



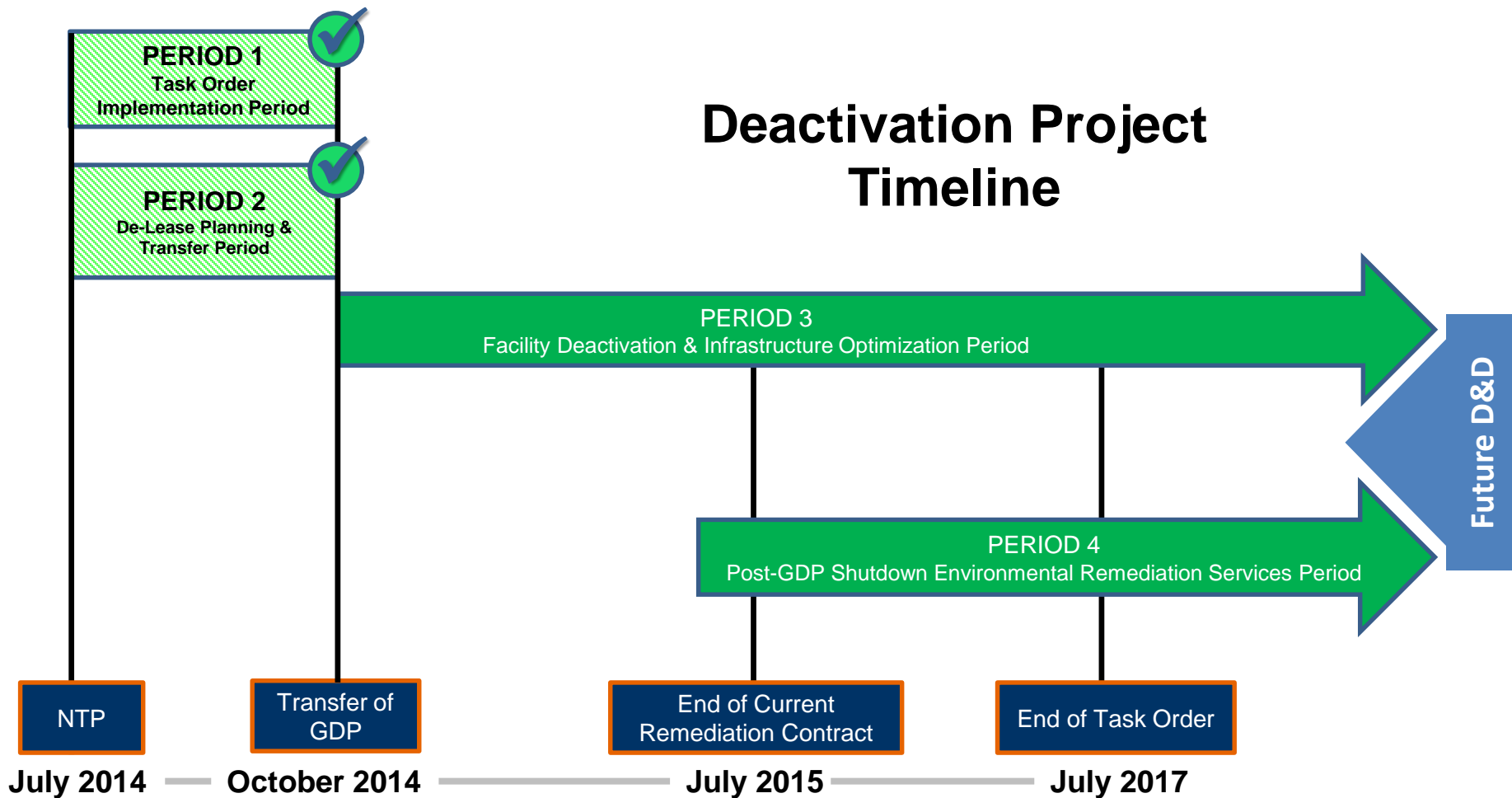
Mark Duff

Fluor Federal Services, Inc./
LATA Kentucky LLC

FLUOR®



- **3,556 acres total**
- **> 500 structures / facilities**
- **4 main process buildings**
- **1,760 process components**
- Groundwater source contamination
- Soils remediation
- Future D&D
- Pump and Treat optimization





