Partners in Excellence Outreach Forum
June 7, 2018
Y-12 National Security Complex Overview

- Y-12 is a government-owned, contractor-operated facility
- The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department of Energy, oversees contractor operations
- Consolidated Nuclear Security, LLC is the managing and operating contractor of the Y-12 and Pantex plants

CNS contracts with the private sector on behalf of NNSA and with oversight by NNSA
Mission

• Providing the nuclear deterrent
• Fueling the Nuclear Navy
• Reducing the global nuclear threat

Y-12 is a Production Site in the NNSA Nuclear Security Enterprise

The NNSA Production Office and CNS manages both the Pantex Plant and the Y-12 National Security Complex
Site Overview

Y-12 National Security Complex

- Vital part of the national nuclear weapons enterprise
- Diverse workforce and unique manufacturing capabilities
- Transforming to ensure enduring security of our nation
- Vital members of our community

Your partnership is needed to transform Y-12 to ensure the enduring security of our nation in the coming decades
NNSA Overview
Jim Winter
Site Portfolio Manager
NNSA Office of Infrastructure
Modernization and Operations

NNSA SAFETY, INFRASTRUCTURE & OPERATIONS
MAKING THE RIGHT THINGS HAPPEN

A VAST AND COMPLEX ENTERPRISE

Vision
We contribute to national security risk and in the future by managing the complex NNSA risks of safety, infrastructure, materials, and the environment.

Mission
Enable safe operations, ensure effective infrastructure, and provide enterprise facilities to meet the Department of Defense and Security Administration needs.

39,000
LAbORATORY & PLANT EMPLOYEES

2,000
miles of roads

500,000
MILLION
NNSA/DOE
TRANSACTIONS

100
Safety for nuclear
and hazardous
facilities

2.100
Square miles of
land area

36 MILLION
Gallons of
active waste
space

8.3 Trillion BTUs
ANNUAL ENERGY CONSUMPTION
enough to power
~250,000
homes for one year
Disposition Program

Eliminating Excess Facility Risk & Streamlining the NNSA Enterprise

- Risk Screening
- Demolition
- Footprint Management

NNSA evaluates excess facility risk based on facility condition, contamination, and proximity to workers, the public, environmental receptors, and key facilities.

NNSA prioritizes projects to address the highest excess facility risk and identifies opportunities to reduce demolition costs.

Y-12 FY18 Enacted: $29.6M

PX FY18 Enacted: $5M

Maintenance & Repair Program

Sustaining NNSA Facilities & Equipment for the Mission

- More than 130,000 Work Orders Completed Annually
- CHAMP Cooling & Heating Asset Management Program
- RAMP Roofing Asset Management Program
- 6 Million ft² Roofs Repaired or Replaced
- BUILDER A Sustainment Management System

New initiatives to reduce operating costs, increase energy efficiency, and improve air conditioned quality enterprise-wide.

Y-12 FY18 Enacted: $99.0M

PX FY18 Enacted: $94.8M
Opportunities Overview
Steve Laggis
Senior Director, Infrastructure Programs
CNS

Y-12 Opportunities — Takeaways

• Y-12 is a large industrial complex with a proud history of service to the nation and a long future of serving the nation’s nuclear security

• The government has begun the revitalization of the Y-12 infrastructure and is committed to continuance of the revitalization in support of the nuclear security mission

• That revitalization requires a strong partnership with the private sector

• The opportunity for this partnership is significant and sustained
  • $80-100 million per year of procurement opportunity over the next 7 years at the Y-12 National Security Complex managed by CNS
  • $80-100 million per year of procurement opportunity over the next 7 years at the Pantex Plant managed by CNS

• Partners in Excellence Outreach Forum was held at Pantex in April
NNSA is modernizing the Y-12 infrastructure in support of its nuclear security mission. We need your partnership in this effort.
The President's 2018 Nuclear Posture Review sets recapitalization of the NNSA Nuclear Security Enterprise as a priority over the coming decade. Recapitalizing the nuclear weapons complex of laboratories and plants is also long past due; it is vital we ensure the capability to design, produce, assess, and maintain these weapons for as long as they are required. Due to constant underfunding, significant and sustained investments will be required over the coming decade to ensure that National Nuclear Security Administration will be able to deliver the nuclear weapons at the deeded rate to support the nuclear deterrent into the 2030s and beyond.

