

ENVIRONMENTAL ASSESSMENT

DRAFT ENVIRONMENTAL ASSESSMENT

Conveyance of real property at the Portsmouth Gaseous Diffusion Plant in Pike County, Ohio

The U.S. Department of Energy (DOE) is considering the potential conveyance (lease, easement, and/or title transfer) for economic development of portions of DOE's real property at the Portsmouth Gaseous Diffusion Plant (PORTS) as real property becomes excess to DOE mission needs. If such transfers are pursued, DOE could transfer PORTS real property to one or more entities for uses different from current site uses.

DOE prepared this Draft Environmental Assessment (EA) to analyze the potential environmental consequences associated with potential land transfers. DOE is inviting comments on the Draft EA for a period of 45 days starting on January 4, 2017. Please submit your comments by close of business, February 18, 2017, by one the following ways:

Copies of the Draft EA may be requested from the DOE Environmental Information Center, 1862 Shyville Road, Room 207, Piketon, Ohio, (740) 289-8898. Additional information along with the Draft EA, can be found at <http://energy.gov/nepa/nepa-documents/environmental-assessments-EA>.

MAIL: Environmental Assessment Comments
U.S. Department of Energy
P.O. Box 700
Piketon, OH 45661

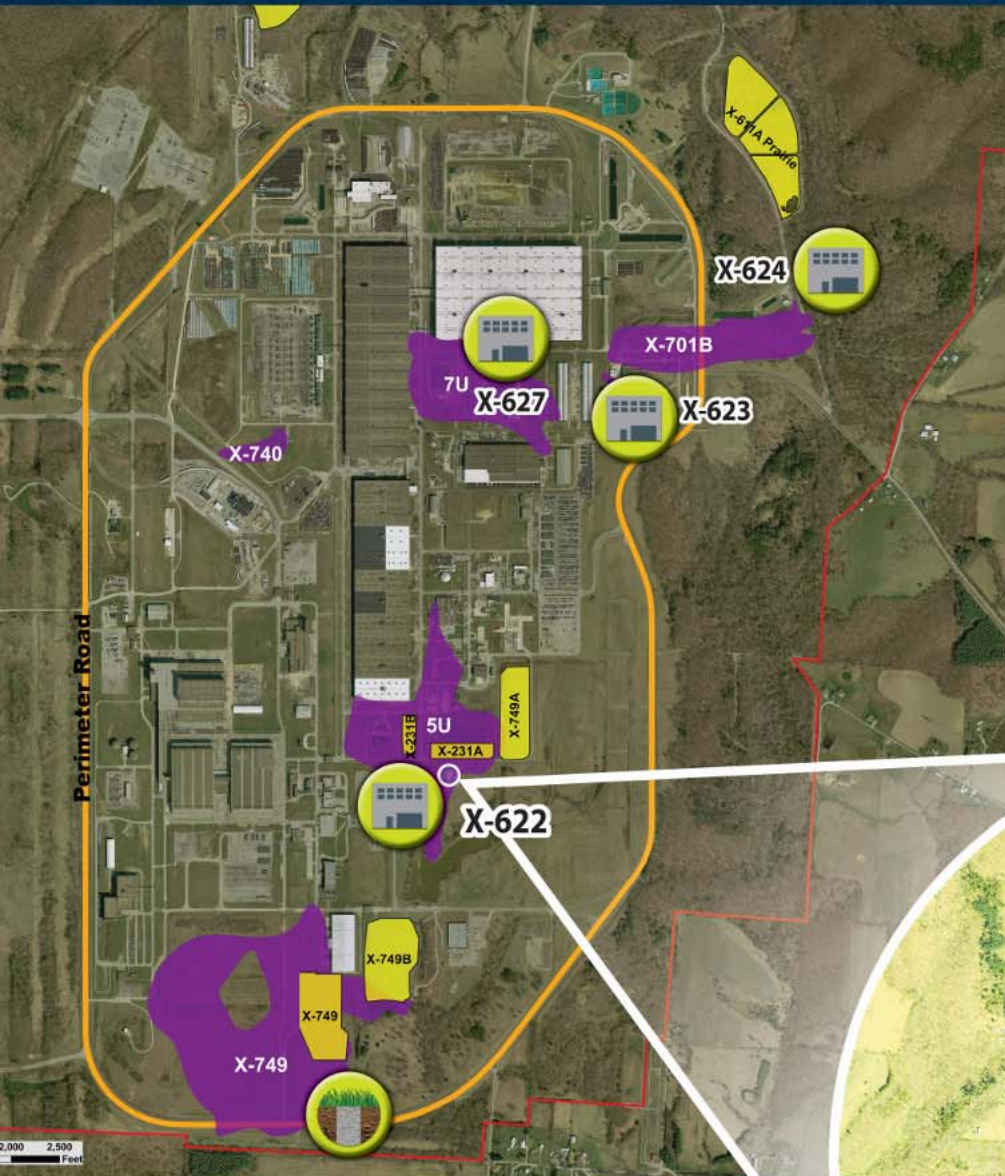
EMAIL: EAComments@fbports.com

PHONE: 1-888-603-7722



ENVIRONMENTAL REMEDiation

GROUNDWATER CLEANUP



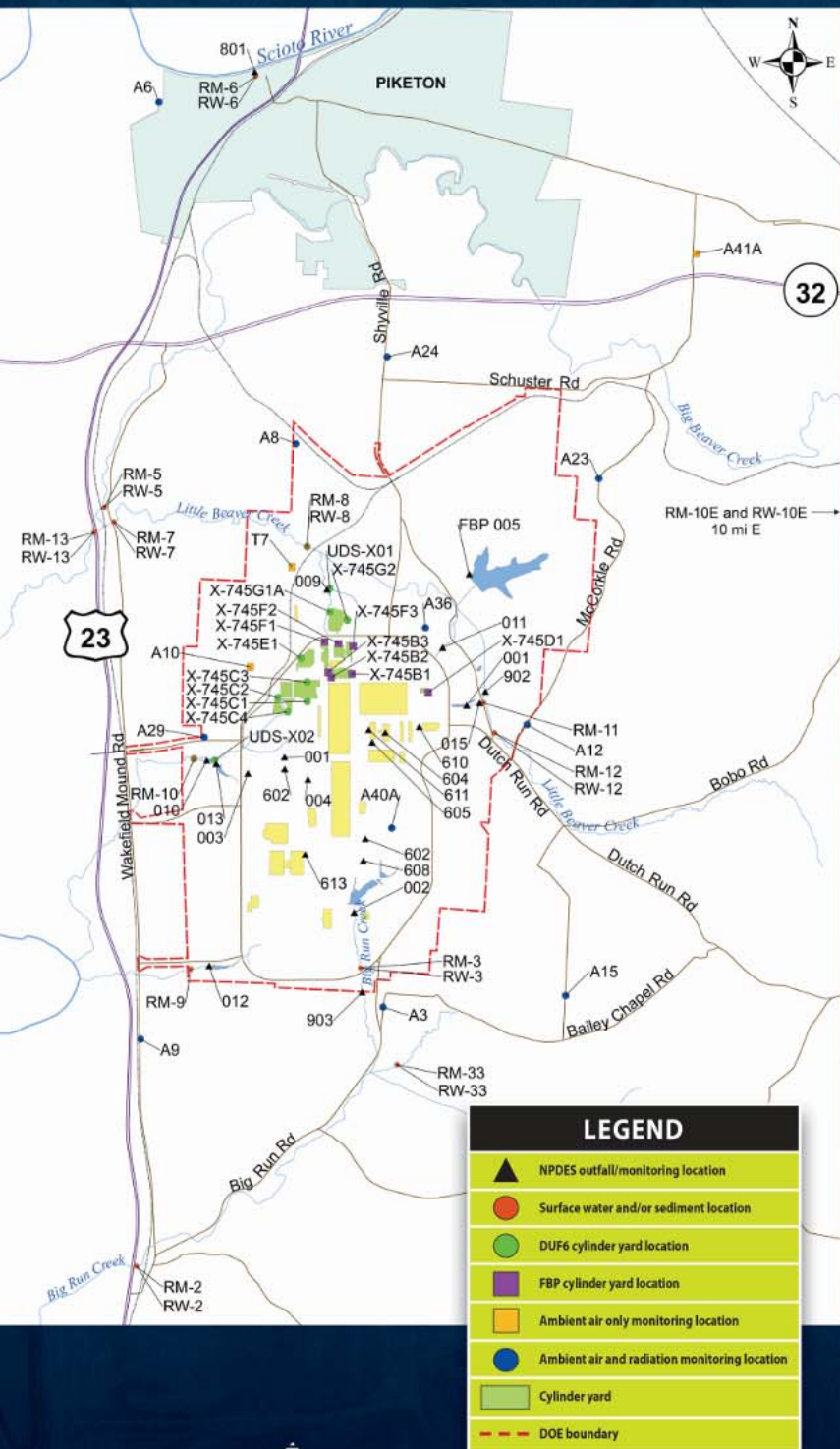
- There are five areas (plumes) on site where groundwater is contaminated by historical use of industrial solvent trichloroethene (TCE). It is contained onsite and has not impacted any public water supplies.
- TCE-contaminated groundwater must be cleaned up to safe levels.

LEGEND	
	Groundwater Treatment Facility
	Slurry Wall
	Landfills and Closure Units
	Plumes

- The X-622 (pictured) is one of four pump and treat facilities on-site that extract water from the TCE plumes and remove the contaminants.



ENVIRONMENTAL MONITORING



DOE conducts continuous environmental monitoring activities on and off-site to ensure that work at the site does not negatively impact plant, animal or human health. Results are shared with Ohio EPA and must meet applicable Ohio EPA requirements. Those results become public record as part the Annual Site Environmental Report.