Current Use



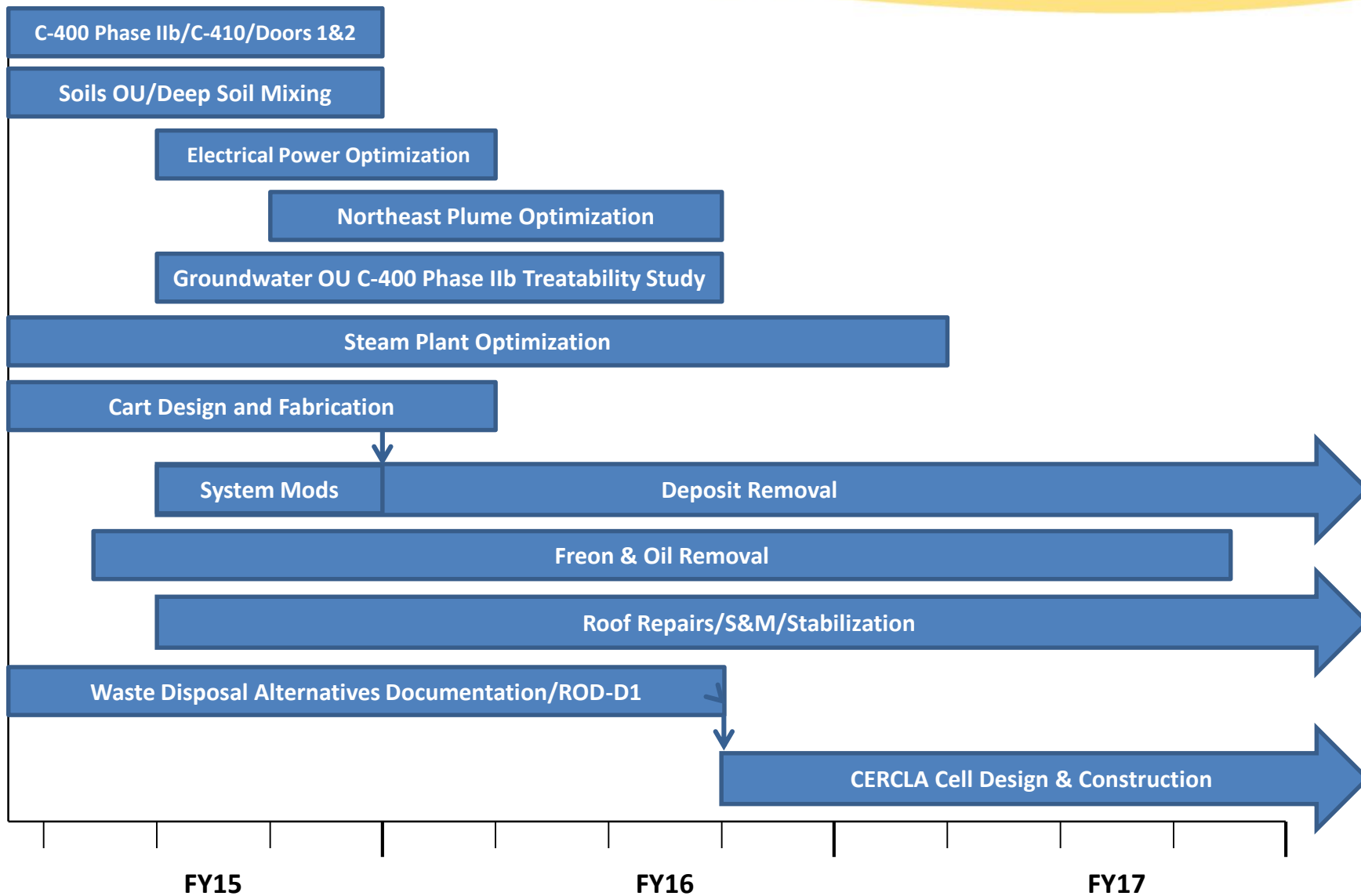
Intermediate Use Vision

Depleted uranium conversion
continues; key infrastructure intact
for potential reuse



Future Reuse Vision?

Industrial?
Recreational?
Wildlife Reserve?
Education and Research?



➤ CHALLENGE:

