MOX FUEL FABRICATION FACILITY

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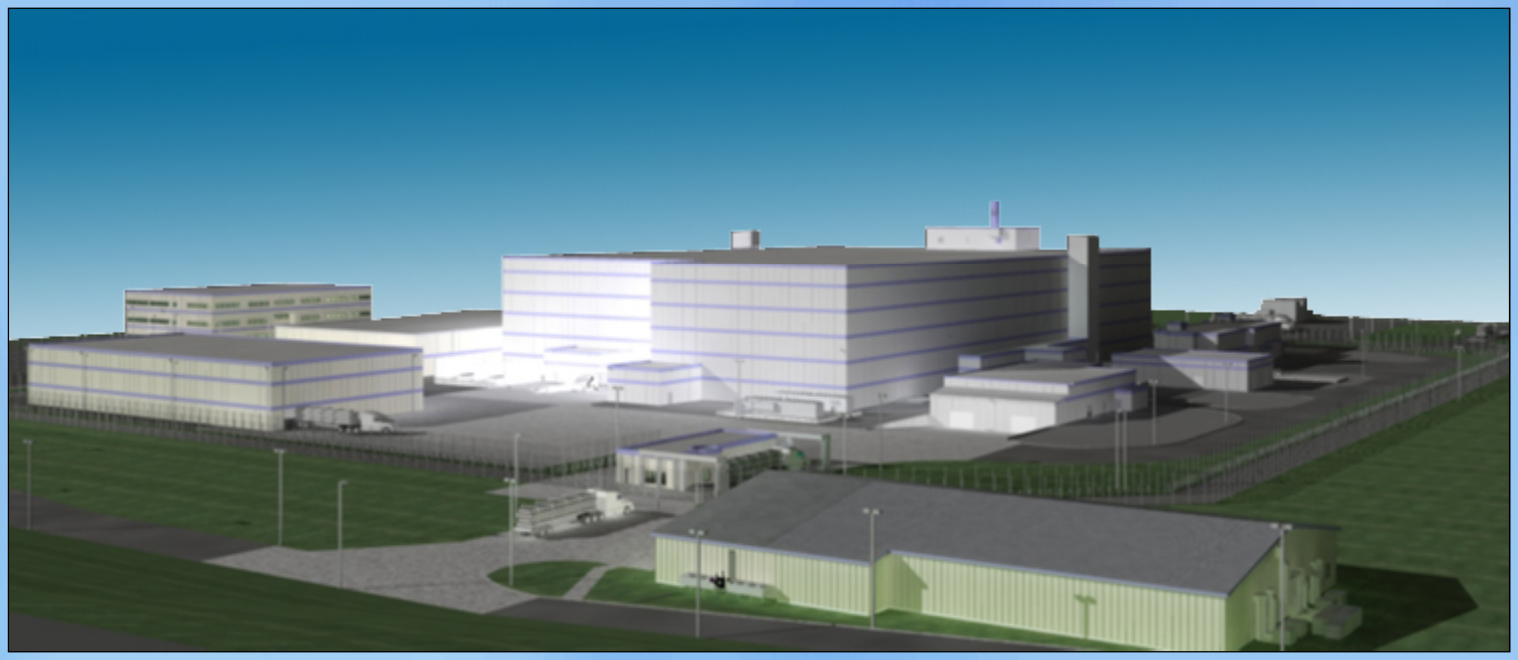
MOX Update



Kelly Trice

President, Shaw AREVA MOX Services, LLC

Enclosure 3

What is MOX?