AIR MONITORING

- DOE and Radiation monitors ambient air quality at 6 on-site and 10 off-site locations.

SURFACE WATER AND SEDIMENT SAMPLING

- DOE collects and analyzes water and sediments from creeks and rivers at and around the site.

WATER DISCHARGE MONITORING

- DOE monitors 23 locations, including 11 locations where water is discharged from the site.

PORTS REGULATORY DOCUMENTS

WASTE DISPOSITION

Ohio EPA Approved Documents

- Waste Disposition Record of Decision - 06/30/15
- RD/RA Work Plan for OSWDF Phase I Initial Site Preparation - 09/21/15
- RD/RA Work Plan for OSWDF Phase II Initial Site Construction - 10/1/2015
- Field Change Notice for Raw Water Line and Sanitary Sewer Line - 05/27/16
- Interim Leachate Treatment System (ILTS) Preliminary Design Package - 07/26/16
- Addendum to the OSWDF Infrastructure RD/RA Work Plan for Phase II Initial Site Construction - 10/17/16

Upcoming Submittals to Ohio EPA

- Comprehensive OSWDF RD/RA Work Plan - Q2 FY17
- Waste Acceptance Criteria Implementation Plan - Q2 FY17
- OSWDF Pre-Final Design Package - Q2 FY17
- ILTS Intermediate Design Package - Q2 FY17
- OSWDF Operations & Maintenance Plan - Q4 FY17

PROCESS BUILDING D&D

Ohio EPA Approved Documents

- Process Building Record of Decision - 07/29/15
- RD/RA Work Plan for the Process Building Deactivation - 04/22/16
- RD/RA Work Plan for the X-114A Outdoor Firing Range D&D - 05/02/16
- Field Work Completion Report for X-114A D&D - 11/22/16

Upcoming Submittals to Ohio EPA

- Comprehensive RD/RA Work Plan for D&D - Q2 FY17
- General Removal Action Work Plan for Deactivation of Attachment G Facilities - Q3 FY17
- Removal Action Work Plan for X-109A Demolition - Q4 FY17
- Field Work Completion Report for the X-800 Pad in Parcel 1 - Q3 FY17
- Field Work Completion Report for the X-744V Pad in Parcel 1 - Q3 FY17

SOIL REMEDIATION DOCUMENTS

Ohio EPA Approved Documents

- Final Soils Background Report - 06/18/2015
- Deferred Unit RFI/CMS Work Plan - 06/26/15

Upcoming Submittals to Ohio EPA

- Deferred Unit RFI/CMS Report - Q4 FY17
- Deferred Unit Preferred Plan - Q2 FY18
- Deferred Unit Decision Document - Q2 FY19

LANDFILL AND PLUME EXCAVATION DOCUMENTS

Upcoming Submittals to Ohio EPA

- Final Natural Resource Damage Assessment Order - Q2 FY17
- Natural Resource Restoration Plan for Landfill and Plume Excavation - Q1 FY18
- Work Plan for the Excavation of the X-740 Plume - Q2 FY18
- Work Plan for the Excavation of X-231A and the 5-Unit Plume - Q2 FY18

PROPERTY TRANSFER DOCUMENTS

Documents currently under review by Ohio EPA

- Parcel 1 Environmental Baseline Report
- Parcel 1 HSA Report

Documents Available to support Property Transfer

- NEPA Environmental Assessment (EA) for Site Wide Property Transfer -
 - » Released for Public Review - 1/4/2017
 - » Public Comment Period Ends - 2/17/2017

ON SITE WASTE DISPOSAL FACILITY (OSWDF)

OSWDF

Design rendering of the OSWDF site.



OSWDF

Early Site Preparation

Sedimentation ponds/basins are an OEPA recognized best management practice that serve as a temporary settling pond to release runoff rainwater at a controlled rate to adjacent clean streams. Each basin is designed to detain 'muddy water' long enough to allow most of the sediment to settle to avoid environmental impact to the stream.



Sediment Pond 2



Sedimentation Pond 2 is the first of three such ponds to be constructed during the first phase of the OSWDF Project (Noting Sedimentation Pond 1 is located to the south of the planned disposal facility and will be constructed later in the overall sequence).

Construction of Sedimentation Pond 3 is slated to begin in 2017.



Temporary Construction Trailers

POTENTIAL ON-SITE ENGINEERED FILL SOURCES FOR OSWDF

On-Site Waste Disposal Facility would require at least two times as much soil (fill) as debris.

