



# PORTSMOUTH EM SITE SPECIFIC ADVISORY BOARD

•OSU Endeavor Center• 1862 Shyville Road • Piketon, Ohio 45661 • (740) 289-5249 •

## Proposed Agenda for the May 4, 2017 Board Meeting

<b>Chair</b> Robert L. Berry		
<b>Co-Vice Chairs</b> Lisa Bennett Carlton L. Cave	<b>6 p.m.</b> Call to Order, Introductions Review of Agenda Approval of March Minutes	
<b>Board Members</b> Eric A. Braun Bradley Burns Maddeline C. Caudill Al Don Cisco Dennis Foreman Carl R. Hartley Ronda J. Kinnamon Neil Leist Bernard S. Neal Irma C. Payne Cynthia Quillen Jimmy E. Smalley Judy R. Vollrath	<b>DDFO Comments</b>  <b>Federal Coordinator Comments</b>  <b>Liaison Comments</b>  <b>Presentation-</b> <ul style="list-style-type: none"><li>• <b>Portsmouth DUF6 Overview, Bob Giroir-Mid-America Conversion Services</b></li><li>• <b>Ohio University Student ASER Project Recognition-Dan Kloepfer, Ohio University</b></li><li>• <b>Wheelersburg Science Bowl Team Recognition-Greg Simonton, DOE</b></li></ul> <b>Administrative Issues</b> <ul style="list-style-type: none"><li>• <b>PORTS SSAB Recommendation 17-01 on FY 2019 Budget Priorities</b><ul style="list-style-type: none"><li>○ Public Comments on Recommendation</li><li>○ Board Comments on Recommendation</li></ul></li></ul>	<b>--15 minutes</b>  <b>--10 minutes</b>  <b>-- 5 minutes</b>  <b>--20 minutes</b>
<b>Deputy Designated Federal Official</b> Joel Bradburne	<b>Subcommittee Updates</b>  <b>Public Comments</b>  <b>Final Comments from the Board</b>	<b>--20 minutes</b>  <b>--5 minutes</b>  <b>--15 minutes</b>  <b>--15 minutes</b>
<b>DOE Federal Coordinator</b> Greg Simonton	<b>Adjourn</b>	

**Support Services**  
EHI Consultants, Inc.  
1862 Shyville Road  
Piketon, OH 45661  
Phone 740.289.5249  
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## PORTSMOUTH EM SITE SPECIFIC ADVISORY BOARD

MINUTES OF THE THURSDAY, MAY 4, 2017, SSAB MEETING • 6:00 P.M.

**Location:** The Ohio State University Endeavor Center, Room 160, Piketon, Ohio

**Site Specific Advisory Board (SSAB) Members Present:** Chair Bob Berry, Co Vice-Chairs, Lisa Bennett and Carlton Cave; Brad Burns, Carol Caudill, Al Don Cisco, Dennis Foreman, Carl Hartley, Ronda Kinnamon, Bernie Neal, Cynthia Quillen, Jimmy Smalley, Judy Vollrath

**SSAB Members Absent:** Eric Braun, Charlene Payne

**U.S. Department of Energy (DOE) and Contractors:** Joel Bradburne, Greg Simonton, DOE; Rick Greene, Restoration Services, Inc. (RSI); Julie Galloway, Cindy Lewis, EHI Consultants (EHI); Jeff Wagner, Fluor-BWXT Portsmouth (FBP)

**Liaisons:** Mike Rubadue, Shannon Dettmer, Ohio Department of Health (ODH); Dustin Tschudy, Ohio Environmental Protection Agency (EPA)

**Facilitator:** Eric Roberts, EHI

**Public:** Damon Detillion PMA; Madelyn Little, Bradon Wooldridge, Kevin Shoemaker, Southern Ohio Diversification Initiative (SODI); Bob Arour, Mark Hauserman, Tim Warren, William Blake, Mid-America Conversion Services (MCS); Diana Cahall

Approved by Bob Berry, Board Chair

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Bob Berry

**Call to Order:**

**Berry:** I would like to call the meeting to order.

**Roberts:** I would like to welcome everyone, and I will be facilitating the meeting. There will be a public comment period after the presentations. The board should stay within its defined scope and follow the meeting ground rules adopted.

**May Agenda:**

**Roberts:** Are there any modifications or proposed changes to the May agenda?

- **Cave:** I make a motion to approve the March agenda.
- **Quillen:** I second the motion.
  - **Motion carried, agenda approved**

**March Minutes:**

**Roberts:** Are there any modifications or proposed changes to the March minutes?

- **Burns:** I make a motion to approve the March minutes.
- **Bennett:** I second the motion.
  - **Motion carried, minutes approved**

**DDFO comments provided by Joel Bradburne, Site Lead, DOE:**

- **D&D Safety Update**
- **PORTS Integrated Baseline**
- **Property Transfer**
- **Project Update**
- **Project Update X-333 Update**
- **Project Update**
- **Project Update-Balance of Plant**
- **OSWDF Update**
- **Environmental Remediation**
- **Community Outreach-SODI Donations**
- **Plant Tours**
- **Educational Outreach – Science Bowl V**
- **Educational Outreach**
- **Community Outreach**
- **Upcoming Site Events**

<b>Question/Comment:</b>	<b>Answer:</b>
<b>Smalley:</b> Do you still have small cylinders?	<b>Bradburne:</b> We are getting rid of all the small stuff unless we would need them, just not that many.

*A copy of the DDFO presentation is available on the SSAB web site  
 ([www.ports-ssab.energy.gov](http://www.ports-ssab.energy.gov))*

**Federal Project Coordinator comments provided by Greg Simonton, Federal Project Coordinator:**

**Simonton:** I would like to thank Michael and Shannon for meeting with us this week. We have the first draft of our environment baseline survey and have received comments back from them. Wheelersburg was the winner of our regional science bowl. Jacob Lewis a junior, Gus a freshman and their Coach Paul Boll are here to tell us about their experiences at the national level.