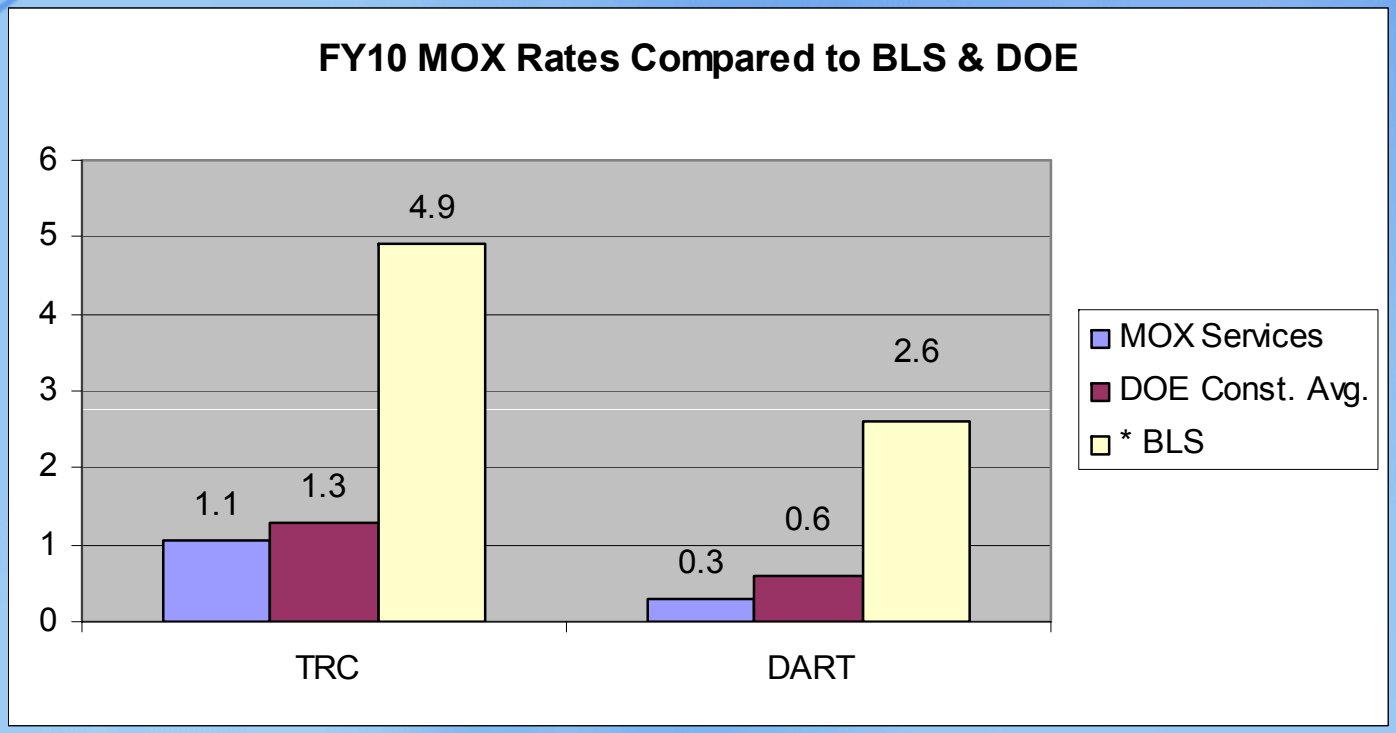
- **Mission**
  - Convert 34 metric tons of weapon-grade plutonium to mixed oxide (MOX) fuel for use in commercial power reactors
- **Impact**
  - Removes many thousands of warheads from the nuclear arsenal
  - Eliminates $500 million/year in security costs
  - Provides clean, carbon free energy that offsets over $31.5 billion in imported oil costs at $72/barrel

MOX FUEL FABRICATION FACILITY

MOX Project Team Values

- Quality
- Safety
- Personal Commitment
- Financial Responsibility
- Environmental Stewardship