AREAS

X-701B Area

X-740 Area

X-749/120 Area
(inc. X-749 & X-749B Landfills)

X-749/120 A

7-Unit Area

5-Unit Area
(inc. X-231A&B & X-749A Landfills)

Surface and shallow soil
contaminated by plant operations



SUPPORTING SOUTHERN OHIO

SUPPORTING SOUTHERN OHIO

PORTS Community Commitment DASHBOARD

January 2017

EDUCATION

	2012	2013	2014	2015	2016	TOTAL
DOE Science Bowl						
Schools/Teams	--	13/18	16/27	18/32	22/38	69/115
Students	--	95	132	155	185	567
Volunteers	--	40	45	55	60	200
Champs		Zane Trace	Notre Dame	Chillicothe	Notre Dame	

Science Alliance						
Schools	20	23	23	26	25	137
Students/Teachers	964	1,208	1,139	1,321	1,400	8,001
Volunteers	145	155	145	109	120	974
Additional presentations	--	12	21	17	--	50

Fluor-BWXT STEM Scholarships						
HS Seniors	12	12	12	12	12	60
	\$24K	\$24K	\$24K	\$24K	\$24K	\$120K

Internship Program						
College Students	16	21	32	34	35	138

Annual Site Environmental Report (ASER) Executive Summary						
HS Science Students	8	19	25	12	19	83
HS Art Students	10	17	10	--	20	65
Total Students Involved	18	36	35	20	37	146
Host School	Pikeeton	Waverly	Eastern	Western	Waverly	

Site Tours						
Tours/Guests	23/410	26/462	26/416	19/342	30/495	146/2,353

ECONOMIC GROWTH

	2013	2014	2015	2016	2017	Project to Date
Regional Site Spending (by FY)						
	\$43.4M	\$29.5M	\$21.2M	\$38.7M	\$5.3M	\$314.5M

Fluor-BWXT Business Opportunity Fund						
	\$467K	\$544K	\$418K	\$288K	\$440K	\$2.84M



GIVING

	2012	2013	2014	2015	2016	TOTAL
United Way						
	\$85,000	\$118,156	\$130,396	\$121,342	\$112,150	\$567,044

Misc. Community Donations (includes educational and charitable giving)						
	\$112K	\$100K	\$121K	\$208K	\$160K	\$812K

Feds Feed Families						
	7,060 lbs.	10,851 lbs.	15,681 lbs.	15,460 lbs.	8,733 lbs.	74,613 lbs.

Pike County Relay for Life						
	--	--	\$7,500	\$4,465	\$4,500	\$16,465

Fluor Foundation						
	\$40K	\$40K	\$40K	\$25K	\$15K	\$200K

Christmas Giving Programs						
Christmas Gifts for Children *	2,400 kids	2,500 kids	2,500 kids	2,600 kids	3,043 kids	15,243 kids
Pike County Childrens Christmas Fund *	400/930 families/kids	428/999 families/kids	411/977 families/kids	323/780 families/kids	301/729 families/kids	2,284 / 5,424

Volunteerism						
Hours	8,500	8,500	8,500	8,010	14,564	48,074

Mutual Aid Runs						
Responses	5	7	18	29	29	88

GRAND TOTAL	
32,029 Neighbors Reached / \$315.3M	

All totals include 2011 data



ch2m



SCIENCE BOWL



SCIENCE ALLIANCE



WAI



Centrus



inSolve



EDUCATION



SCIENCE BOWL

115 teams and more than 550 high school students from the four-county area have participated in the South Central Ohio Regional Science Bowl since its beginning in 2013. This year, 32 teams and 160 students will add to those numbers and look to win an all-expense paid trip to the U.S. Department of Energy's National Science Bowl in April 2017.



SCIENCE ALLIANCE

Since 2010, more than 8,000 students, teachers and chaperones have participated in the DOE's Science Alliance. The annual educational event gives students an opportunity to get "hands-on" experience and talk directly to professionals in the fields of Science, Technology, Engineering and Math (STEM).

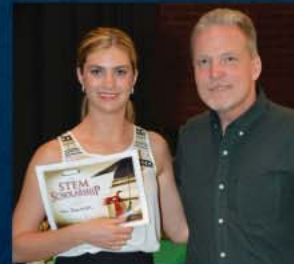


INTERNSHIPS

More than 135 college students have gained valuable experience in industry careers through the site's internship program.

Fluor-BWXT has provided \$120,000 in scholarships to 60 area students since 2012.

SCHOLARSHIPS



EMPLOYMENT

The following contractors post employment opportunities on their websites.



www.fbportsmouth.com



www.pma-iss.com



Restoration
Services, Inc.
Earth Friendly • Project Savvy

www.rsienv.com



www.insolves.com



www.duf6-mcs.com



www.wastrenadvantage.com

SUPPORTING SOUTHERN OHIO

Transferring Property for Reuse/Reindustrialization

Southern Ohio Diversification Initiative (SODI) has requested an 80-acre parcel on the east side of the reservation.

- Environmental Baseline Survey developed, reviewed by Ohio EPA
- Transfer requires DOE-Headquarters and Congressional approval
- Community sees property transfer as key component to future reindustrialization



SUPPORTING SOUTHERN OHIO

Business Grants Making an Economic Impact



\$881K



\$5.5M

Through the Joint Economic Development Initiative of Southern Ohio (JEDISO) the \$855K in FBP business opportunity grants has led to \$5.5M in matching dollars, which generated \$186M in investments creating 830 jobs and retaining an additional 5,155 jobs.*

**830 New Jobs
5,155 Retained Jobs**



\$186M

**As reported by JEDISO*

STUDENT ASER PROJECT

ANNUAL SITE ENVIRONMENTAL REPORT



The ASER report details site environmental conditions and remediation efforts.