**Liaison comments provided by Dustin Tschudy, OEPA:**

**Tschudy:** Lately we have been working on the Environmental Baseline Survey (EBS). We are currently reviewing the 90% design for the on-site waste facility and the 60% design of the leachate.

**Liaison comments provided by Mike Rubadue, ODH:**

**Rubadue:** ODH has been working on the EBS. As Dustin said, we have been working on the 90% design and the leachate system. I would like everyone to know I have accepted a new position at ODH and this will be my last board meeting. I do not know if they will be hiring another person in this position. In the meantime Shannon will be sitting in on your meetings.

<b>Question/Comment:</b>	<b>Answer:</b>
<b>Foreman:</b> Can you clarify this 90% waste 60% leachate.	<b>Tschudy:</b> There is 30%, 60%, 90%. This allows us to make comments as the designs are being put together in the different stages, so when I say 30% design, it doesn't have a lot of details. The 90% is for the on-site waste disposal facility, the 60% is for the intermediate leachate treatment system.

**Portsmouth DUF6 Overview by Bob Giroir, Mid-America Conversion Services:**

- **Who we are**
- **Our Leadership Team**
- **MCS Portsmouth Leadership Team**
- **MCS Vision**
- **Purpose of the Portsmouth DUF6 Project**
- **Portsmouth Conversion Facility**
- **Cylinder and By-Product Work Flow**
- **DUF6 Conversion Process**
- **Cylinder Yards**
- **Transportation-Aqueous HF**
- **Key Safety Aspects**
- **Current Status**
- **Mid-American Conversion Services**

<b>Question/Comment:</b>	<b>Answer:</b>
<p><b>Kinnamon:</b> Where are you shipping to?</p> <p>What is your biggest challenge right now?</p>	<p><b>Giroir:</b> The cylinders are right back in the cylinder meter. Once they have been processed the cylinders have been modified it goes back to the government to make a determination whether it be a product or a waste. That has not been determined yet.</p> <p>Funding, as with anything.</p>
<p><b>Foreman:</b> Out of the 219 jobs how many are local?</p> <p>You said the cylinders are considered as waste.</p> <p>So does that mean that stuff will go into a waste cell?</p>	<p><b>Giroir:</b> All of them are.</p> <p>It is managed as waste because the waste criteria that was established to make sure we stay safe. It is just a technique to manage it.</p> <p>No it will not.</p>

**Ohio University Student ASER Project Recognition- Dan Kloepfer, Ohio University:**

- **Important aspects of the project**
  - Rotates yearly between local high schools
  - Educates local students about the environmental restoration activities that take place at the PORTS site
  - Teaches them technical writing skills
- **Deliverables**
  - Student Summary Document of the full ASER document

<b>Question/Comment:</b>	<b>Answer:</b>
<p><b>Kloepfer:</b> We had 51 students working on the project this year. We have Bradon Wooldridge, Corey Thacker, Madelyn Little, Chase Newton as well as the chemistry teacher Katrina Queen to talk briefly about the project.</p>	

**Administrative Issues:** The National Chairs meeting is May 8-11, 2017.

**PORTS SSAB Recommendation 17-01 on FY 2019 Budget Priorities discussion:**

<b>Question/Comment:</b>	<b>Answer:</b>
<p><b>Roberts:</b> Are there any changes you want to make to the recommendation?</p>	
<p><b>Caudill:</b> I have a few suggestions for</p>	<p><b>Roberts:</b> Ok. Go over the changes and</p>

changes in words used.	Julie will change them up on the board.
<b>Foreman:</b> What does the word “efforts” mean? I do not like “efforts”, what could we use instead?	<b>Roberts:</b> What if we use recycle instead of efforts.
<b>Kinnamon:</b> We need to look at this recommendation, as it will be read 10 years from now. We know what we mean, but will they in ten years?	

**Bennett:** I would like to make a motion that we go forward with this recommendation. **Burns:** I would like to second the motion.

**Public Comments:** None

**Board Comments:** None

**Motion approved** (11 approved, 0 opposed, 1 abstained, 0 recused)

**Subcommittee Updates:**

**Budget and Lifecycle Planning Subcommittee Update by Judy Vollrath:**

**Vollrath:** The Budget and Lifecycle Planning Subcommittee met on March 14. The purpose of the meeting was to discuss a Recommendation on the FY 2019 budget priorities. The subcommittee met again on April 11. The purpose of the meeting was to have a 2018 budget update and discuss recommendation 17-01.

**D&D/Remediation Subcommittee Update by Al Don Cisco:**

**Cisco:** The D&D/Remediation and Future Use Subcommittee met on March 14. The purpose of the meeting was to have a NDA overview. The subcommittee met again on April 11. The purpose of the meeting was to give a summary on OSWDF modeling.

**Future Use Subcommittee Update by Dennis Foreman:**

**Foreman:** The D&D/Remediation and Future Use Subcommittee met on March 14. The purpose of the meeting was to present an overview on training programs. The subcommittee met again on April 11. The purpose of the meeting was to discuss future use planning from A-Z and a recap of the FFE study.

**Historic Legacy & Community Engagement Subcommittee Update by Carol Caudill:**

**Caudill:** The Historic Legacy & Community Engagement Subcommittee met on March 14. The purpose of the meeting was to have a Science Bowl recap. The subcommittee met again on April 11. The purpose of the meeting was to have a presentation on local purchasing.