■ Plant transition from USEC to DOE

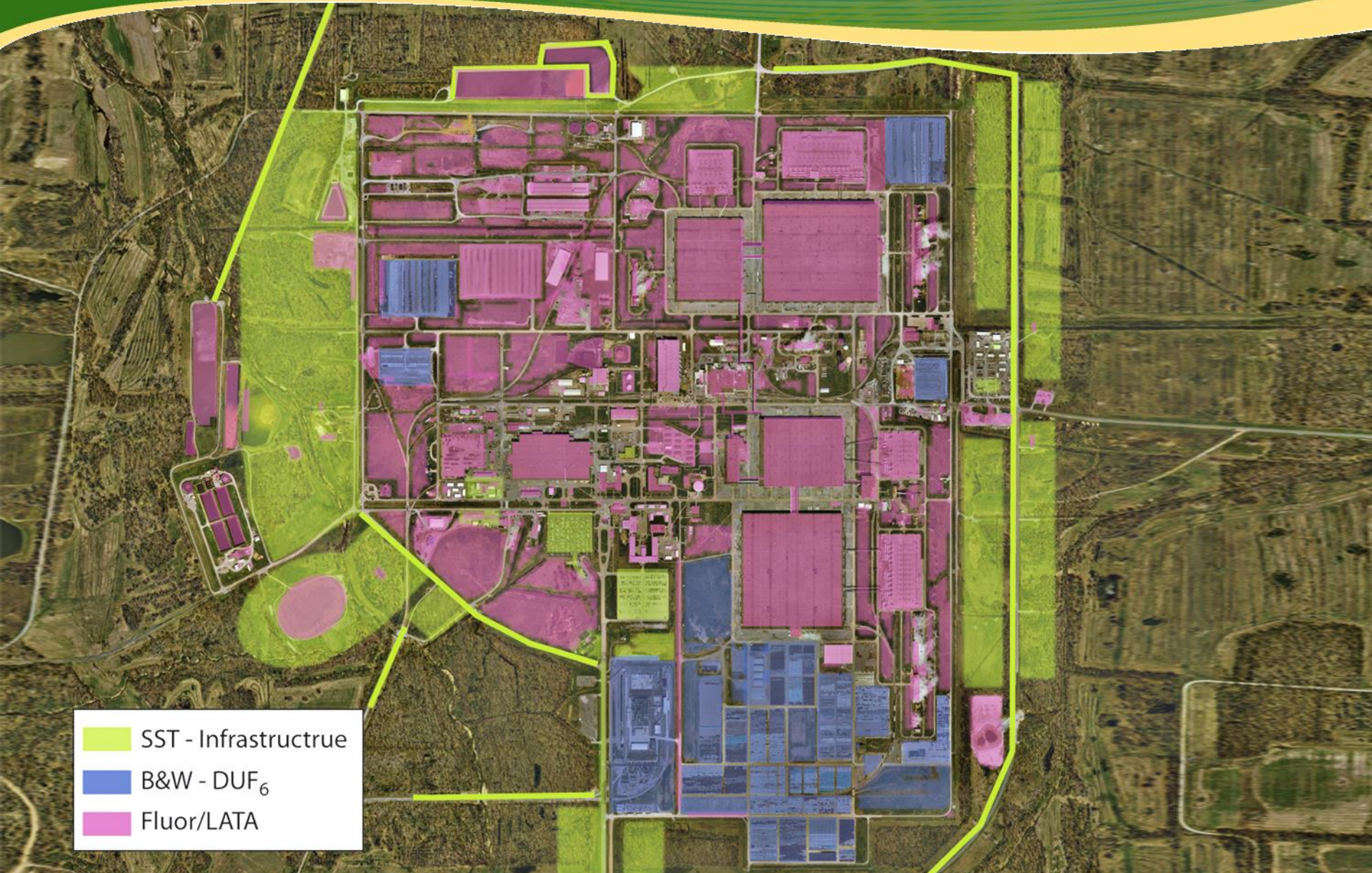
- On October 21, 2014 DOE officially received the Paducah Gaseous Diffusion Plant from the United States Enrichment Corporation (USEC).

➤ ACTIONS:

- Initiated ISMS safety program.
- Walk down of facilities in preparation for transfer.
- Setup programs and processes under DOE regulatory environment.
- Established new organization with existing workforce, hiring 400 new employees with an additional ~80 positions currently open.

➤ IMPACT:

- Safely and compliantly maintain facilities under DOE regulation and oversight while balancing deactivation, site cleanup and reutilization activities.
- Integrate DOE Environmental Management (EM) cleanup program resulting in enhanced risk reduction, cost savings, and efficient performance of work.
- Complete EM cleanup mission to enable future reindustrialization.



