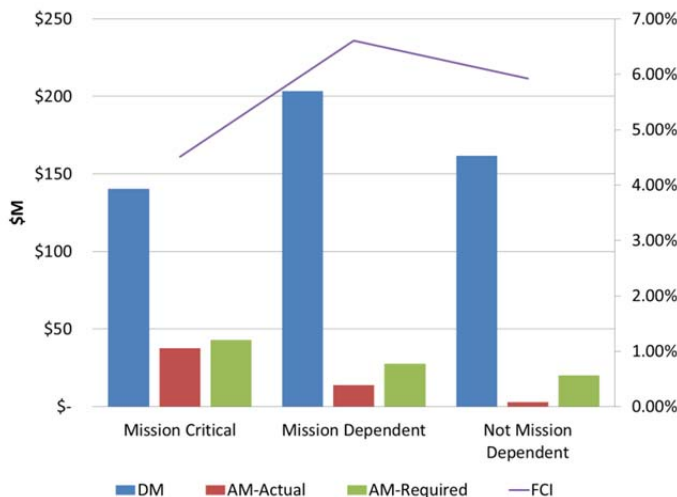


Figure 2 DM & FCI by Mission Dependency

Contractor Operator: B&W Y-12

Responsible Field Office: NPO Y-12

Site Manager: Steven C. Erhart

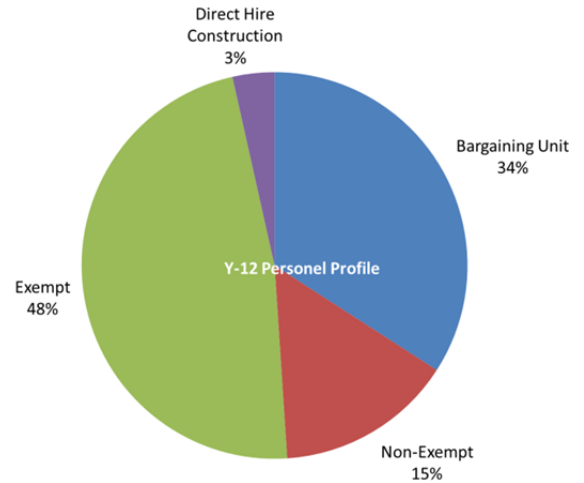


Figure 1 Y-12 Personnel Profile

FY 2013 Funding by Source (\$M)

FY 2013 Total Plant Operating Cost:	\$1,450
FY 2013 Total NNSA Cost:	\$1,321
FY 2013 Total DOE (Non-NNSA) Cost:	\$90
FY 2013 Total Other Funding:	\$39

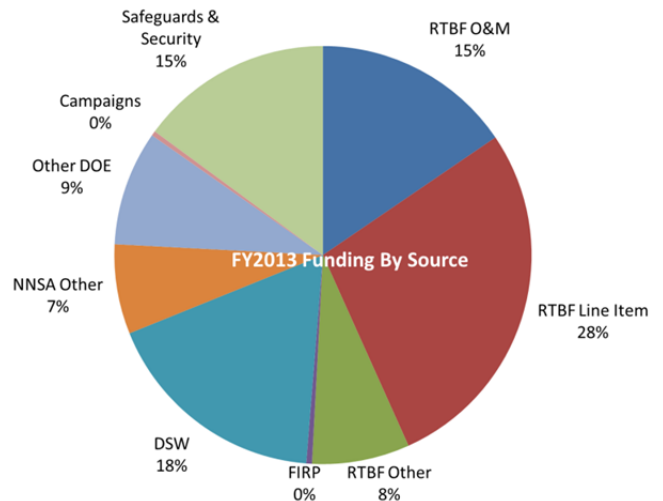


Figure 3 FY2013 Funding by Source

2.1 Prioritized Project List

The following list of projects has been risk ranked and prioritized along with all infrastructure projects at Y-12. The listing includes Line Item expense support, General Plant Project (GPP) and Expense funded projects with a funding profile within the FY2014 – FY2016 timeframe.