**Public Comment:** None

**Final Comments from the board:**

**Foreman:** I want to thank Jack Williams for helping with our school quiz bowl.

**Berry:** Adjourned

**Next Meeting:** TBA

**Action Items:**

1. EHI to make changes and mail Recommendation 17-01.



# DEPUTY DESIGNATED FEDERAL OFFICIAL PRESENTATION

**Joel Bradburne, Site Lead  
U.S. Department of Energy**

**Portsmouth Site Specific Advisory Board  
May 4, 2017**





- Safety
- Project Updates
  - Property Transfer
  - X-326 & X-333 Deactivation
  - On-Site Waste Disposal Facility (OSWDF)
- Community Outreach
- Upcoming Events

# D&D Safety Update

March was workplace  
eye safety month .

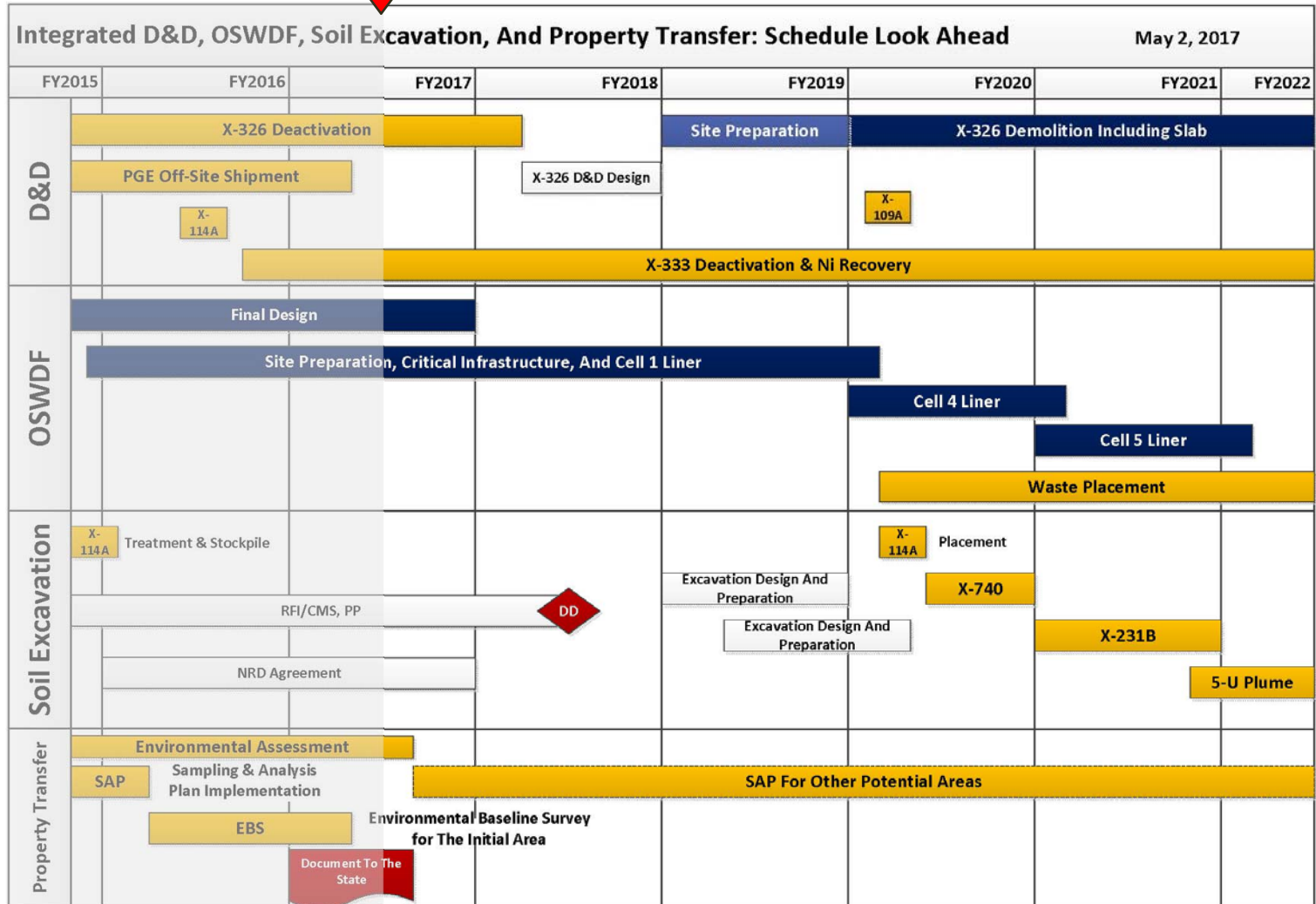


**FBP ProForce - One Year Injury-Free**



**YOU are the KEY to SAFETY!**

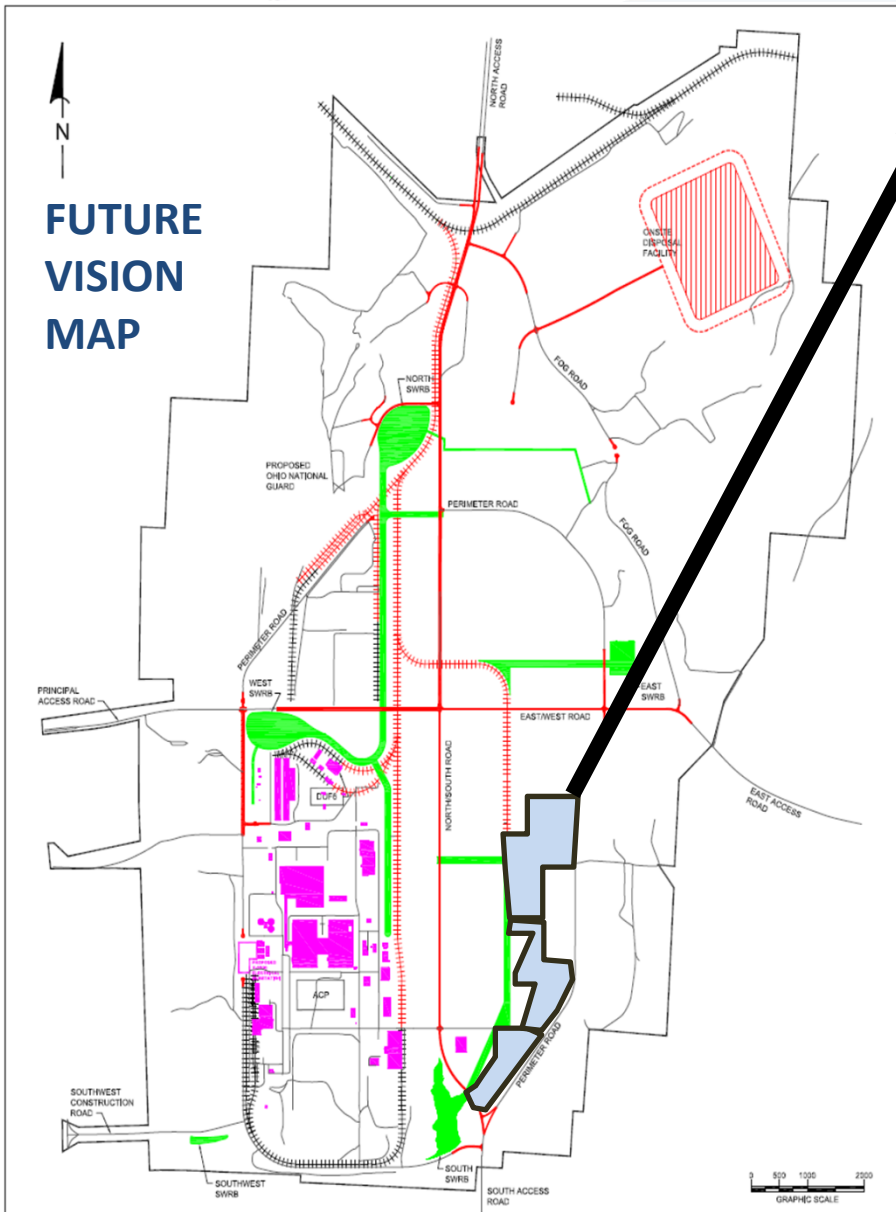