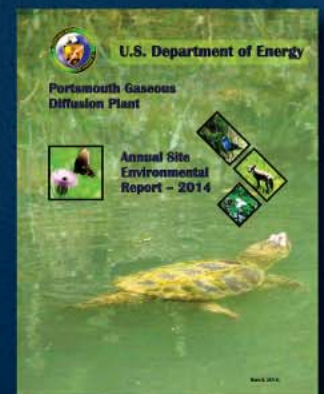
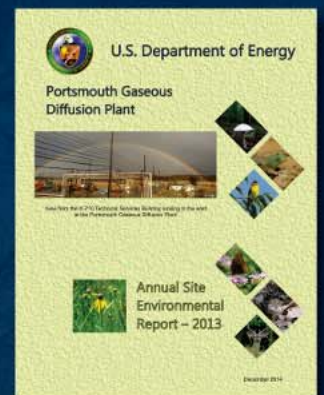
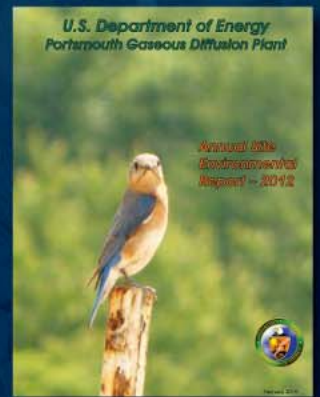
It is administered by the Ohio University Voinovich School of Leadership and Public Affairs through a DOE grant.



The project engages high school students in summarizing the technical ASER report into a document intended for a public audience.



The program is conducted every year at a Pike County High School.



Copies of the ASER can be viewed at www.fbportsmouth.com.

GET INVOLVED

SITE SPECIFIC ADVISORY BOARD



The PORTS Site Specific Advisory Board is made up of stakeholders that reside in Pike, Scioto, Jackson and Ross counties who have an interest in topics pertaining to the safe cleanup and future use of the Portsmouth site.

The U.S. Department of Energy's (DOE) Office of Environmental Management has established Site Specific Advisory Boards at DOE sites throughout the country to involve stakeholders more directly in cleanup decisions.

PORTS
SSAB



The SSAB bi-monthly full board meetings are open to the public - the dates of which are announced in public advertisements, the Federal Register, and are posted at www.ports-ssab.energy.gov. Members of the public are encouraged to attend and ask questions.

TOUR THE SITE

The Portsmouth site played an important role in the defense and energy security of our nation.



For decades, the site was closed for security reasons, but now bus tours are open to the public on a periodic basis in the spring, summer and fall.

- Saturday mornings
- Free to the public
- Must be 18 years of age
- Must be a U.S. citizen



Call 740-897-2336 to learn more.



WASTE REMOVAL

WASTE REMOVED

Significant Reductions from 2011 - 2016

Since the assumption of its contract at the PORTS site in March 2011, Fluor-BWXT has made significant strides to reduce the amount of Resource Conservation and Recovery Act (RCRA) waste. The efforts have resulted in significant reductions (225 cubic meters) during a five-year period ending March 30, 2016.



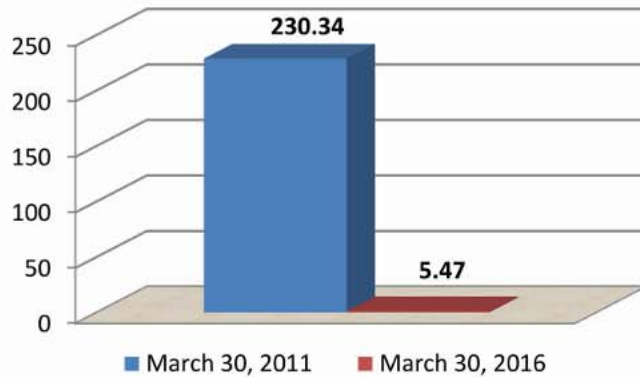
RCRA waste is hazardous and could be harmful if not handled properly.

97.6%

Reduction in RCRA
Permitted Storage Inventory*



Total Permitted Storage Volume
(in cubic meters)



*Includes 69 containers of legacy waste - each over 40 years old - that were successfully characterized and shipped.

For economic purposes, the future reuse of the DOE site will depend on the Ohio Environmental Protection Agency (OEPA) agreement to allow unfettered access to the property. In order to assure the OEPA, local businesses and potential industries to relocate and reuse the property, it must be demonstrated that all the hazardous waste/materials have been removed and identified sites are clean and treated to acceptable standards.