- SST - Infrastructure
- B&W - DUF₆
- Fluor/LATA

CHALLENGE:

Transition of Contracts and Cultures

- Transition from commercial contract & supply culture to DOE culture of programs and processes
 - Technical issues
 - Process/procedures
 - Safety culture
 - Customer focus

ACTIONS:

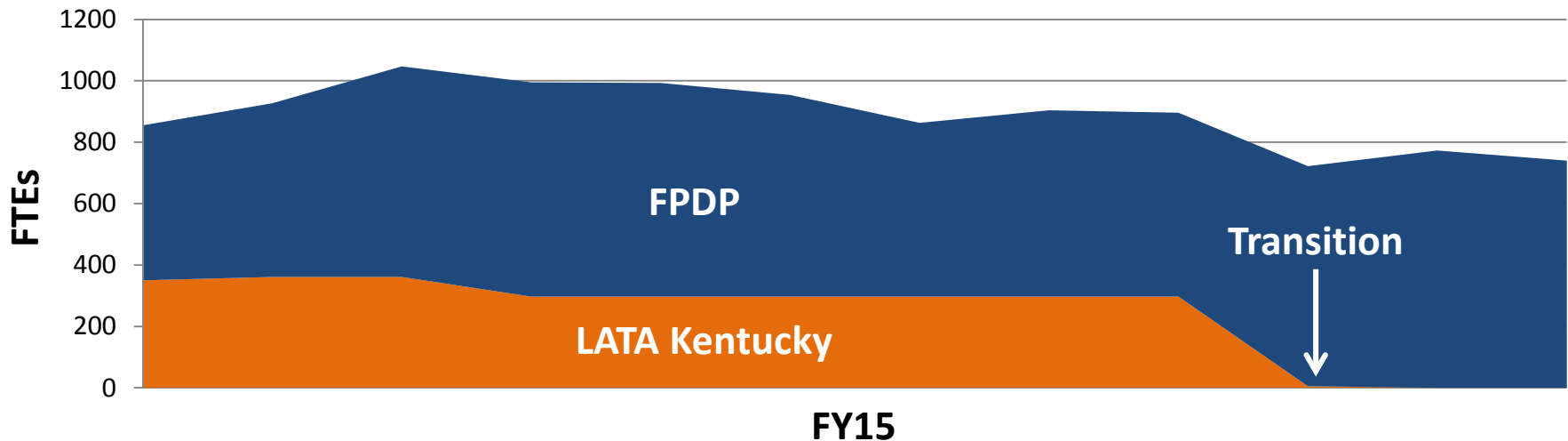
- Defined and communicated expectations to workforce
- Completed documentation and program transfer in 90 days
- Continued refinement of procedures to expand capabilities
- Certifications and permits transitioned to ensure compliance
- Safety program standup and deployment

IMPACT:

- Stable and safe operations
- Steady ramp-up of projects and hiring
- Methodical hiring with respect to remedial contractor impacts

Transition of Remediation Contract

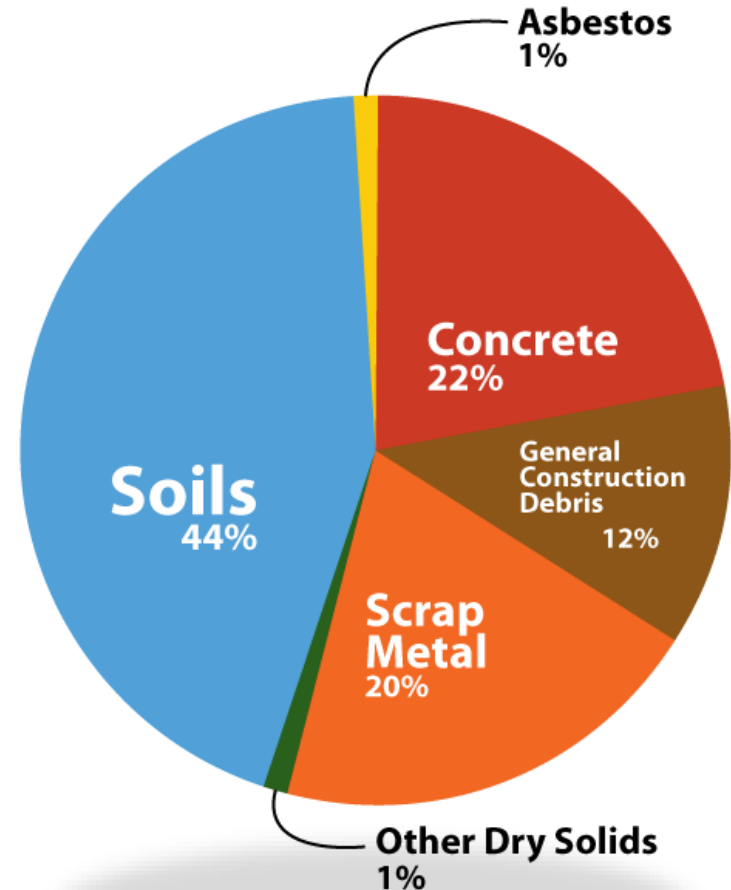
- In July LATA Kentucky's cleanup contract will transition to Fluor (FPDP) scope.
- In order to maintain consistency between the two contracts hiring guiding principles were prepared that lessened personnel impacts and shared resources.
 - ❑ Employees were allowed to work part-time for each contract.
 - ❑ Hiring dates were staggered through the overlapping period to minimize impacts with backfill support to LATA Kentucky through a temp agency.
 - ❑ Established work authorizations from Fluor to LATA Kentucky to receive waste management and analytical services with existing staff through transition.