# PORTS Integrated Baseline



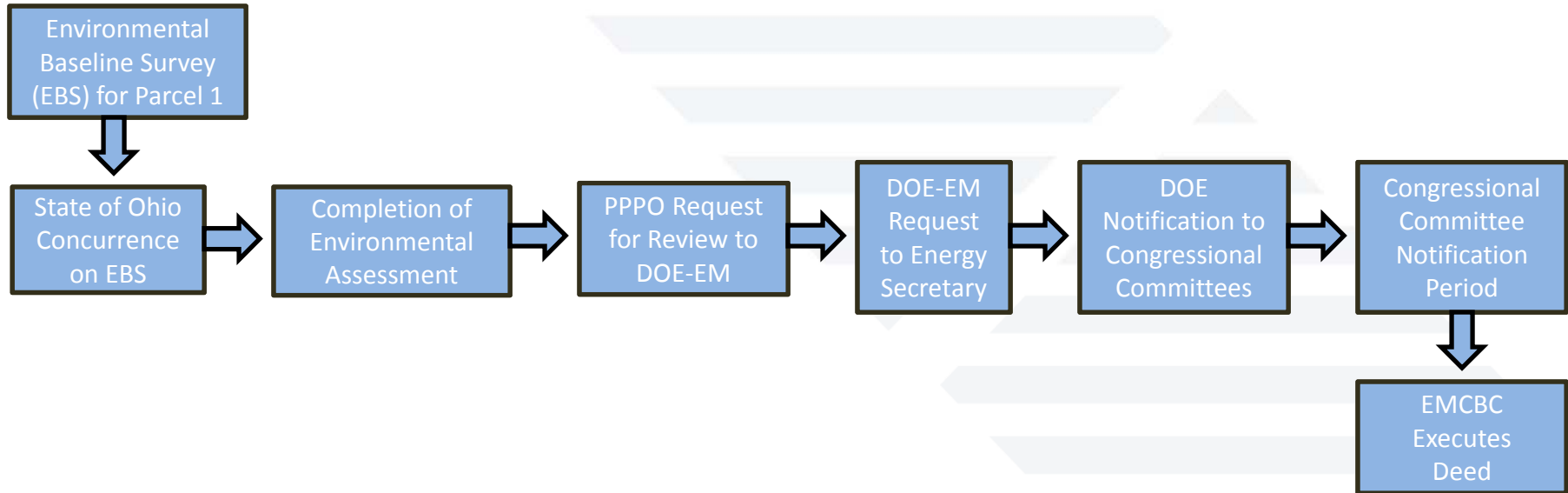
# Property Transfer

## BEGINNING STEPS TO REINDUSTRIALIZATION Parcel 1 Activities

- Nearing completion of comment resolution from Ohio EPA and ODH on Environmental Baseline Survey (EBS)
- Public comments from Property Transfer Environmental Assessment under review
- State concurrence of Parcel 1 EBS and DOE completion of EA are key components of Parcel 1 transfer
- Draft Business Case for transfer of Parcel 1 completed
- Parcel 1 transfer package on schedule for delivery to DOE-HQ by end of FY2017



# Property Transfer



This is a high level overview of key steps in the property transfer process as outlined by 10 CFR 770 – Transfer of Real Property at Defense Nuclear Facilities for Economic Development.

