



2022 Annual Site Environmental Report (ASER)

Portsmouth Site Specific
Advisory Board (SSAB)

November 2, 2023

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U.S. Department of Energy





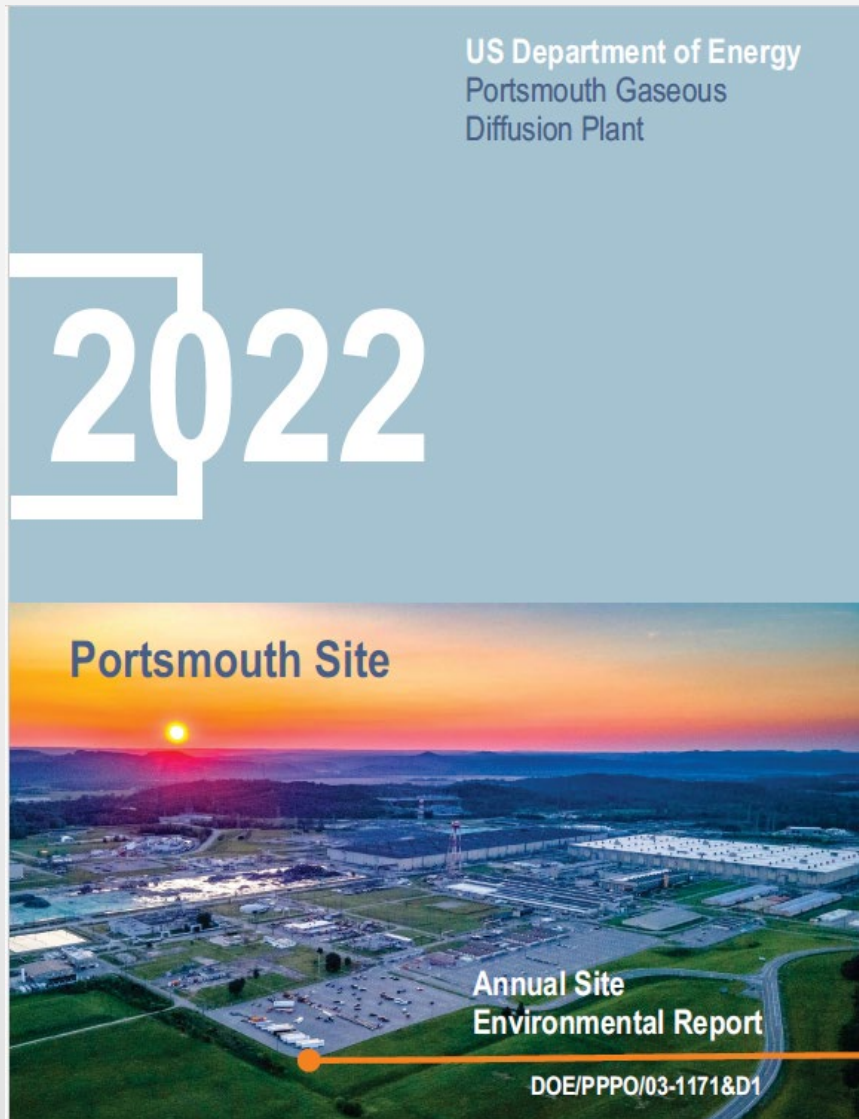
Annual Site Environmental Report (ASER)



In accordance with DOE Order 231.1B, *Environment, Safety and Health Reporting*, DOE prepares an Annual Site Environmental Report (ASER), which offers a detailed overview of environmental activities at the Portsmouth Site.



Annual Site Environmental Report (ASER)



The ASER is a key component in DOE's outreach effort to keep the public informed about environmental conditions at the Portsmouth Site.



2022 Environmental Monitoring

Environmental Sampling Includes...



Crops



Surface Water



Groundwater



Ambient Air



Soil



Wildlife

Each year more than 10,000 sample results are utilized from both on and off site sources.