ASSET RECOVERY & RECYCLING

Minimizing Waste to Maximize Value



As part of the cleanup of the site, the PORTS Asset Recovery & Recycling (ARR) Program identifies eligible equipment and materials (not radiologically or chemically contaminated) for recycling and/or reuse.

RECYCLED

More than 22,600,000 pounds of scrap*, including:

- Structural steel
- Synchronous condensers
- Transformers
- Rail road track
- Gearboxes
- Electrical cable
- Motors
- Piping
- Conduit

*Since the program began in 2011



BENEFITING THE REGION

The majority of materials and items from the ARR are transferred to the Southern Ohio Diversification Initiative (SODI), DOE's recognized Community Reuse Organization. SODI then uses the proceeds from those materials and items to fund economic development projects and programs throughout the four-county region including Pike, Ross, Jackson and Scioto Counties.



FACT

SODI is governed by a 14-member Board of Directors appointed by local governments and members of the community.

The ARR has generated nearly \$6M since 2011.



REUSED

- Shop equipment
- Heavy machinery
- Passenger vehicles
- Office furniture



DECONTAMINATION AND DECOMMISSIONING

X-114A DEMOLITION

Old Firing Range Demolished as Part of OSWDF Prep Work



The X-114A Outdoor Firing Range was 220 yards long and constructed in 1988 for the site's Protective Force Officers. To maintain their qualifications, officers are required to meet standards for physical fitness and marksmanship.



3 drums with 814lbs of metal (mainly brass), was transferred to SODI from the old firing range.

Approximately 6,400 cubic yards of soil was excavated from the side and end berms and the floor of the firing range for sampling.

X-114A Lead shot, projectiles, and fragments were removed from impacted soils and were separated to the maximum extent possible from aggregate/rock for disposition as waste material.



Once the soil is treated, it can be used in the OSWDF as part of the protective layer.

X-326 DEACTIVATION

Preparing the building for D&D



Removed and shipped off-site to prepare the building for cold & dark:

- 2370 compressors
 - 2359 convertors
 - 2338 coolers
- Utilities Disconnect
- All utilities and systems

Removed residual lube oil from the pipes and tanks and added absorbent to stabilize the system to prepare for cold & dark.



FIRST COMPRESSOR SHIPPED

The last tie-line panel has been removed between the X-326 and X-330 in preparation for D&D.



TIE-LINE

X-333 DEACTIVATION

Preparations for Cold and Dark Begin



The X-333 includes 66 acres of floor space housing the largest components of enrichment process equipment on site.

Bypass panels have been removed in order to allow technicians access to the piping to perform



non-destructive assay testing. The tests will find uranium deposits that may be held up in the process equipment and piping.



DRY PIPE FIRE SUPPRESSION

45 of 80 sprinklers were compromised in the freezing weather and are being repaired.

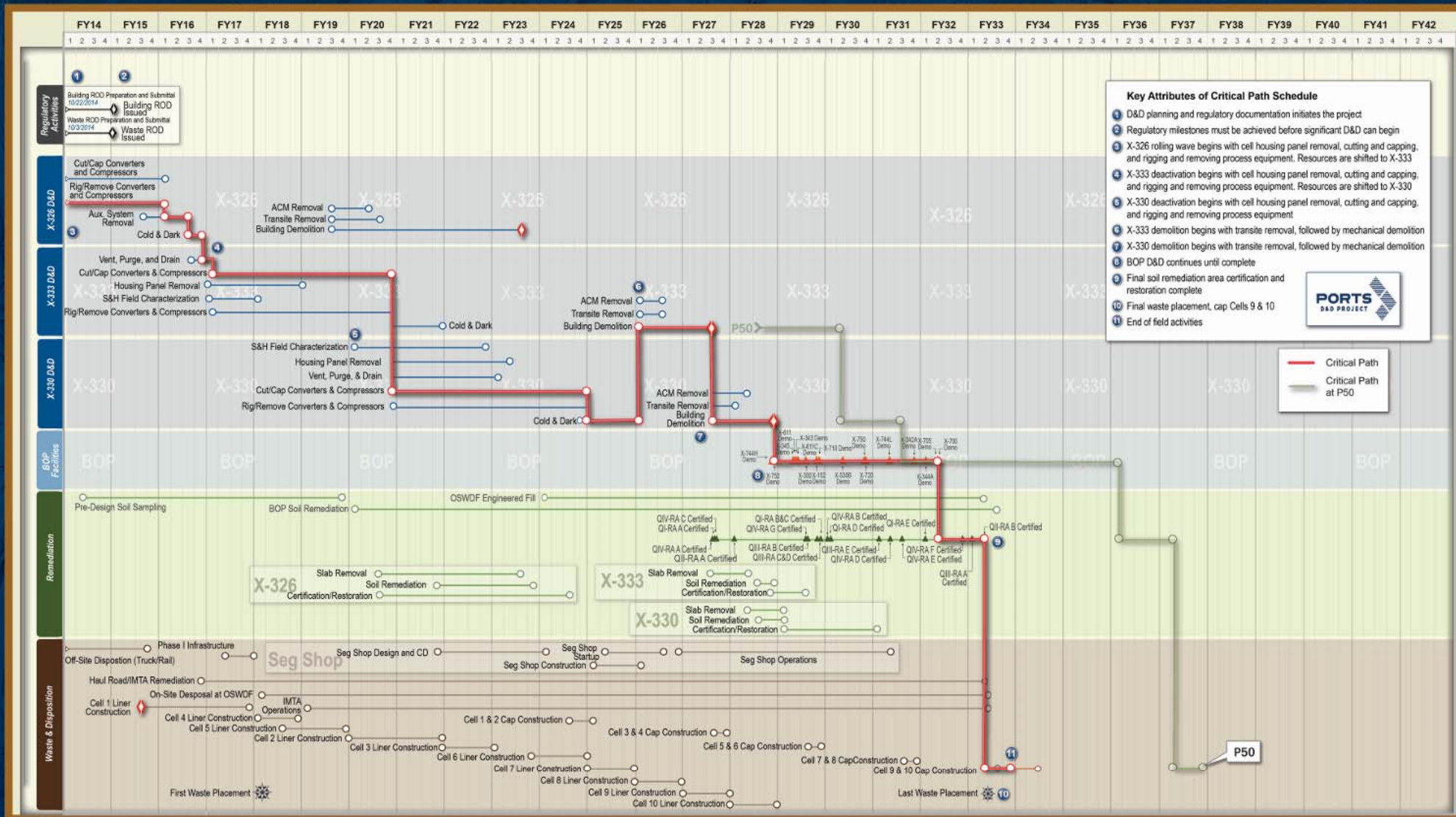
This repair is in compliance with the NFPA and OSHA safety standards.