# Project Update

## Mission Incredible: Cleaning Up the X-326 (Criticality Incredible determination is a key step)

Right, NDA personnel measure and analyze the vent stack at the X-326 facility in 2016.



Left, in 2014, Radiological Control Technicians surveyed the bottom cavities of each packaged component exiting the X-326 Building before it was fastened to the trailer.



Process gas equipment in the X-326 was lowered from the cell to the operations floor for packaging.



# Project Update

## Tieline Project Complete at X-326



# Project Update X – 333 Update







# Project Update

## Small Cylinder Processing Project, First Milestone Met



**Chemist Ron Day, checks documentation in the subsampling lab. He performs a large part of the transfers, cleaning and disassembly operations.**

# Project Update – Balance of Plant

## Emergency Operation Center Upgrades



**Emergency Operation Center (EOC) To Be Updated**



**Joint Information Center (JIC) To Be Updated**

## Roofing Makeover at the X-744G Warehouse



**Above, an off-road crane was used to lift supplies for the crew.**

**Right, Workers place the boundary lines to create a safe work environment for the roofing project.**

# OSWDF Update

## Testing Complete on Water Lines at OSWDF



# Environmental Remediation



Groundwater Treated FY2017	Groundwater Source	TCE Removed FY2017 lbs.
2,078,400 Gallons	X-701B Plume	74.31
1,560 Gallons	Misc. Site	0
5,468,265 Gallons	7-Unit Plume	47.00
9,690,800 Gallons	5-Unit & X-749/ X-120 Plumes & PK Drainage	12.53

# Community Outreach – SODI Donations

## Material Donated To SODI



**Latex Gloves 14,700 lbs.**



**Forklift 13,420 lbs.**



**Cleaning Sup. 262 lbs.**



**New Steel 66,960 lbs.**



**Bus Bars 54,429 lbs.**



**Brush Chipper 8,000 lbs.**



**Welding Wire 1,056 lbs.**



# Plant Tours

## Scioto Valley School District Board Members



At left, Environmental Remediation Director JD Chiou talks about the multiple lining systems that make up the disposal cell liner and cap.

# Educational Outreach – Science Bowl V





# Educational Outreach

## OSU Engineering Students Visit PORTS





# Community Outreach



**American Red Cross – Dancing With Our Stars**



**Johnathan's Journey**



**FBP recipient of Ross County  
United Way  
Community Impact Award**



**PMA recipient of 2016 Chillicothe  
Ross Chamber of Commerce  
Group and 100% Award**

## Upcoming Site Events



Public Tour  
Saturday, June 20, 2017



Public Tour  
Saturday, July, 15, 2017



SSAB Executive Planning Session  
August 2017 Date TBD

To register for the public tours, please contact Sandy Childers  
[sandy.childers@fbports.com](mailto:sandy.childers@fbports.com) or 740-897-2336.

*For a full list of SSAB activities, check out the website at  
<http://www.ports-ssab.energy.gov>*



## Depleted Uranium Hexafluoride (DUF<sub>6</sub>) Project at Portsmouth

# Who we are



Mid-America Conversion Services is comprised of world class companies led by Atkins Global Nuclear with Westinghouse Electric Company and Fluor Federal Services

**ATKINS**

- Atkins brings program management, nuclear/chemical operations, and commercial waste processing expertise



- Westinghouse Electric Company (WEC) brings a cumulative 162 years of experience operating 3 uranium conversion facilities

**FLUOR.**

- Fluor Federal Services, Inc. (Fluor) provides efficient integration into the Paducah and Portsmouth sites

# Our Leadership Team



Bob Giroir serves as Plant Manager in Portsmouth, Ohio.



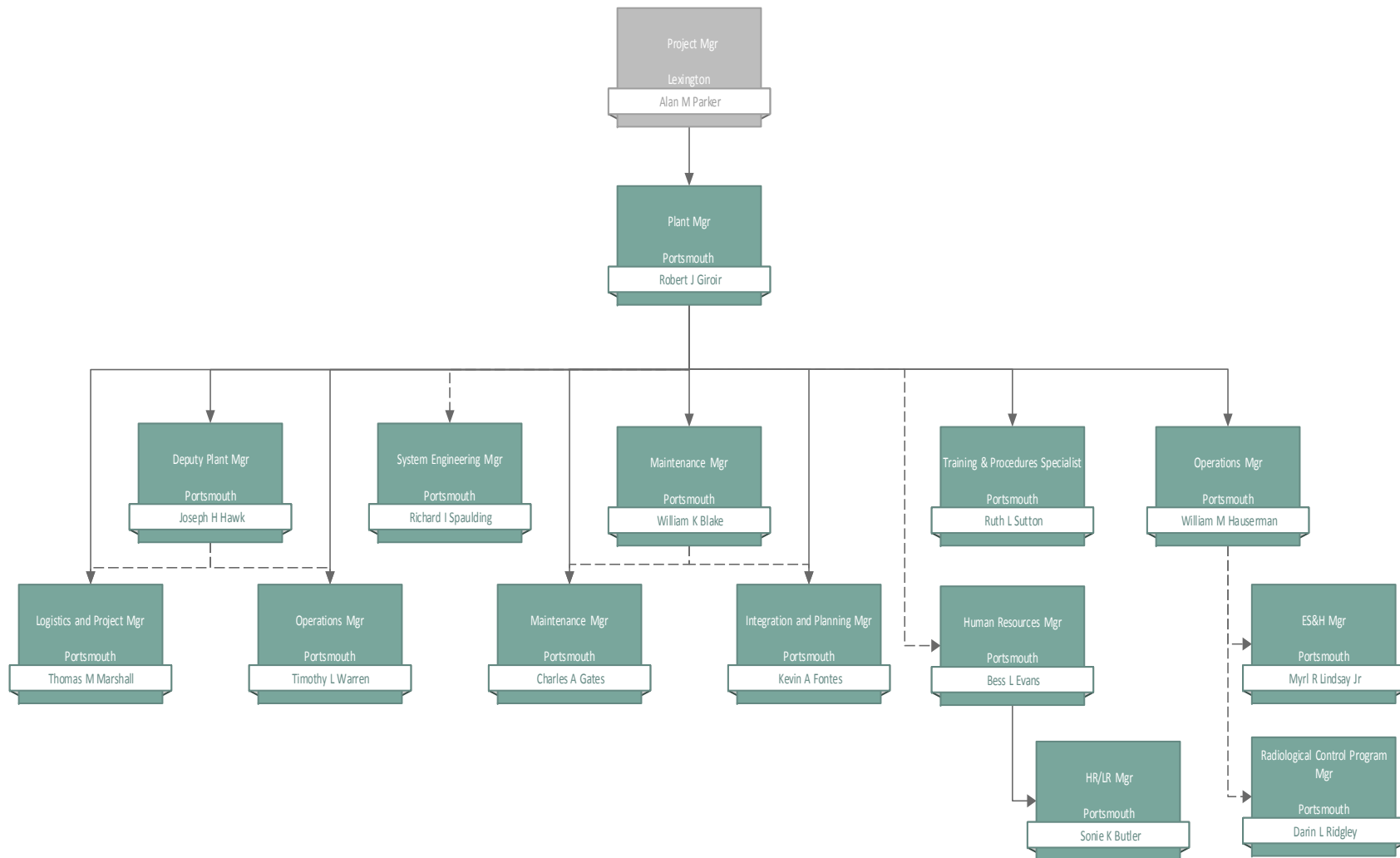
Alan Parker is the President and Project Manager located in Lexington, Kentucky.