Preparation Y-12 for Future Decades of National Service

Nuclear forces, along with our conventional forces and other instruments of national power, are therefore first and foremost directed towards deterring aggression and preserving peace. Our goal is to convince adversaries they have nothing to gain and everything to lose from the use of nuclear weapons.

Preparing Y-12 for Future Decades of National Service

HR 2810, the National Defense Authorization Act for fiscal year 2018

“...Administrator for Nuclear Security shall....establish and execute infrastructure modernization milestones that reduce the deferred maintenance and repair needs of the nuclear security enterprise by not less than 30 percent by 2025.”

H.R.1625 Vehicle for Consolidated Appropriations Act

“Maintenance and Repair of Facilities. --...includes funds above the budget request to address the significant backlog of deferred maintenance at the NNSA sites.”

Congressional action also sets recapitalization of the NNSA Nuclear Security Enterprise as a priority over the coming decade.
Multi-year revitalization plans have been developed for CNS based upon the executive and congressional priority and budget planning guidance. A robust vendor base is needed to successfully accomplish these plans.
Recapitalization and Repair Needs

- Steam Coils
- Chilled Water Piping
- Flooding
- Asbestos Insulated Piping
- Fan Refurbishment
- Gas Lab & X-ray
- Roof Leak over Fire Alarm Panel

Additional Y-12 Opportunities

- Roof Asset Management Program (RAMP)
  - Anticipate growth
  - Managed at Kansas City Plant
  - Contacts:
    - KCP: John Demski (816) 488-5463
    - Technical Assurance: Dan LaFountain (440) 953-3147 ext.131

- Chiller & Heating Asset Management Program (CHAMP)
  - Anticipate growth
  - Managed at Lawrence Livermore National Laboratory
  - Just getting started
  - Contact: Barb Quivey (925) 784-6517
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• Partners in Excellence Outreach Forum was held at Pantex in April
- Weapons assembly and disassembly
- Life Extension Programs and surveillance for active weapons
- Plutonium pit surveillance
- High explosives components

\[ \text{PanTEX} \]

- Disassembly, refurbishment, and reassembly of canned subassemblies
- Safe, secure uranium storage
- Highly enriched uranium fuel for the United States Navy
- Specialized response training and material recovery to support nonproliferation

\[ \text{Y12} \]

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**Lithium Production Capability**

- Approximately 100,000 square foot facility will house non-nuclear process equipment
- In early planning stage; CD-1 submittal later this year
Emergency Operations Center/Fire Station

- New EOC replaces existing 1940s-era Plant Shift Superintendent building
  - Approximately 12,000 square feet
- New Fire Station replaces existing 1940s-era Fire Station
  - Also consolidates fire response equipment stored at a separate location
  - Approximately 36,000 square feet including berthing and apparatus bays
- CNS soliciting input on an alternate acquisition strategy using commercial practices

Working at Y-12

- Y-12 is located in Oak Ridge, TN approximately 25 miles northwest of Knoxville, TN
- Authorized access is required for all work at the site
- Escorts are required in security-restricted areas if not Q cleared
- All work must be approved in advance to ensure safety and quality requirements are met
- Laydown areas are provided for equipment and materials
Y-12 Opportunities — Infrastructure Improvement
Examples include $700M (FY19–FY24)

• Electrical Improvements
  • $230M (FY19–FY24)
  • Design Engineering and Construction Electrical
• Fire Suppression Systems, Fire Water/Potable Water Lateral Replacements
  • $110M (FY19–FY24)
  • Design Engineering and Construction (Piping, Structural, Fire Protection) some Safety Class
• Heating, Ventilation, and Air Conditioning (HVAC)
  • $100M (FY19–FY24)
  • Design Engineering and Construction (Electrical, Mechanical, Structural, HVAC)
• Elevator Upgrades
  • $25M (FY19–FY24)
  • Specialty Design/Build

Y-12 Opportunities — Infrastructure Improvement
Examples include $700M (FY19–FY24) (cont.)