MOX Safety Rates



*Bureau of Labor Statistics

MFFF achieved 4.7 million consecutive safe work hours in 2010

Currently > 1.5 million consecutive safe work hours

MOX Safety Fuels the Future

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Accomplishments in 2010

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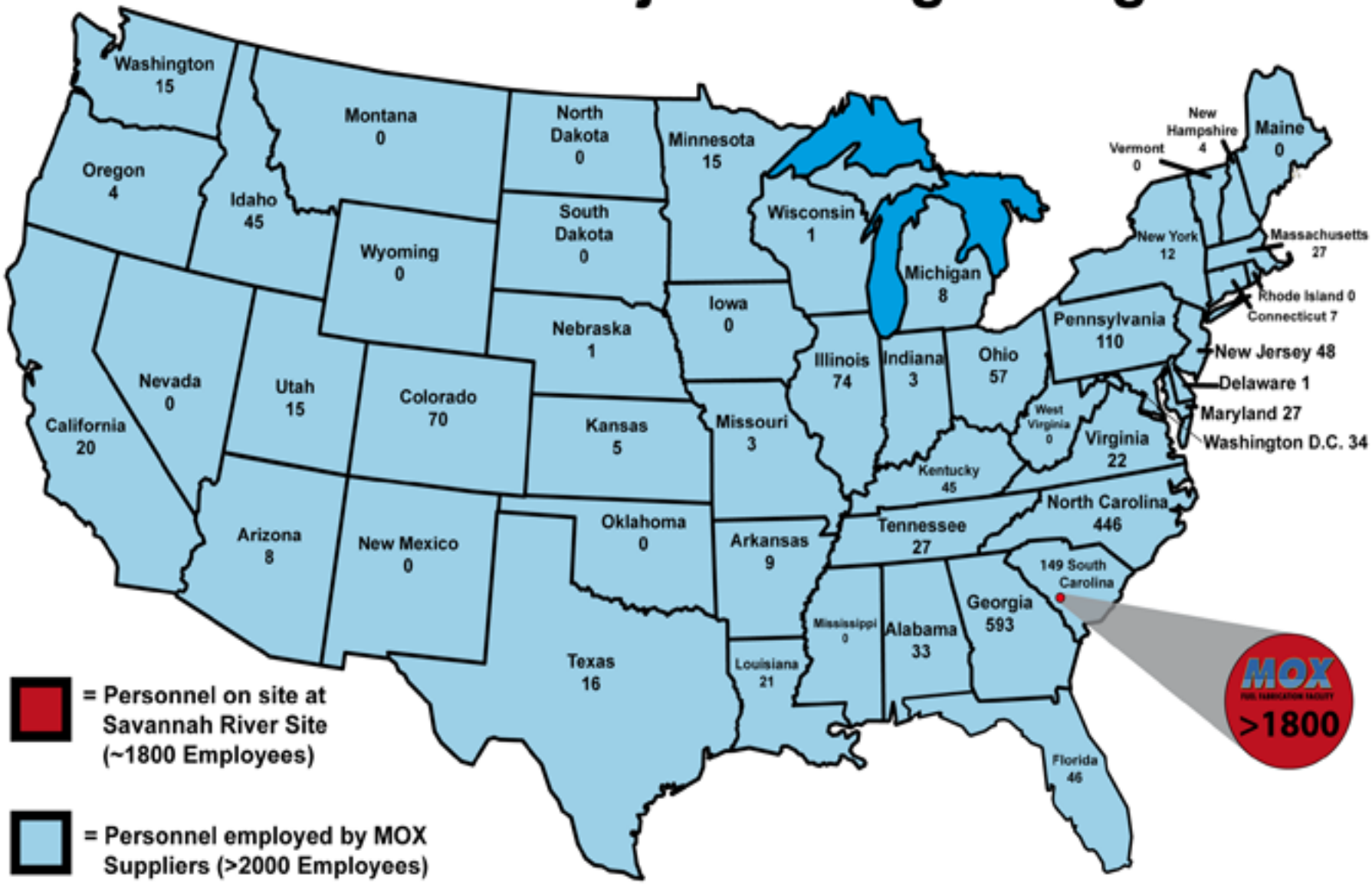
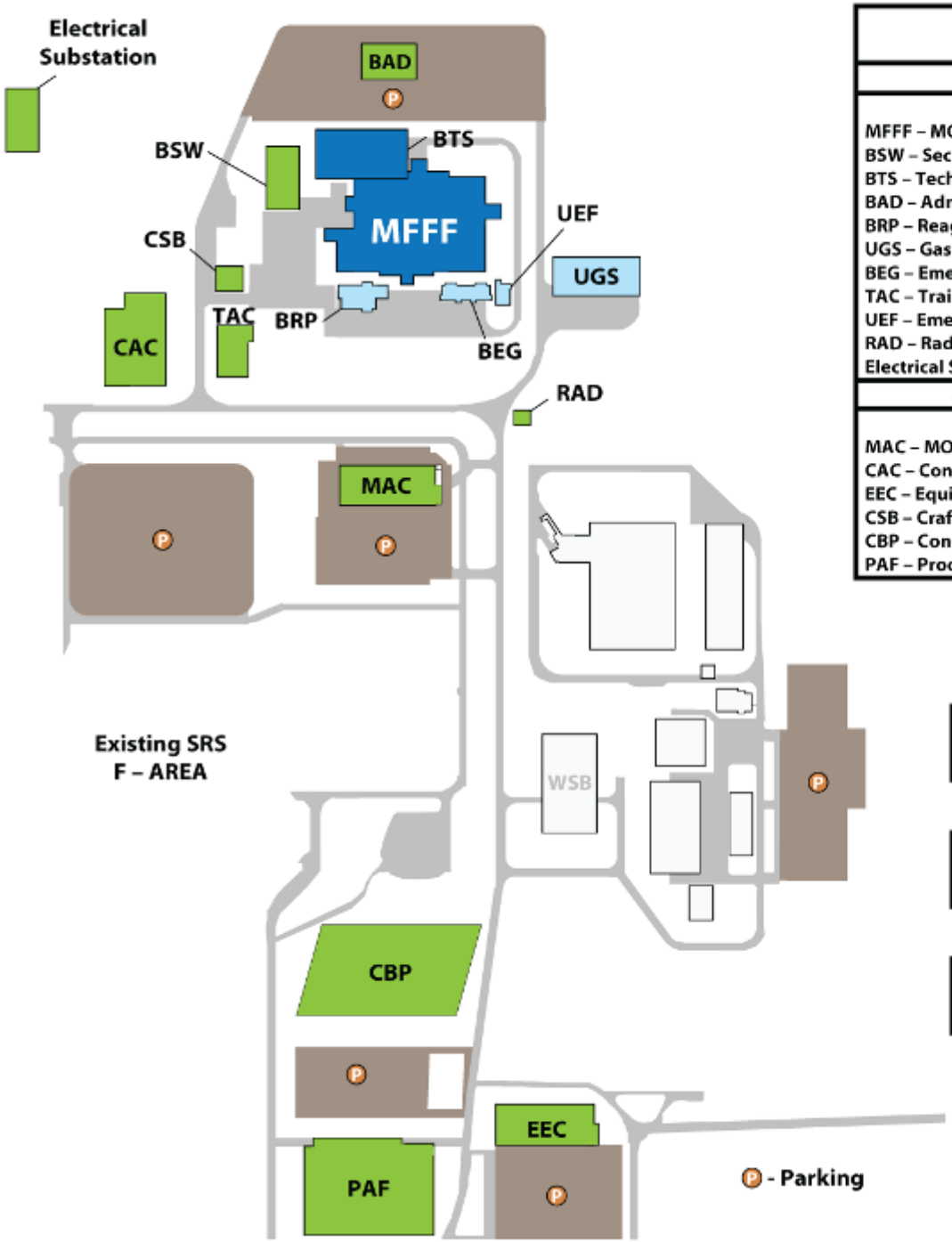
Material quantities installed