CHALLENGE:

Waste Disposal Alternatives (WDA)

- Complete the CERCLA decision process for a waste disposal alternative to support long-term site cleanup with multiple stakeholder questions
 - Community Acceptance
 - Seismic
 - Siting



Community Acceptance:

- Multiple stakeholder questions about perceived impacts of potential on-site cell

Actions:

- Comprehensive education sessions for the Paducah Citizens Advisory Board
- Presentations to the Paducah Community Action Team
- Routine meetings with elected officials
- Public meetings for the general public

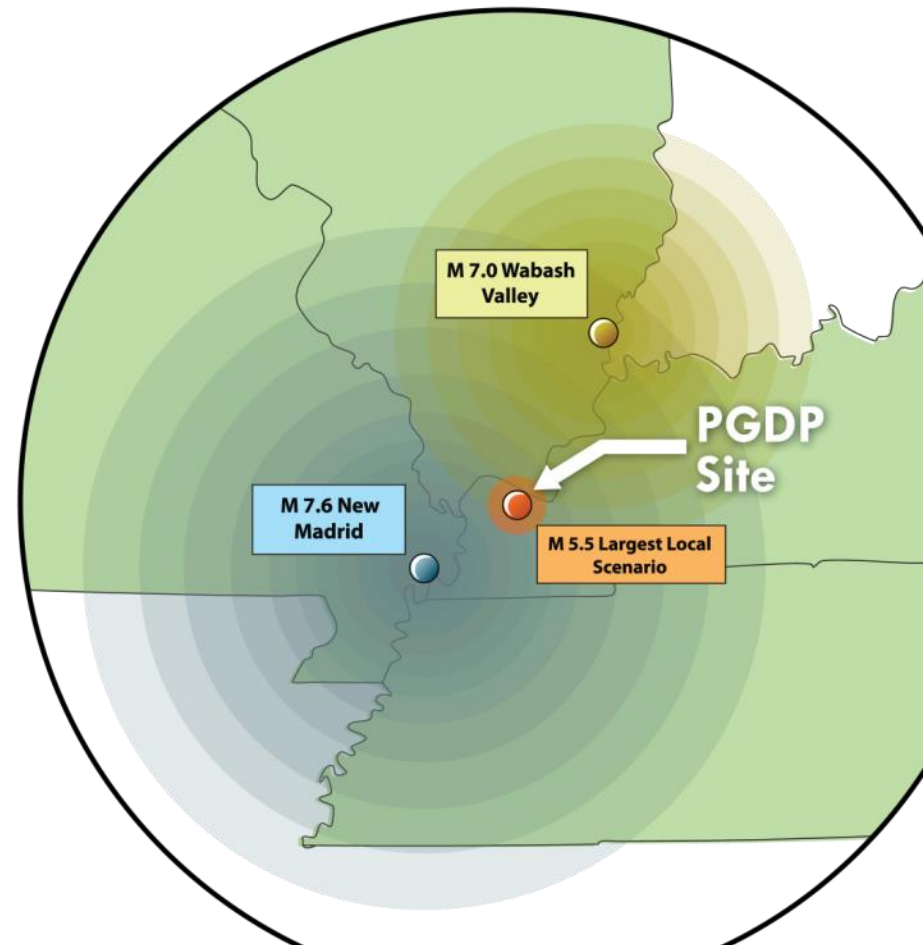


Seismic:

- Paducah's proximity to the New Madrid Fault increased stakeholder concern related to on-site disposal option