• Structural Repairs
  • $50M
  • Structural Design Engineering and Construction
• Criticality Accident Alarm Systems
  • $100M
  • Design Engineering and Safety Class Construction (Electrical, Instrumentation)
• Building Renovation/Demolition
  • $40M
  • Design Engineering and Construction (Electrical, Mechanical, Architectural, Structural, HVAC)
• Infrastructure Piping Improvements
  • $25M
  • Design Engineering and Construction (Piping, Structural)
Y-12 Opportunities — Excess Facility Disposition
Examples include $165M (FY19–FY24)

- 33 projects associated with demolition or preparation for turnover to Environmental Management
  - Design Engineering (Electrical, Mechanical, Structural) and Construction

Y-12 Opportunities — Defense Nuclear Security
Examples include $200M (FY19–FY24)

- Upgrade existing PIDAS systems
- Install new West End Protected Area Reduction System
  - Line item; submit CD-1 this year
- Install new building security features
- All involve Design Engineering (Electrical, Civil) and Construction
Y-12 Opportunities — Production Enhancements
Examples include $400M (FY19–FY24)

- Equipment Fabrication and Installation
  - Gloveboxes
  - Furnaces/Ovens
  - Manufacturing, such as cutting, grinding, measuring
  - High Fidelity/resolution quality measurement
- Increased capabilities for specialized processes
- Upgrades or enhancements to existing processes

Additional Y-12 Opportunities — Line-Item Projects

- Electorefining
  - $95M TPC (FY19–FY22)
  - Glovebox and Specialty Equipment Installation
  - Construction (Mechanical, Electrical, Instrumentation, Structural), some Safety Class
- Calciner
  - $65M TPC (FY19–FY22)
  - Glovebox and Specialty Equipment Installation
  - Construction (Mechanical, Electrical, Instrumentation, Structural), some Safety Class
- Emergency Operations Center and Fire Station
  - See earlier slide for rendering
  - Commercial Design and Build, all disciplines
Additional Y-12 Opportunities — Line-Item Projects (cont.)

• Lithium Production Capability
  • Cost TBD
  • 100,000 sq. ft. non-nuclear process facility
• West End Protected Area Reduction (included in Security Section)
  • Installs new PIDAS approximately along existing “H” road
  • Significantly reduces the size of current Protected Area

Partnership with KBCTC

• The partnership between the Knoxville Building and Construction Trades Council (KBCTC) and Y-12 is identified through a Construction Labor Agreement (CLA)
  • 15 trades represented in the CLA
• Y-12 is providing support to the Apprentice Readiness Program to help grow the apprentice pool
  • First class completed; second class in progress
• Contacts
  • Stefanie Richards, CLA Lead Administrator, 574-7555 or Stefanie.richards@cns.doe.gov
  • Charlie Woody, President, KBCTC, 865-228-2323, or charlie.woody46@yahoo.com
  • Tony Dagley, Vice President, KBCTC, 865-566-3875, or t Dagley@selaborers.org
Expectations for Partners in Performance

• The government is committed to revitalizing the Y-12 infrastructure in support of its nuclear security mission

• That revitalization requires a strong partnership with the private sector
Quality Requirements

- DOE/NNSA has established Quality Assurance Requirements for Nuclear Safety
  - 10 CFR 830 Subpart A / DOE O 414.1D
    - Quality Assurance Requirements for Nuclear Facilities
  - ASME NQA-1a-2008, with the NQA-1a-2009 and NQA-1b-2011 addenda
    - Quality Assurance Requirements for Nuclear Facility Applications
  - NAP-24A
    - DOE/NNSA Weapon Quality Policy
- Y-12 relies heavily on the Supplier’s Quality Management System to ensure these requirements are met

Evaluation of Supplier’s QMS

- CNS will perform an audit of the subcontractor’s QMS for placement on the Quality Approved Supplier List
  - On-site audit at the subcontractor’s facility
  - Review of Quality Assurance Program
  - Verification of implementation
  - Additional evaluation for subcontractors who perform welding
    - Qualification required prior to award of contract
  - Re-evaluation every 3 years
  - Periodic surveillances will be performed within the 3-year period
  - Project-specific QA plans may be required for each project
Acquisition Process

The primary objective of CNS Procurement is to obtain the best value in the products and services purchased. All CNS procurements emphasize safety, security, mission delivery, quality, and cost efficiency.