Office Space (Completed)	340,500 square feet
Office Space (In process)	72,000 square feet
Structural Concrete	82,830 cubic yards
No-Structural Concrete	51,369 cubic yards
Rebar	15,514 tons
Embedded Plates	18,987 plates
MOX Project Employment	2,022

MOX Employment in the United States
Almost 4000 jobs and growing





Facility	Construction		Status
	Start	Complete	
Permanent Buildings			
MFFF – MOX Fuel Fabrication Facility	Sep 2007	2014	Construction
BSW – Secured Warehouse Building	Jan 2009	Dec 2009	Complete
BTS – Technical Support Building	2010	2012	Construction
BAD – Administration	Jun 2008	Jun 2009	Complete
BRP – Reagent Processing Building	2010	2013	Planning
UGS – Gas Storage Area	2011	2014	Planning
BEG – Emergency Diesel Generator Building	2011	2013	Planning
TAC – Training Administration Complex	Jun 2007	Jan 2008	Complete
UEF – Emergency Diesel Storage	2011	2013	Planning
RAD – Radiography Building	July 2008	July 2008	Complete
Electrical Substation	Feb 2009	Sep 2010	Complete
MOX Site Infrastructure			
MAC – MOX Administration Complex	Dec 2006	Mar 2007	Complete
CAC – Construction Administration Complex	May 2007	Aug 2007	Complete
EEC – Equipment Engineering Complex	Sep 2007	Nov 2007	Complete
CSB – Craft Support Building	Mar 2008	May 2008	Complete
CBP – Concrete Batch Plant	Apr 2007	July 2007	Complete
PAF – Process Unit Assembly Building	Apr 2008	Sep 2008	Complete