Co-Located Monitors



- DOE worked with OEPA and ODH to co-locate a total of 23 air monitoring stations
- In addition to DOE's data, OEPA and ODH air monitors will provide independent confirmation of air quality data during demolition work





Air Monitoring

- Ambient air monitoring stations measure
 - Radionuclides released from DOE cleanup work
 - Fugitive air emissions
 - Background levels of radionuclides
- 18 radiation monitoring locations are utilized
 - Co-located with Ohio Department of Health
 - Additional 7 locations at the OSWDF

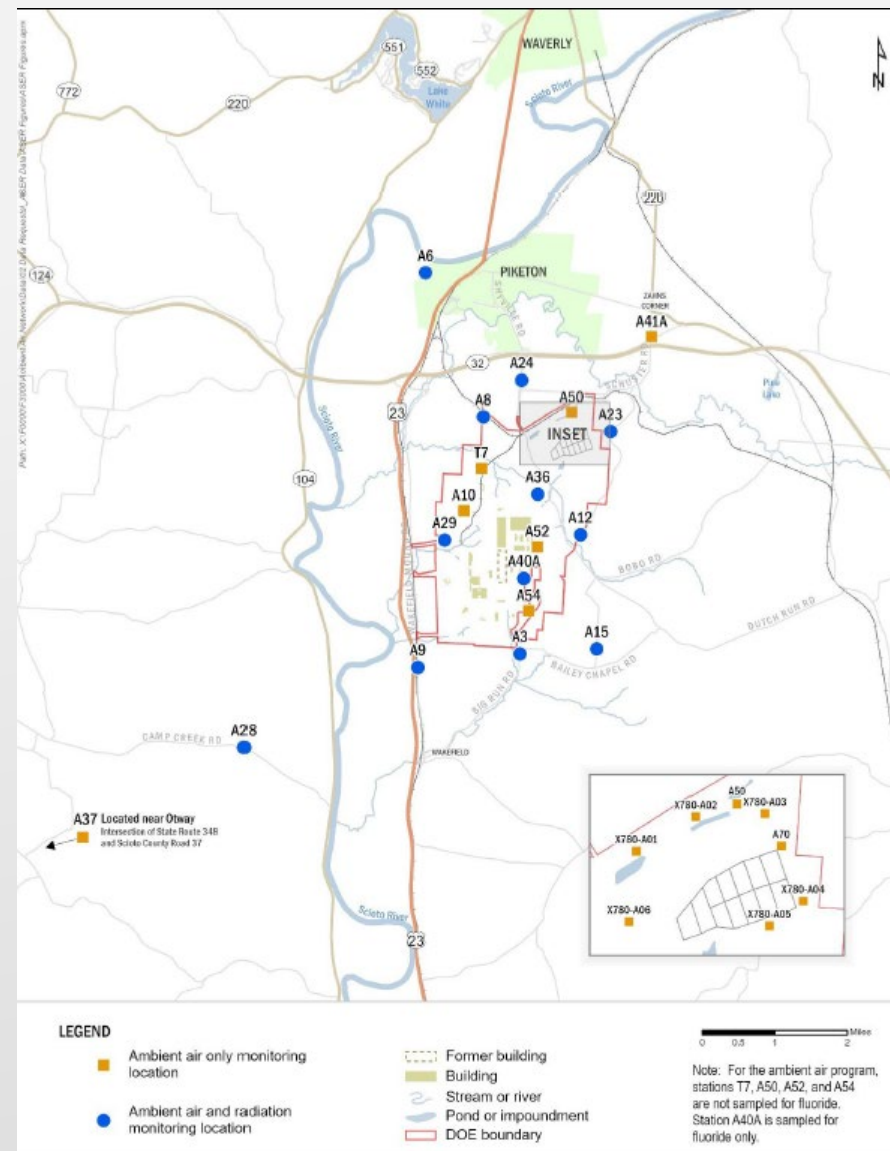


Figure 4.2. Ambient air and radiation monitoring locations from 2022 ASER



2022 Additional Air Monitoring

- 5 DOE and Ohio EPA co-located locations
 - monitor non-radionuclides that may be released
- Additional project-specific air monitors for D&D areas