Phillip Weaver serves as Plant Manager in Paducah, Kentucky.



# MCS Portsmouth Leadership Team



# MCS Vision

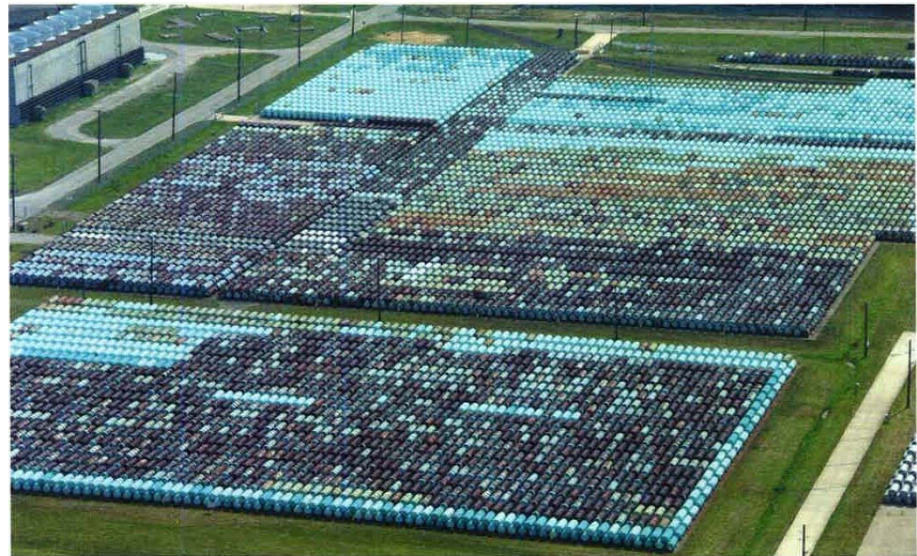


- To be recognized as the best DOE Prime Contractor because we
  - Deliver Safe-Sustainable-Performance
  - Operate the site conversion processes safely, compliantly, and efficiently, while meeting our production commitments
  - Treat our employees, our client, our subcontractors, our stakeholders, and the public ethically and with respect
  - Exceed our client's expectations



# Purpose of the Portsmouth DUF<sub>6</sub> Project

- Convert the Department of Energy's (DOE) existing depleted Uranium Hexafluoride (DUF<sub>6</sub>) inventory and disposition Hydrofluoric Acid (HF)
- DUF<sub>6</sub> inventory of ~19,000 cylinders at Portsmouth containing ~227,000 metric tons is estimated to take ~ Approx. 20 years to process