Complete

Construction Ongoing

Planning

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August 1, 2007

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November 22, 2010

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Rebar Installation

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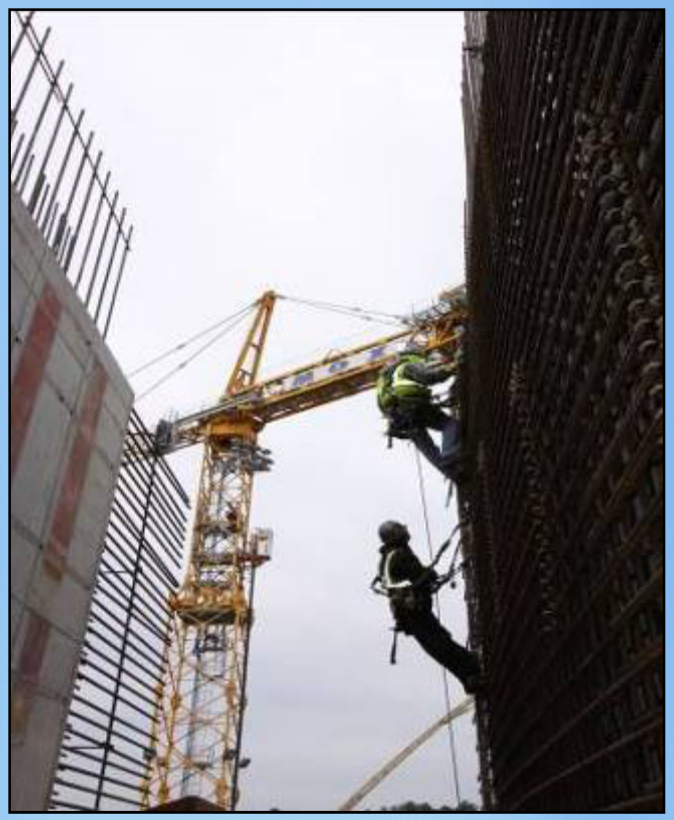
Rebar Installation



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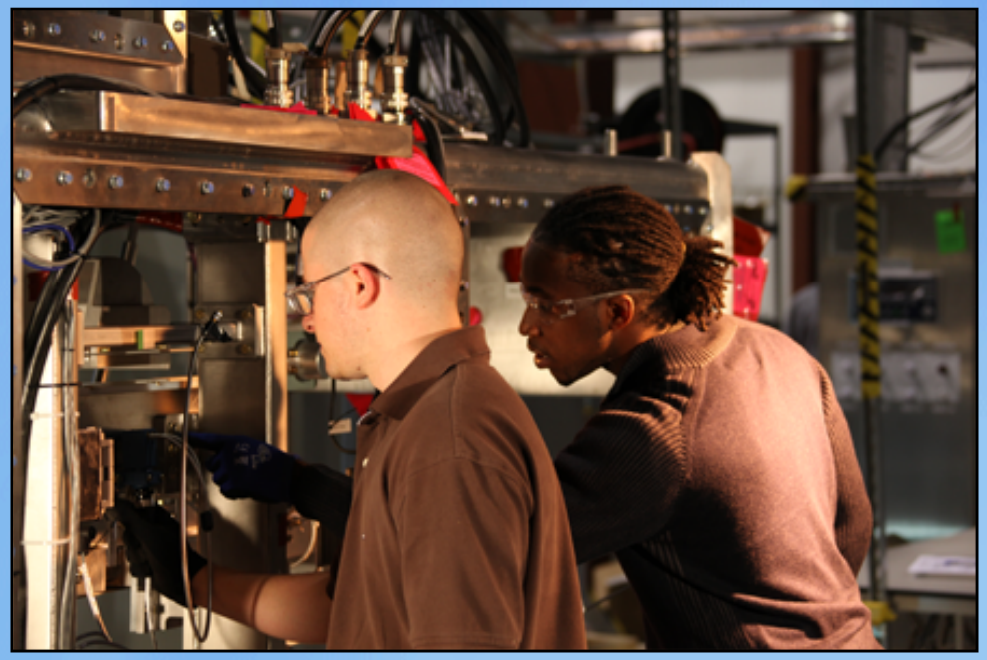
Glove Box Assembly and Test