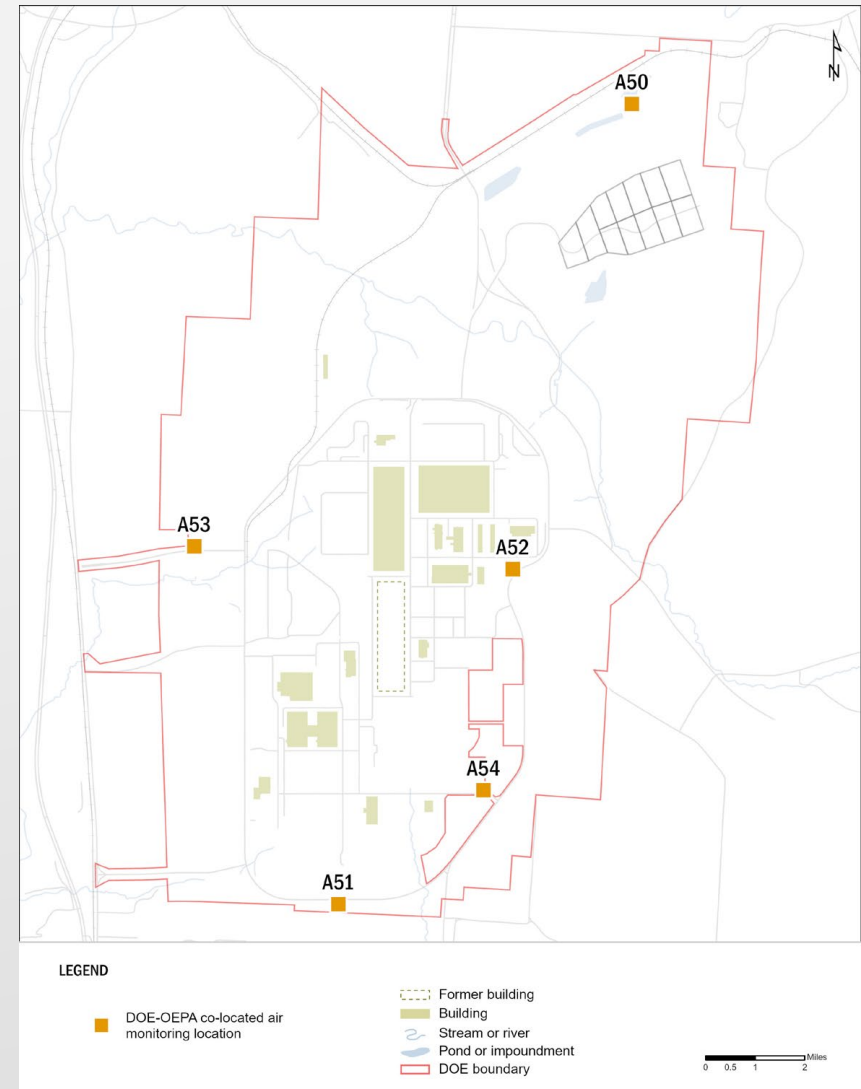


Figure 5.2. DOE/Ohio EPA air monitoring stations from 2022 ASER



Surface Water and Sediment

- Surface water and sediment samples measure radionuclides released from DOE and naturally occurring radionuclides.
- Samples taken from Scioto River, local creeks, and background locations.