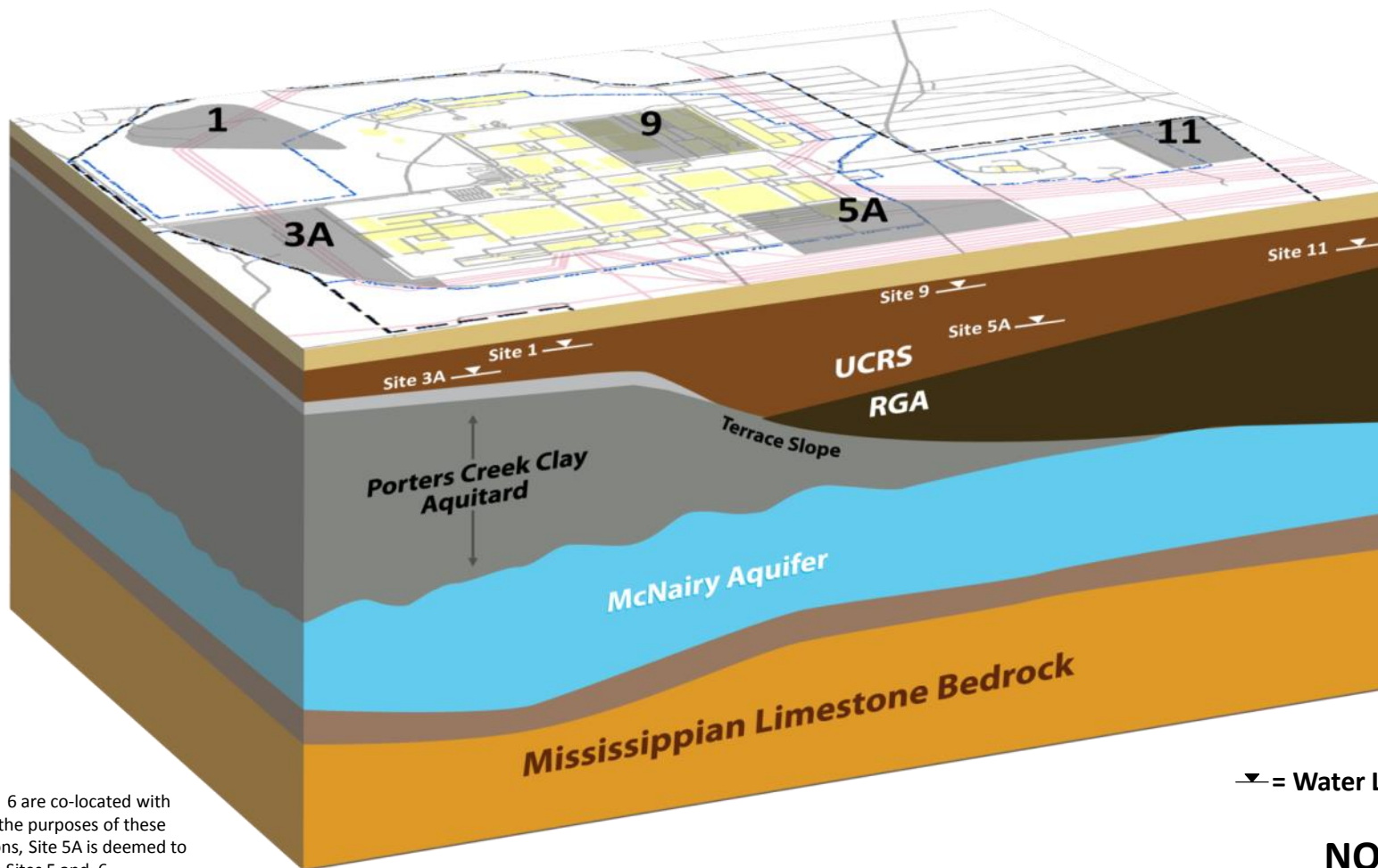
Actions:

- Developed impacts of multiple earthquake scenarios
- Hired leading seismic expert to develop worst-case scenario modeling
- Highlighted local geologic knowledge
- Design parameters to resist maximum credible earthquake event
- Presented environmental control systems allowing rapid response impact assessment (post earthquake)



Addressing Paducah Challenges -Waste Disposal Alternatives

- Potential sites identified for an on-site disposal cell have unique challenges.



*Sites 5 and 6 are co-located with Site 5A. For the purposes of these considerations, Site 5A is deemed to be similar to Sites 5 and 6.