Acquisition Methods

- Lowest price, technically acceptable
- Best value, trade off

Contract Type: Fixed Price/T&M/Cost

- CNS approach: Select the contract type based on specificity of the statement of work or specification
Acquisition Process (cont.)

- Commercial items under $5,000 are usually purchased with a P-card.

- The majority of dollars spent under $150,000 are evaluated on a competitive basis and are typically set-aside for small business participation.

- Purchases over $150,000 are competitively solicited under a formal written solicitation. As a general rule, awards are made to the lowest-priced technically acceptable offer or to the offeror determined to represent the best value to Consolidated Nuclear Security, LLC and the government.

- If Best Value is used, the criteria will be provided with the solicitation.

- The CNS Small Business Program ensures the utilization of small businesses by providing the maximum practicable opportunities to participate in subcontracting of services and products. Small businesses include businesses classified as small, small disadvantaged, 8(a), woman-owned, HUBZone, veteran-owned, and service disabled veteran-owned small businesses.

Subcontracting Considerations

- Pantex and Y-12 sites act as an integrated Supply Chain organization
  - CNS has one set of terms and conditions and one consolidated procurement policy document that governs our acquisition requirements

- Be registered in the System for Award Management (SAM.gov)

- Be current in SAM
  - Market research
  - Use of representations / certifications

- Be good in SAM
  - Verification of Suspension / Debarment

- Y-12 / Pantex Supplier Registry

- Provide one-page capability statement
Doing Business Information

Procurement Forecast
- CNS’s goal is to provide suppliers with Y-12 and Pantex procurement projections based on the best information presently available
- This information is provided for planning purposes and market research
- Requirements posted may be newly added, revised, or cancelled (depending on program budget funding or departmental needs)

Forecast Link:
https://www.y12.doe.gov/suppliers/procurement/subcontracting/subcontracting-forecasts
https://pantex.energy.gov/suppliers/subcontracting-forecasts

Procurement Website

https://www.y12.doe.gov/suppliers/procurement/subcontracting
Pre-Bid Conference

- Pre-bid meetings may be held to discuss the requirements of each solicitation
- Pre-bids include:
  - Briefings from Safety, Quality, Project Manager, Subcontract Technical Representative, Buyer, Waste Operations, Environmental, and Security
  - Review of technical requirements and scope
  - Walk down of site conditions
- All questions asked are compiled and sent to all offerors
- Pre-bid conferences are non-reimbursable

Seller Environment, Safety & Health Performance

It is the policy of the Company to award Agreements only to firms that have demonstrated safety performance equal to or better than the industry average. In order to be considered for award, the Offeror must have the most recent three-year average interstate Experience Modification Rate (EMR) not to exceed one (1). When the EMR average exceeds one (1), the Company’s Safety Department may waive this requirement based on a specific review of the work package, documentation, and proposed compensatory measures. As such, Offeror is requested to provide the following:

- OSHA 300 Log for the 3 past calendar years
- Completed Seller Safety Qualification Questionnaire (UCN-21752)

Offers received from firms that do not meet these minimum requirements must be approved by the Safety Department to be considered.
Mentor Protégé Program

- CNS is an active participant in the DOE Mentor Protégé Program
  - The program encourages DOE/NNSA prime contractors to assist in the development of small businesses, Historically Black Colleges and Universities, and other Minority Educational Institutions of higher learning
  - The agreements are designed to enhance the protégé’s business and technical capabilities, to foster long-term business relationships between these small businesses and DOE prime contractors, and to increase the overall number of small businesses receiving awards

- Interested candidates should contact the Small Business office for more details

Y-12 / Pantex Point of Contacts

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<thead>
<tr>
<th>Y-12 National Security Complex (Oak Ridge, TN)</th>
<th>PANTEX Small Business Program</th>
<th>PANTEX Procurement Manager</th>
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<tr>
<td><strong>Y-12 Small Business Program</strong></td>
<td><strong>Ryan Johnston</strong></td>
<td><strong>Bill Bridenbaugh, Jr.</strong></td>
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<tr>
<td>Lisa Copeland</td>
<td>806-573-4417</td>
<td>806-573-7445</td>
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<td>865-576-2090</td>
<td><a href="mailto:ryan.johnston@cns.doe.gov">ryan.johnston@cns.doe.gov</a></td>
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