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Process Piping Welding

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First Process Piping Install

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First HVAC Components Install

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Tanks in MFFF

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Substation Electrical Install

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3rd Level Deck Workers

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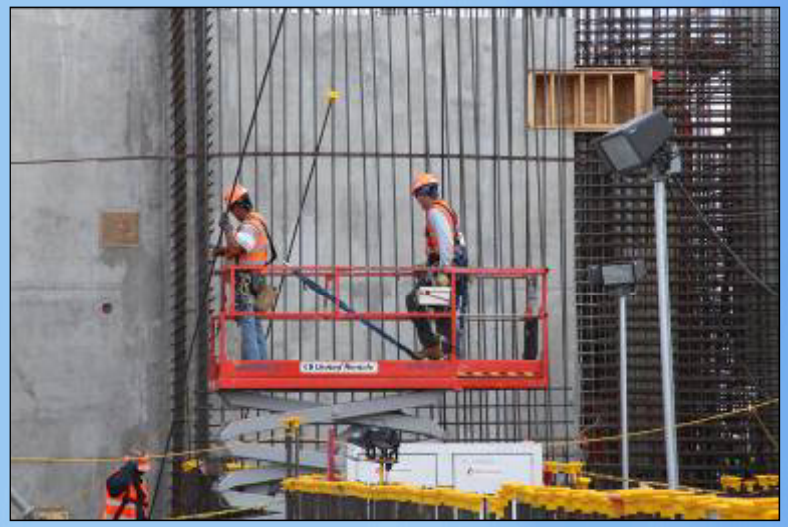
3rd Level Deck Workers



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MFFF Overhead

2010 Accomplishments

- Workforce reached >2000
- Gold LEED certification achieved for Administration Building
- Secure Warehouse construction completed
- New electrical substation completed
- Delivery of all 73 tanks
- BMF structure is 62% complete
- Began HVAC fabrication and installation
- Began process pipe and support installation
- Began construction of Construction Package 20 - Release 3B
- Testing of tanks and gloveboxes continued with ramp up on purchase of gloveboxes
- Began construction of Technical Support Building

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Performance Review

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Performance Review

- Organizational Strengthening – Key Positions
  - Assigned Permanent President/Project Manager
  - Assigned Permanent VP Facility Design and Construction
  - Established and Filled Position of VP Project Assurance
  - Brought in new VP Engineering
  - Brought in new Resident Engineering Project Engineer

Performance Review

- Design Control
  - Enhancements to Design Basis Requirement Flowdown, Regulatory Compliance, and Code Compliance Processes
    - Enhanced Design Verification Process (Design)
    - Established Final Technical Review Process (Procurement)
    - Established Conformance Review Process (Construction)
    - Performed Review of Legacy Design Documents to Current Design Requirements

Performance Review

- Vendor Oversight
  - Established dedicated vendor surveillance group to supplement the vendor inspection function
  - Communication of lessons learned to vendors so MOX vendors may learn from one another's and MOX experiences
  - Increased scope and depth of engineering review of key vendor technical documents

Performance Review

- Nuclear Regulatory Commission (NRC) Inspection Reports
  - Submitted Notice of Violation (NOV) responses including corrective actions and actions to preclude recurrence
    - Corrective actions ensure compliance with Title 10 Code of Federal Regulations (CFR) 70.61 performance requirements
    - Internal audits and surveillances being used to monitor effectiveness

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Performance Review

- Conclusion
  - Effectively implementing MOX Project Quality Assurance Plan
  - Constructed facility meets 10 CFR 70.61 performance requirements
  - Low Significance issues are being corrected
    - Preclude future significant issues
    - Documentation consistent with constructed facility and regulatory requirements

Ahead in 2011

Ahead in 2011

- ✓ Begin glovebox installation in BMF (MFFF building) (Oct 2010)
- Start BMF roof installation
- Start electrical installation in BMF
- Complete Technical Support Building foundation
- Complete Sintering Furnace procurement
- Initiate construction of BEG (Diesel Generator Building)
- Continue installation
  - HVAC
  - Process piping
  - Supports
- Start installation
  - Fire dampers
  - Tornado dampers