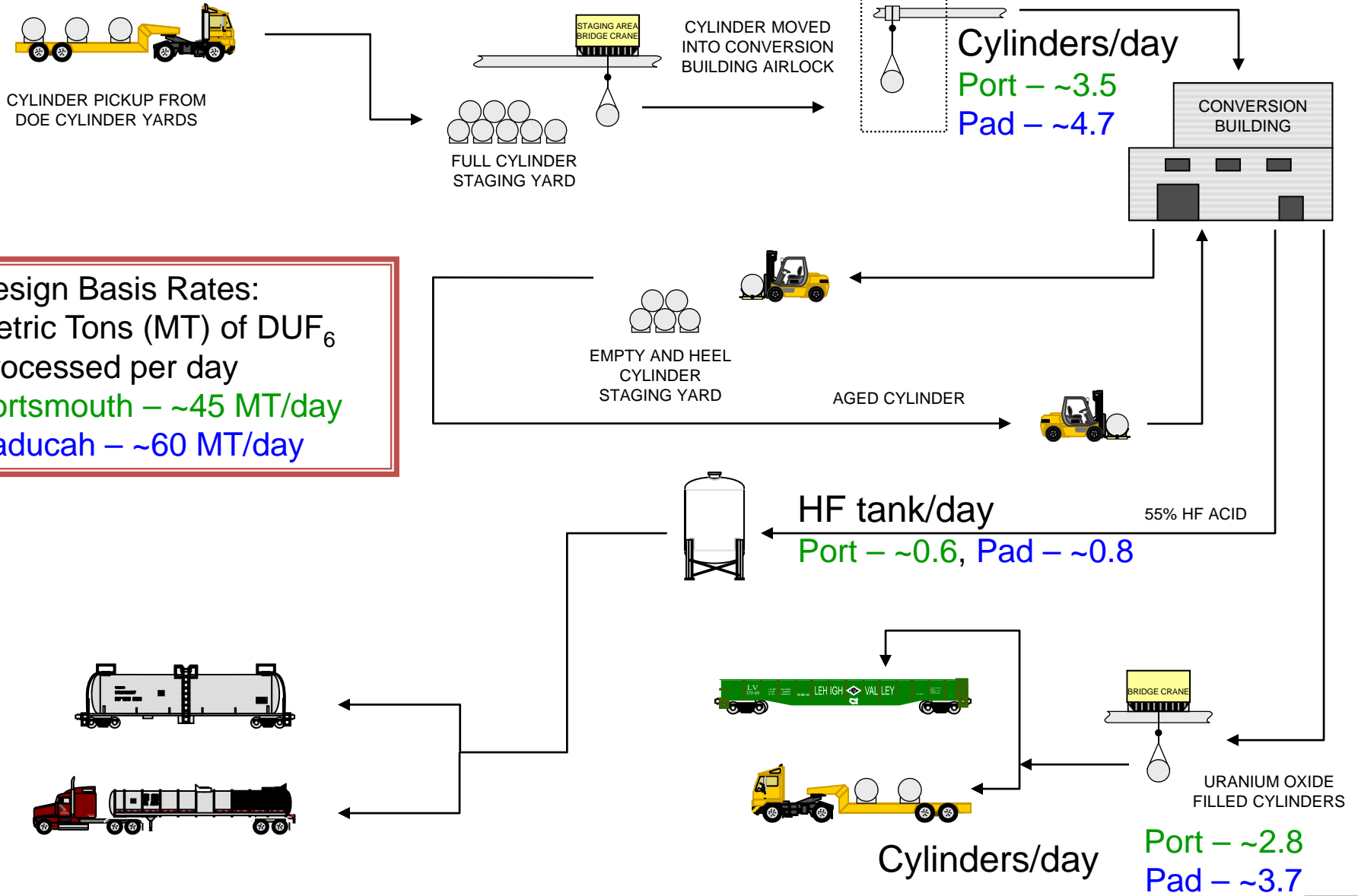
# Portsmouth Conversion Facility



- Plant staff consists of 219 personnel
- Plant consists of over thirty-five systems including process and balance of plant, i.e. utilities
- Designed for 24/7 operations
- Three process lines at Portsmouth vs. four process lines at Paducah