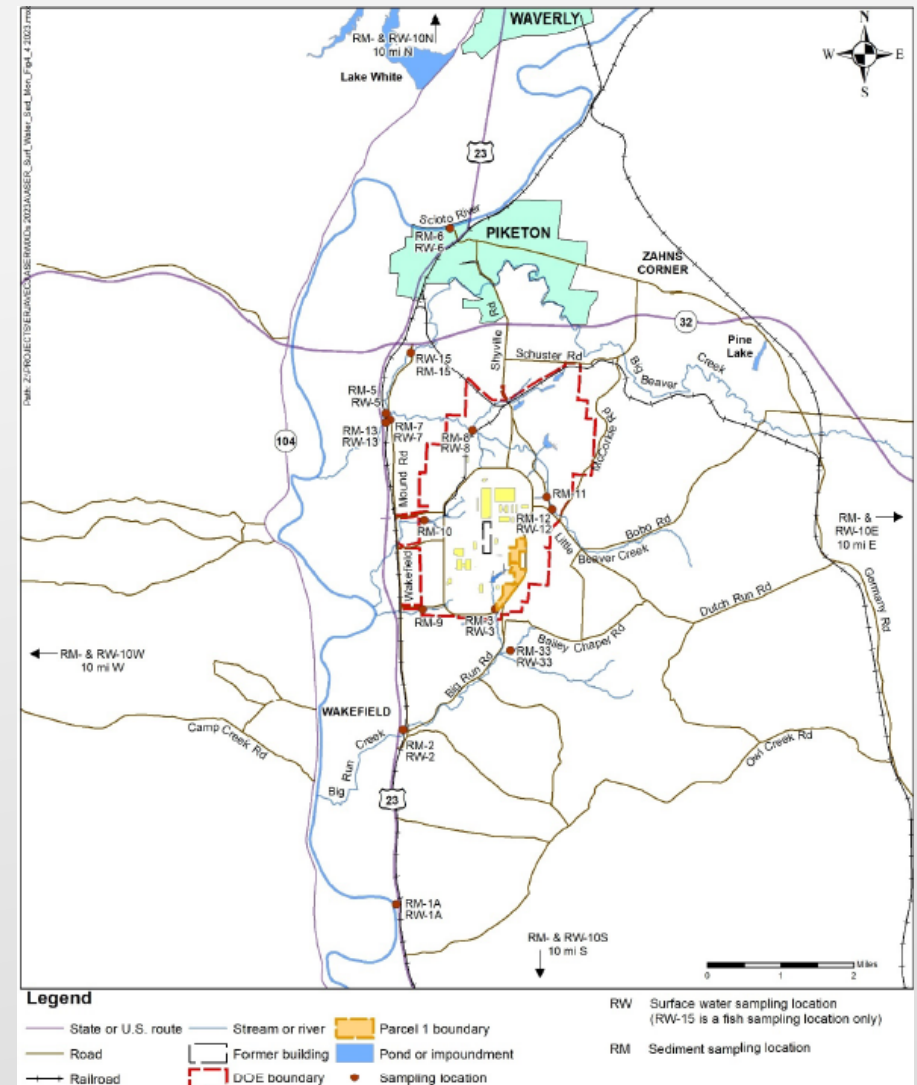


Figure 4.5 Local surface water and sediment monitoring locations from 2022 ASER



Soil

- Soil samples measure radionuclides released from DOE and naturally occurring radionuclides.
- Soil samples are collected at the ambient air monitoring locations.