▼ = Water Level

NOT TO SCALE

CHALLENGE:

➤ Winterization

- Installation of heating system to support shutdown of steam plant; Paducah continues to maintain the High Pressure Fire Water System and heat is necessary to prevent freezing

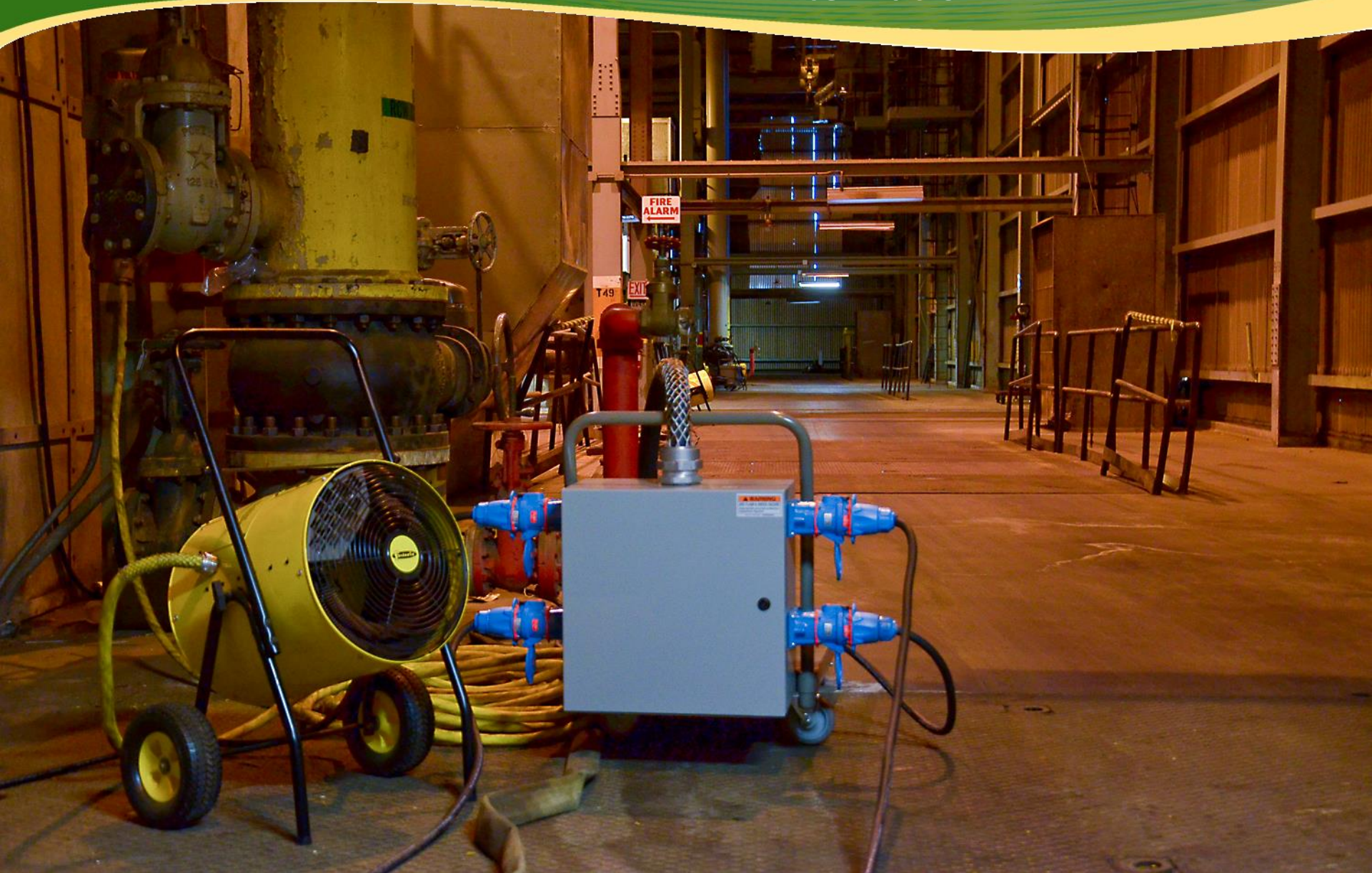
➤ ACTIONS:

- Improved insulation to tighten the facilities from cold air
- Completed set up of 750 cascade heaters, including 150 power panels.
- Restart boiler, which was shutdown in April of 2014

➤ IMPACT:

- Save money and right size system for future work





CHALLENGE:

➤ Reduce S&M costs to increase cleanup program

ACTIONS:

- Reduce cost
- Refrigerant/lube oil removal
- Waste disposition

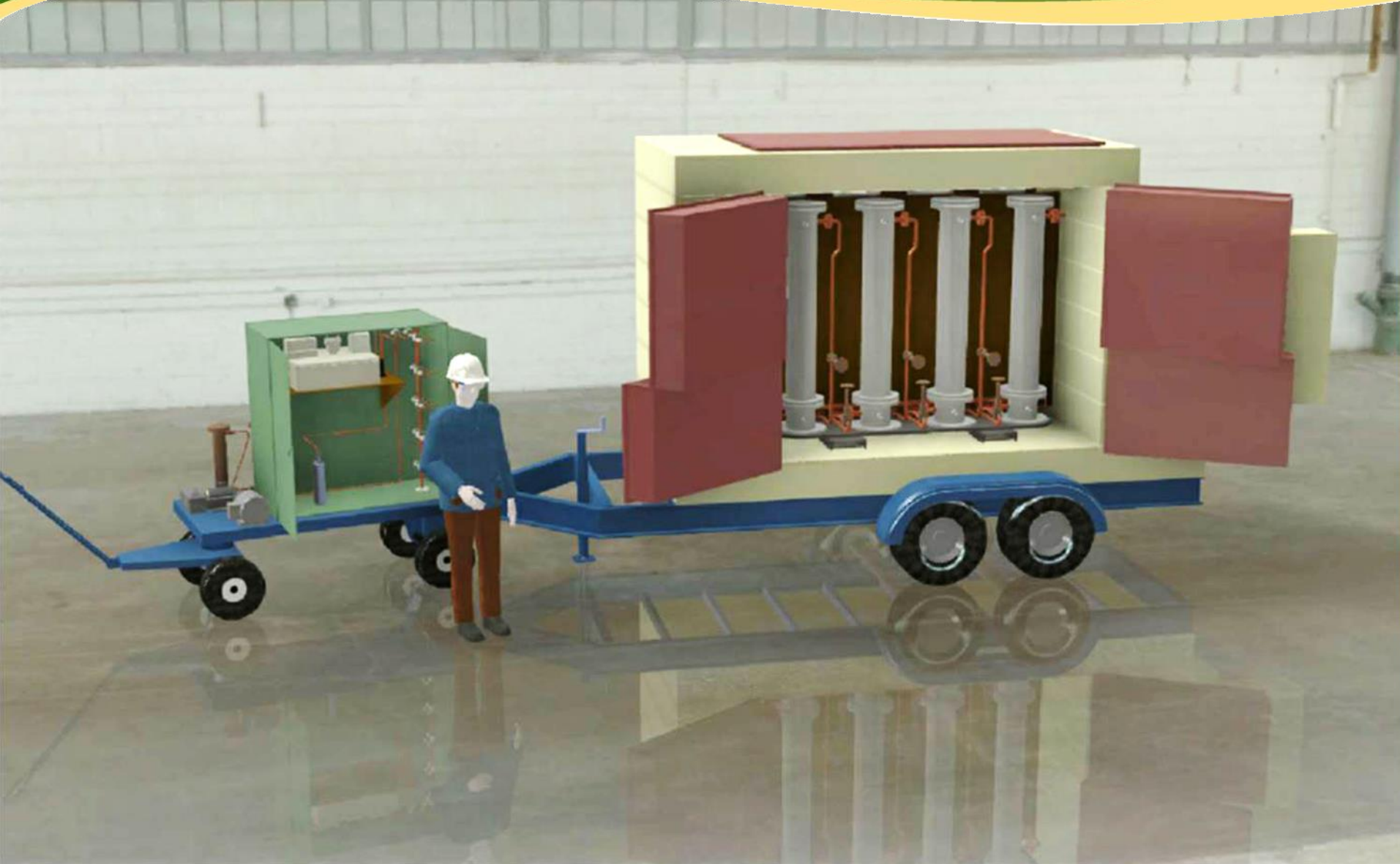
IMPACTS

- Perform in-situ chemical deposit removal on all process gas equipment to reduce uranium hold up in the systems.
- Eliminate heating requirements and reduce facility maintenance costs.
- Downgrade facility from CAT II to Rad facility.
- Remove wastes to eliminate management requirements.

DEPOSIT REMOVAL

- Multi-year year project averaging about 90 employees.
- Design, procure and fabricate uranium deposit removal equipment and carts.
- Perform in-situ chemical deposit removal on all process gas equipment to reduce uranium hold up in the systems.
- Removes uranium holdup and deposits so that buildings can be downgraded to non-nuclear; cost savings allow funding to be used on cleanup activities.
- Reduces the risk of D&D waste that may require off-site shipment and provides potential cost avoidance.

Addressing Paducah Challenges -Deposit Removal



- Graded approach is necessary to evaluate the technology and due to budget constraints
- FY15 Fabricate 10 cell treatment carts (buggy and traps)
- FY15 Install facility modifications to support cell treatments
- FY15-16 Perform treatment on 12 cells/piping “Proof of Principle”
- FY16 Performance data collection (NDA, Samples, Inspections)
- FY16-17 Continue treatment in C-337 based on available funding