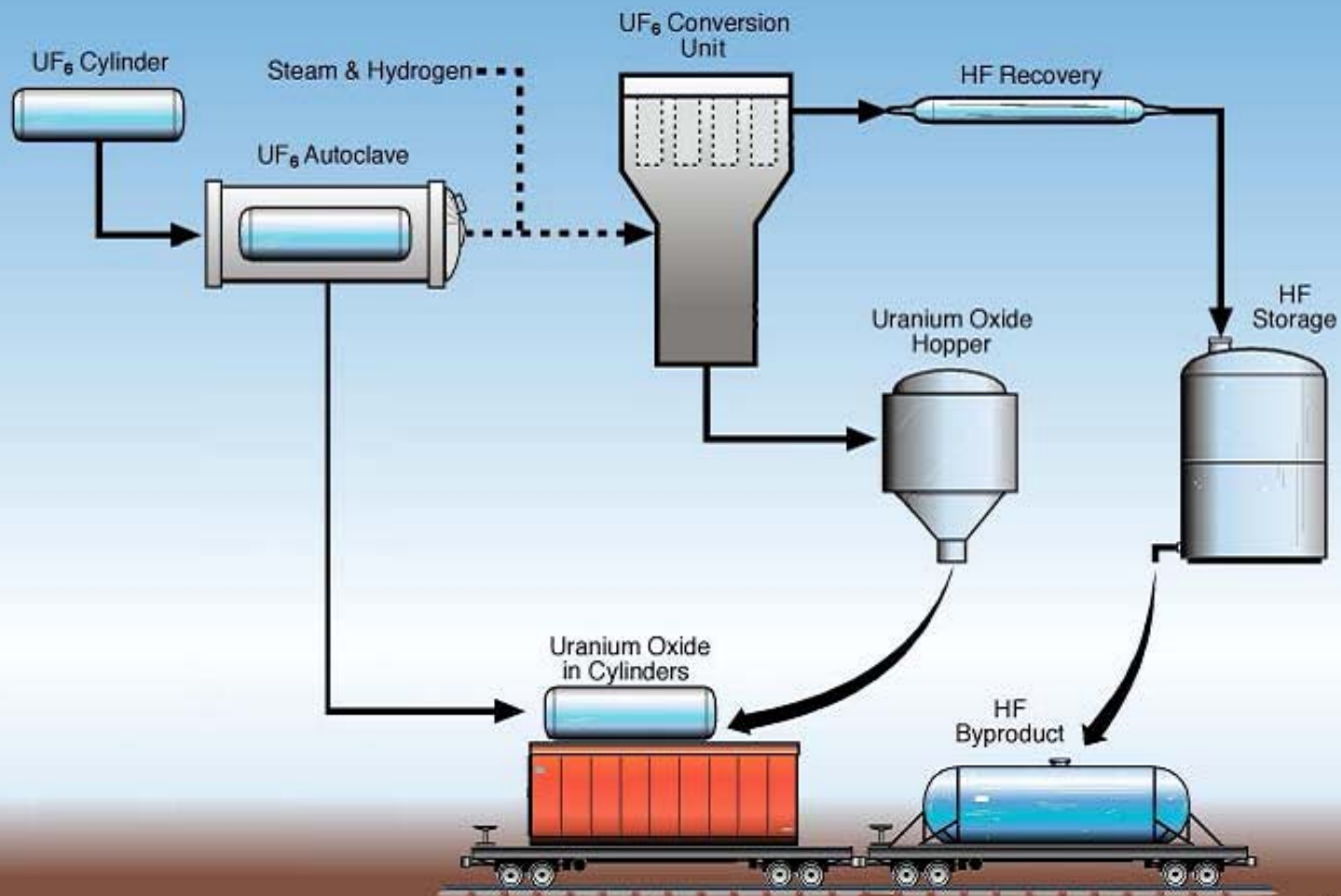


# Cylinder and By-Product Work Flow



Design Basis Rates:  
 Metric Tons (MT) of  $\text{DUF}_6$   
 Processed per day  
 Portsmouth – ~45 MT/day  
 Paducah – ~60 MT/day

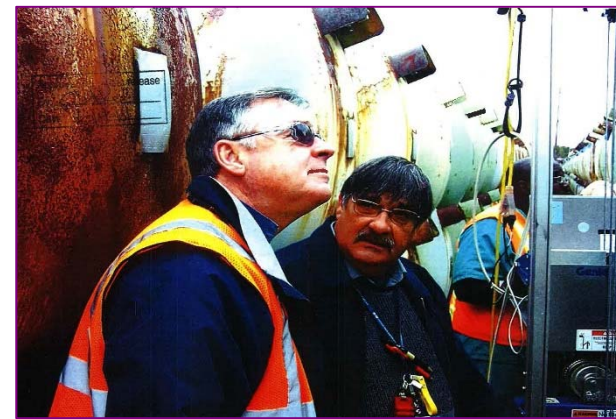
# DUF<sub>6</sub> Conversion Process



9684.1-0101

# Cylinder Yards

- Manage cylinder yards consistent with DOE approved:
  - Safety Basis (Hazard Category 2 Nuclear Facility)
  - Nuclear Material and Accountability Plans
- Day-to-day management of the DUF<sub>6</sub> cylinders includes:
  - Performing regular inspections and general maintenance of cylinders and storage yards
- Cylinders are typically stacked two high
- Cylinders generally contain about 12 metric tons of DUF<sub>6</sub>
- Cylinders are generally 12 ft long by 48-inches in diameter, with a steel wall thickness of 5/16.



# Transportation – Aqueous HF

- Shipments are a combination of both truck and rail
- Each truck shipment contains approximately 4,000 gallons
  - Maximum of 12 shipments each week
- Each railcar shipment contains approximately 18,000 gallons
  - Maximum of 3 railcars each week



# Key Safety Aspects

- Conversion process operates at near atmospheric pressures
- $UF_6$  vaporization via electrical power for better temperature control
- Cylinder autoclave is an ASME-rated pressure vessel in case of a cylinder rupture
- A filtration system removes all uranium, additional down stream detector
- HF condenser removes most HF, then scrubbers eliminate balance
- Centralized, automated process controls
- Nuclear Safety Culture embedded into the organization
- Human Performance best practices

# Current Status

## Path Forward:

- Equipment repaired and tested
- Management Self Assessment (MSA)
- Contractor Readiness Assessment (CRA)
- DOE Readiness Assessment (RA)

## Goal:

- Achieve 3 Process Line(s) Operational by September 30, 2017.

### Condenser Critical Lift



# QUESTIONS









REGIONAL POOLS

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

REGIONAL POOLS

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Science Bowl V

4:50	
A Team	B Team
8	0
BONUS	POSS
1	0

Welcome Coaches and Teams  
SCIENCE BOWL



A - THREE  
A - TWO  
A - ONE  
A - CAPTAIN

Zane Trace

B - CAPTAIN  
B - ONE  
B - TWO  
B - THREE

Wheelersburg

SOUTH CENTRAL OHIO REGIONAL







**Wheelersburg High School, Wheelersburg**  
**Champion – Science Bowl V**











# ASER 6 Student Summary Project

In collaboration with the Chemistry  
students at Piketon High School

# Important aspects of the project

- ▶ Rotates yearly between local high schools
  - ▶ Eastern Local
  - ▶ Western Local
  - ▶ Piketon HS
  - ▶ Waverly HS
- ▶ Educates local students about the environmental restoration activities that take place at the PORTS site
  - ▶ Through hands-on field trips to the PORTS site and Lake Hope State Park
  - ▶ Through Subject Matter Expert presentations
    - ▶ Chemistry and Wildlife Conservation Professors
    - ▶ Environmental Specialists
    - ▶ SSAB members
    - ▶ DOE representatives and contractors who work on-site











# Important aspects of the project, continued

- ▶ Teaches them technical writing skills
  - ▶ Through summarizing the technical ASER document each year



# Deliverables

- ▶ Student Summary Document of the full ASER document
  - ▶ Which is distributed widely throughout the region to multiple stakeholders, including:
    - ▶ Public officials, state and local levels
    - ▶ Local libraries
    - ▶ Participating High Schools
    - ▶ Students
    - ▶ Published online at [www.portsfuture.com](http://www.portsfuture.com)

*Student Summary of the U.S. Department of  
Energy Portsmouth Annual Site Environmental  
Report (ASER) for 2013*