TRANSFORMER SHIPMENT

Compressors and convertors are being removed to prepare the Material Sizing Area (MSA). The MSA area will be used to downsize the process gas components and remove Nickel for recycling.

LIFECYCLE BASELINE



SCIENCE OF SAFETY

PORTS SAFETY PROGRAM

Safety Culture Improvements

- Personal Safety Plans
- 2017 Safety Performance Objectives, Measures and Commitments
- Health & Wellness Campaigns (e.g. – smoking)
- Outstanding Safety Achievements during FY16
- Employee Safety Recognition Program
- Communications through Safety Alerts, Newsletters, Focus on Safety and Daily Safety Sheets

2017 Personal Safety Plan for:
EXAMPLE

I, Floor-BMW, am committed to quality and carrying out the PORTS D&D mission safely. Last 3 to 5 performance objectives that support the safety and Quality of project, your customer, the environment and JEP activities:

My Safety Plan
Safety is a core value for myself and Floor-B&W. I will:

- Attend 10 Safety Work Group Meetings (AM)
- Engage in the work of my process and conduct 3 safety walkdowns per month (Supervisors)
- Ensure my understanding of the hazards and controls for my work (AM)
- Use designated walkways when possible (AM)
- Employ safety standards for PPE for work at height as per my OSHA 10 work (AM)

My Quality Plan
I share Floor-B&W's commitment to quality and excellence. I will:

- Vary processes and integrity of my tools and equipment before each use (AM)
- Initiate "stop work" authority for items of moment (AM), potential or quality affecting items (AM)
- Lead 5 pre-work walkdowns and share my experiences that improve the work (Supervisors)
- Participate in 3 work planning walkdowns and share my experiences that improve quality of work (AM)
- Understand full meaning of signatures before I complete them on any work documents (AM)

I have personally developed the following PSP and reviewed it with my supervisor as part of my OSHA Performance Plan.

Employee Signature

Supervisor Signature

SAFETY WORKS **PORTS D&D PROJECT**

SAFETY WORKS

Nuclear Facility Safety Tenets

- ✓ Procedure Compliance
- ✓ Questioning Attitude
- ✓ Willingness to Stop
- ✓ Personal Accountability

PORTS D&D PROJECT

OUTSTANDING!!

FY16 Safety Achievements

365 - Safe Work Days!

4 Times - Over 1 Million Safe Work Hours! 2 Times - Improvement in "Safety Culture!"

2 Times - Over 2 Million Safe Work Hours! 3 Times - Reduction in TRC Injury Rate!

Lowest FBPTC EVER!

Thanks FBPTC Team!

SAFETY WORKS

Alert

X-106B PARKING LOT VEHICLE ACCIDENT

On January 11, 2017, a vehicle accident occurred in the X-106B parking lot. The vehicle involved was a 2015 Ford Focus. The accident resulted in property damage and a minor injury to the driver. The cause of the accident was determined to be the driver's failure to yield to a pedestrian crossing the road. The driver was cited for violating the traffic code. The accident was investigated by the Safety Office and the results were shared with the project team. The project team is working to improve safety in the parking lot by installing additional signage and lighting.