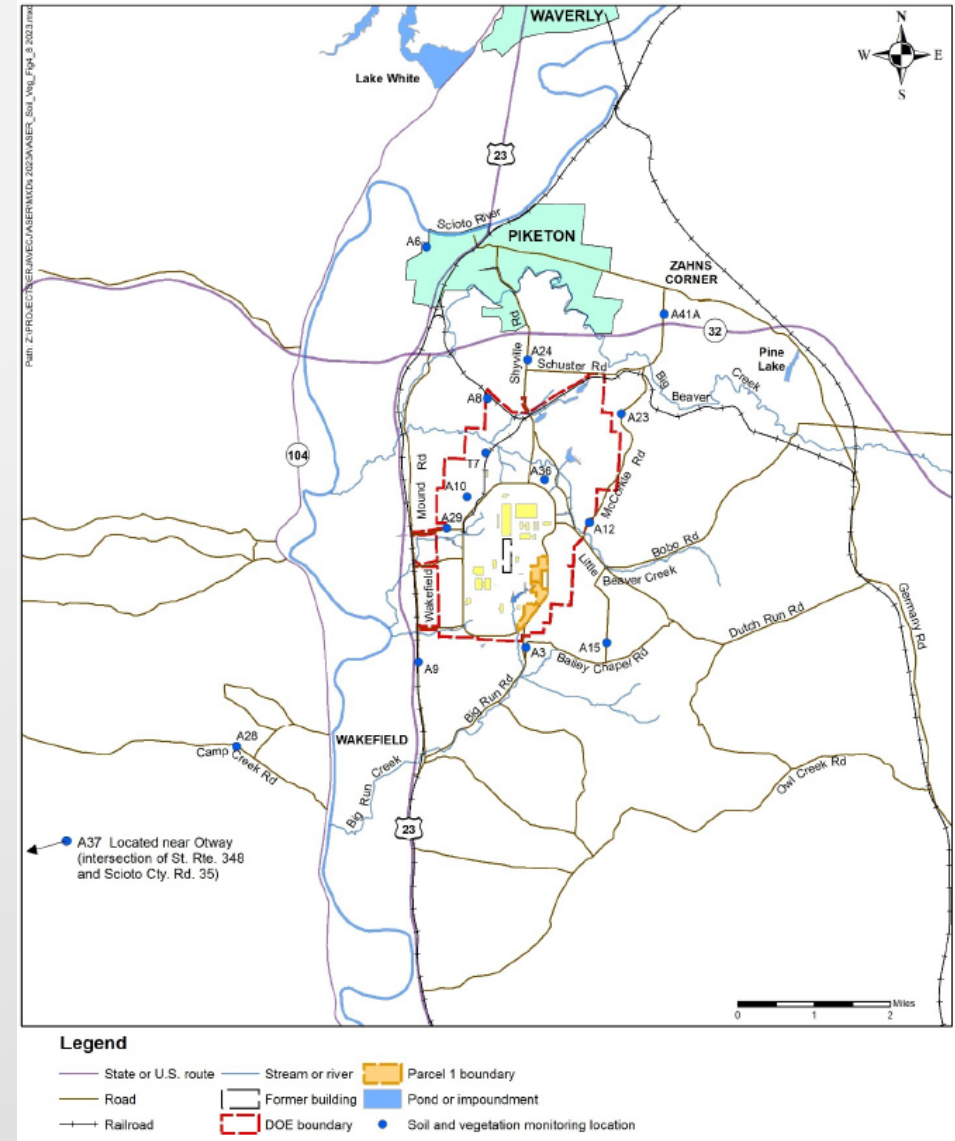


Figure 4.6 Soil and vegetation monitoring locations from 2022 ASER



Crops and Wildlife

- Crop samples are provided on a voluntary basis by neighboring residents.
- Local wildlife samples are obtained when available.





2022 Environmental Risk Summary

- The sampling results are compiled for a dose calculation.
- The calculated radiation dose that could be received by a member of the public from activities at the Portsmouth Site was 0.09 millirem (mrem), compared to the DOE annual dose limit of 100 mrem.

