



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
ENVIRONMENTAL
MANAGEMENT

SEVEN LINES



ONE PROJECT
Integration • Safety • Production

DUF6 Operations

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Mid-America Conversion Services is a joint venture that blends the strengths of its partners into a single cohesive team

ATKINS



FLUOR[®]

Program Management, Nuclear/Chemical Operations, Commercial Waste Processing Expertise

Conversion Program Management, Engineering, Design Operations Experience,

Efficient integration into the Paducah and Portsmouth sites

DUF6 Conversion Project

- › DUF6 resulted from uranium enrichment process at three Gaseous Diffusion Plants (GDP) in Portsmouth, OH, Paducah, Kentucky, and Oak Ridge, Tennessee.
- › DUF6 placed in steel cylinders that accumulated over time in site storage yards.
- › Facilities constructed at Portsmouth and Paducah to convert DUF6 into aqueous hydrofluoric acid (HF) for recycle into commerce and stable uranium oxide for storage, beneficial reuse, or disposal.

**Approximately 800,000 total
metric tons initial DOE inventory**



DUF6 Conversion Project

DUF6 Mission

- › Operate conversion facilities to safely convert DUF6 into a more stable chemical form (oxide) for beneficial reuse or disposal thus reducing immediate and future risk to workers and surrounding community.



First 18 Months of Contract

- › PORTS had not operated in previous 2 ½ years
- › Significant training weaknesses identified at PORTS and PAD
- › Minor corrective maintenance work packages drove excessive shutdowns
- › Frequent safety occurrences and pauses
- › Plant Operational Uptime at 12%



Improvement Initiatives

- › **Training - Fixed Highest Priority Issues Promptly**
 - Committed early to highly qualified workforce
 - "All Hands-On-Deck" approach - Everybody helped!
 - Longer Term improvements ongoing
- › **Engaged Workforce**
 - Safety Initiatives and Safety First advocacy
 - Job tasks and approaches in work packages
- › **Listened and Engaged Quickly, Decisively and Effectively**
 - Plant Manager directly involved
 - Short turnaround times
 - Communications
 - Formed "focused task teams" to address most urgent
 - › labor force played key roles on teams

Improvement Initiatives...continued

› Implemented Long-Term Plant Improvements

- Reduced worker time in hazard area
- Modifications made tasks easier to perform
- New equipment has higher reliability

› Voluntary Protection Program participation

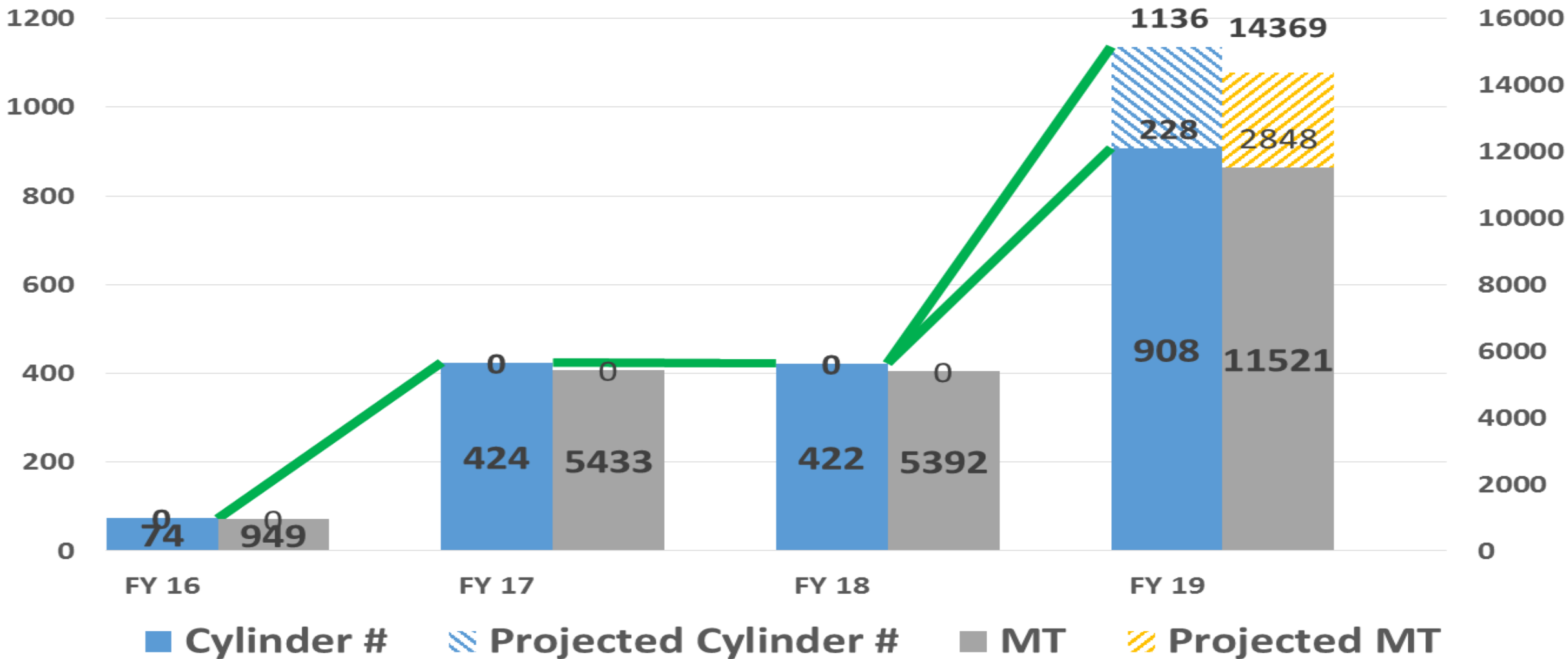
- Process of self-assessing was valuable
- Demonstrated to workforce we were committed to worker involvement
- Portsmouth achieved STAR Status!
 - › Paducah next
- Workforce is proud of where they are at - and want to do more

Today

- › PORTS/PAD are fully operational
- › 7 Lines operating has been demonstrated
- › Most training deficiencies resolved and program improvements continue
- › Corrective maintenance packages similar to prior year can now be completed and lines returned operational within 48 hours (Rebound)
- › Demonstrated Plant Operational Uptime 70% over 6-month period



Production - Cylinders/Tons Converted



Closing Summary

- › Non-standard/defective cylinders are challenging and present project risk
- › DOE – MCS interface is good
- › Safety initiatives successful