TRC/FBPTC

SAFETY AWARD

YOU'RE THE KEY TO SAFETY!

Nuclear Facility Safety Tenets:

- Procedure Compliance
- Questioning Attitude
- Willingness to Stop
- Personal Accountability

Post

Signature

\$20.00

Focus on Safety

WALK ON DESIGNATED WALKWAYS AS MUCH AS POSSIBLE

ICE & SNOW CORNER

Winter Walking Safety

- Wear walking shoes with good traction and avoid walking on icy or slippery surfaces.
- Use handrails on stairs and ladders.
- Take a safety break to stretch and warm up.
- Use caution when carrying equipment or materials.
- Use caution when driving or operating equipment in winter weather.

SAFETY WORKS

DAILY SAFETY SHEET

Vol. 5, Issue 51 • Monday, January 9, 2017

TRC/FBPTC

SAFE DRIVING AT PORTS

TRC/FBPTC REMINDER

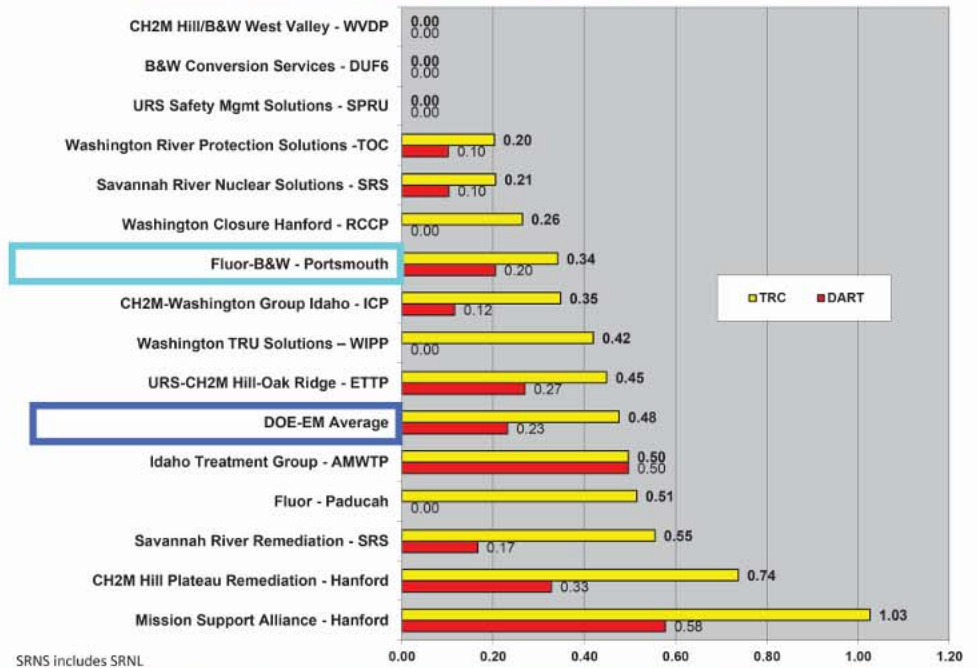
Please take safety-related issues to TRC/FBPTC at 1000 S. 10th Street, 2nd Floor, Denver, CO 80202. For more information, visit www.ports.gov.

PORTS SAFETY RATES VS. INDUSTRY STANDARDS

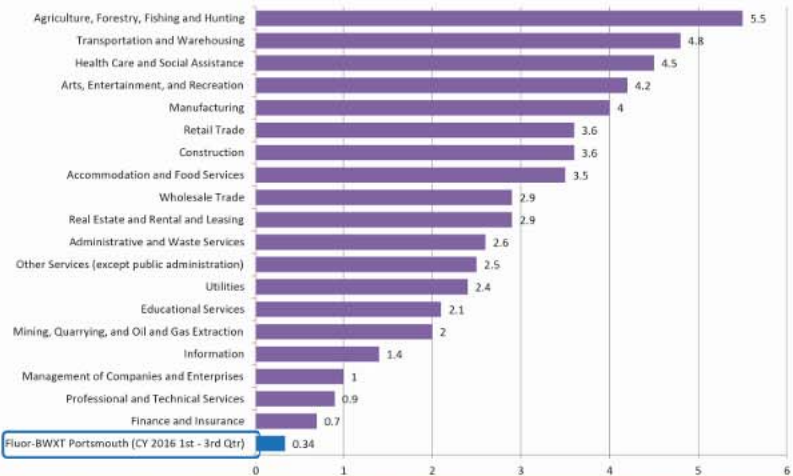
Fluor-BWXT has a better (lower) injury rate than most other DOE Sites

DOE-EM Prime Contractor Safety Ranking CY 2016 First thru Third Quarter

(Includes Contractors with > 200 Direct Operations and Construction Employees & Subcontractors)



Incident Rates of Nonfatal Occupational Injuries and Illnesses by Private Industry Sector, 2015



Fluor-BWXT has a lower injury rate than all of the listed private industries.