Table 1 FY2014 - FY2016 Prioritized Project List

Budget Category	Activity Description	FY2014	FY2015	FY2016
Line Item	Nuclear Facilities Risk Reduction (NFRR) (NPE/OPC)	\$ 1,700	\$ 1,000	\$ 1,000
Line Item	New Emergency Operations Facility (NPE/OPC)	\$ 1,500	\$ 1,000	\$ 1,000
Line Item	Electrical Improvements for Nuclear Operations (NPE/OPC)	\$ 1,000	\$ 2,000	\$ 2,000
Line Item	Lithium (NPE/OPC)	\$ 1,000	\$ 0	\$ 0
Line Item	New Fire Protection Operations Center (NPE/OPC)	\$ 1,000	\$ 1,000	\$ 1,000
Maintenance and Repair	Building 9995 HVAC Air Handling Unit (AHU) 1 Replacement	\$ 5,000	\$ 4,900	\$ 0
Maintenance and Repair	Building 9995 HVAC AHU 2 Replacement	\$ 4,500	\$ 500	\$ 0
Maintenance and Repair	Building 9201-5N HVAC Replacement - A Bay	\$ 3,300	\$ 0	\$ 0
Maintenance and Repair	Workplace Improvements	\$ 2,000	\$ 0	\$ 0
Maintenance and Repair	Other small projects and support activities across the enterprise	\$ 400	\$ 0	\$ 0
Maintenance and Repair	9212, 9215, 9204-2E, 9995, 9720-5, 9995, 9720-82 (EU) - Corrective Maintenance (CM)	\$ 0	\$ 8,000	\$ 8,240
Maintenance and Repair	9212, 9215, 9204-2E, 9995, 9720-5, 9995, 9720-82 (EU) - Preventive Maintenance (PM)	\$ 0	\$ 10,820	\$ 11,560
Maintenance and Repair	9201-5N, 9201-5W, 9202 (DU) - Corrective Maintenance (CM)	\$ 0	\$ 2,760	\$ 2,820
Maintenance and Repair	9201-5N, 9201-5W, 9202 (DU) - Preventive Maintenance (PM)	\$ 0	\$ 590	\$ 760
Maintenance and Repair	9204-2, 9225-3, 9720-32 (Special Materials) - Corrective Maintenance (CM)	\$ 0	\$ 2,500	\$ 1,530
Maintenance and Repair	9204-2, 9225-3, 9720-32 (Special Materials) - Preventive Maintenance (PM)	\$ 0	\$ 1,760	\$ 1,810
Maintenance and Repair	9201-1 (Non-nuclear component production/fabrication) - Corrective Maintenance (CM)	\$ 0	\$ 520	\$ 540
Maintenance and Repair	9201-1 (Non-nuclear component production/fabrication) - Preventive Maintenance (PM)	\$ 0	\$ 500	\$ 510
Maintenance and Repair	9212 - FRR	\$ 0	\$ 3,200	\$ 0
Maintenance and Repair	9215 and 9204-2E - FRR II	\$ 0	\$ 1,500	\$ 0
Maintenance and Repair	Mission Critical Fire System Maintenance	\$ 0	\$ 1,000	\$ 1,000
Recapitalization	Building 9204-2E Electrical Distribution Upgrades	\$ 4,000	\$ 0	\$ 0

Budget Category	Activity Description	FY2014	FY2015	FY2016
Recapitalization	Balance of Plant - M&O support to Johnson Controls required for them to implement Energy Savings Performance Contract Phase 3, starting in FY 2014 thru FY 2016.	\$ 3,500	\$ 6,400	\$ 5,400
Recapitalization	Calcliner (NPE/OPC)	\$ 200	\$ 1,000	\$ 0
Recapitalization	Site-wide - RAMP support	\$ 2,500	\$ 3,000	\$ 1,000
Recapitalization	West End Treatment Facility Tank F-8 Refurbishment	\$ 1,200	\$ 0	\$ 0
Recapitalization	Direct Electrolytic Reduction (DER) Deployment & Acceleration	\$ 600	\$ 2,000	\$ 2,000
Recapitalization	9204-2 Concrete Repair	\$ 0	\$ 1,500	\$ 1,000
Recapitalization	9204-2 - 50 Year Sprinkler Head Replacement 9204-002-WPS-006	\$ 0	\$ 0	\$ 2,000
Recapitalization	9215 - 50 Year Sprinkler Head Replacement 9215	\$ 0	\$ 3,000	\$ 0
Recapitalization	Site-wide - Quality of Workplace	\$ 0	\$ 2,000	\$ 1,000
Recapitalization	Building 9204-2 Dehumidification Upgrades	\$ 3,600	\$ 2,000	\$ 3,000
Recapitalization	Demolish Building 9744	\$ 2,000	\$ 0	\$ 0
Recapitalization	EAC Upgrades - Fire Department Vehicle Replacement (pumper truck, engine, command vehicle, etc.)	\$ 1,000	\$ 0	\$ 0
Recapitalization	Building 9212 Breathing Air Upgrades	\$ 500	\$ 0	\$ 0

3. Freeze the Footprint

Y-12 fully supports the demolition and new construction off-set requirements established for both the 2003 banking memo and the 2013 *Freeze the Footprint* initiative. The *Freeze the Footprint* initiative places an emphasis on changes to warehousing/storage and office facilities for a three-year forecast. Over the next 3-year span, Y-12 does not have any plans to construct or acquire new square footage in either of these categories. The following demolition initiatives are targeted for office and/or warehouse space:

Table 2. Freeze the Footprint Information

Property ID	Property Name	Estimated Disposition Year	Usage Code	Excess Date
9107	Office Building	2014	101 Office	1/1/2012
9724-01	Breakroom Facility	2014	101 Office	1/1/2009
9720-37	Storage/Emergency Shelter	2014	400 General Storage	1/1/2012
9720-22	Storage	2014	400 General Storage	
9124	Storage Building	2014	400 General Storage	1/1/2012
9112	Office-Engineering	2016	101 Office	
9111	Office-Engineering	2016	101 Office	
9720-17	Warehouse/Industrial	2016	400 General Storage	
9720-13	Y-12 Stores Warehouse	2016	400 General Storage	