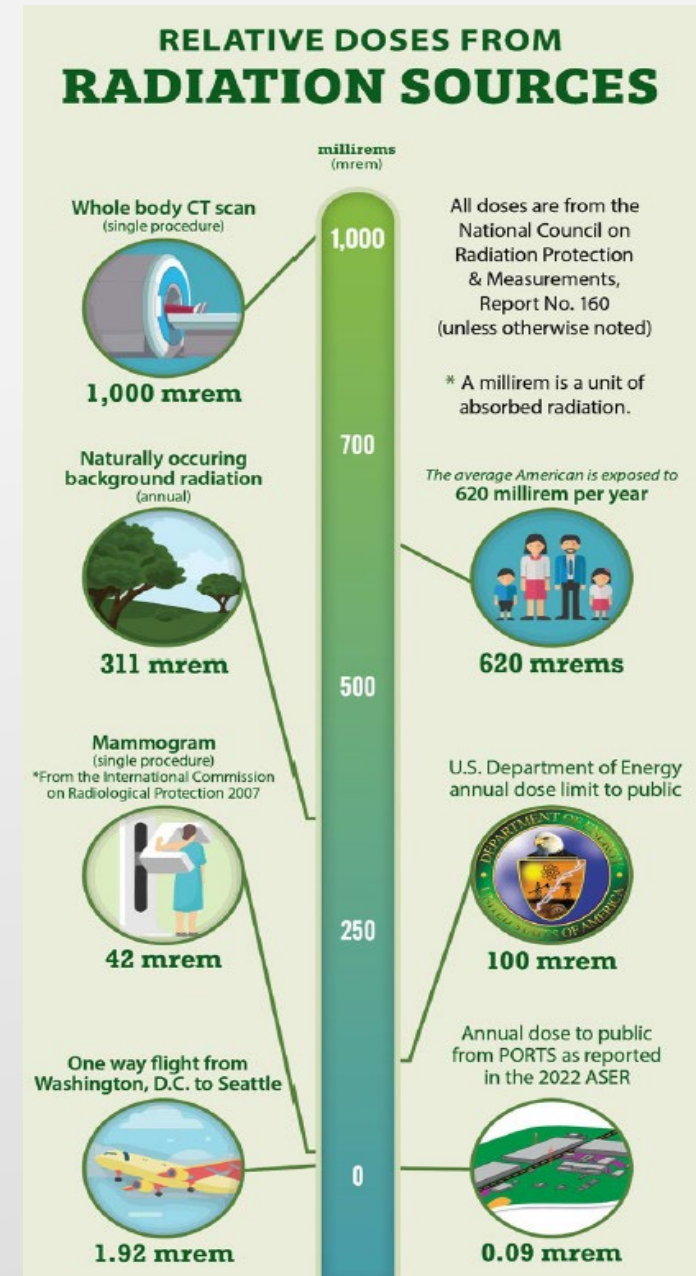


Figure ES.2. Relative doses from radiation sources from 2022 ASER



2022 Environmental Summary

- Notice of violation from Ohio EPA - September 14, 2022
- DOE self-reported the issue
- Ohio EPA considered the issue resolved due to
 - prompt action & self-reporting
 - no evidence of a release

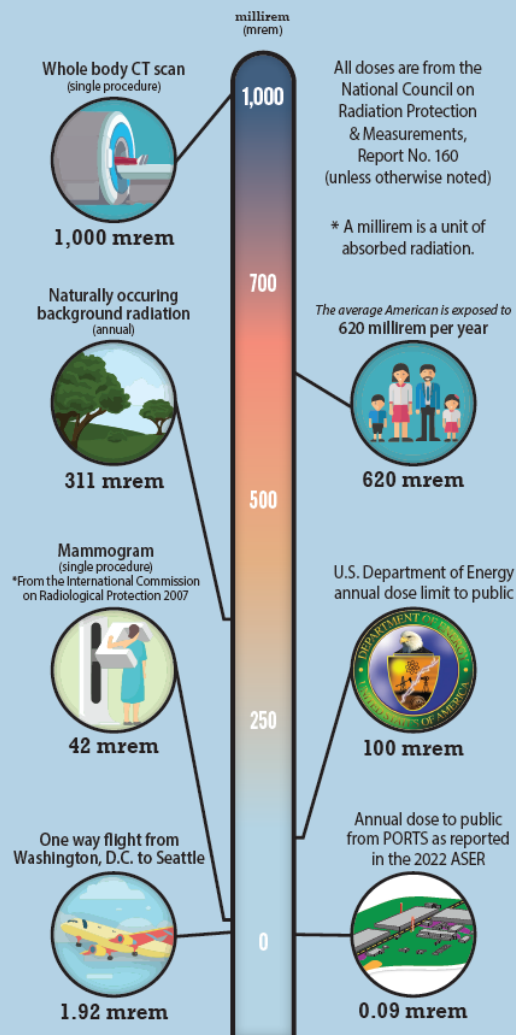
Table 2.4 Environmental inspections of DOE activities at PORTS for 2022 from 2022 ASER

Date	DOE contractor	Agency	Type	Notices of Violation
July 14	FBP	Ohio EPA	Air permit compliance evaluation	None
September 1	FBP	Ohio EPA	RCRA compliance	None
September 1	FBP	Ohio EPA	Closed solid waste management units	None
October 6	FBP	Ohio EPA and Pike County Health District	Closed solid waste landfills	None



Public Outreach – ASER Summary Mailer

RELATIVE DOSES FROM RADIATION SOURCES



What did sampling find?

Environmental data published in the 2022 ASER is consistent with previous years indicating that radionuclides, metals, and other chemicals released by PORTS have minimal effect on human health and the environment. All results found are below the limits set by state and federal environmental laws.

But radiation levels are not zero?

That's right, because radiation occurs everywhere. Most occurs naturally, it's called background radiation. Some sources of background radiation include natural minerals, radon in the air and potassium in food.

According to the National Council on Radiation Protection and Measurements, the average American is exposed to 620 millirem per year. About half of that comes from background radiation, the rest comes from human-made radiation like diagnostic medical tools and equipment, even some watches, clocks and smoke detectors.

The Department of Energy has established a total public annual dose limit of 100 millirems per year above background.

The 2022 ASER reports the total annual dose was much less at 0.09 millirem per year.

Environmental Monitoring Data Now Available Online through PEGASIS

Interested stakeholders now have access to dynamic mapping and environmental monitoring data at the Portsmouth site through the Portsmouth/Paducah Project Office (PPPO), Environmental Geographic Analytical Spatial Information System, or PEGASIS.

PEGASIS is a powerful and customizable tool developed in response to input from stakeholders, regulatory agencies and the public who asked for faster reporting of air monitoring data at the site. PEGASIS will continue to be updated with ambient and independent air monitoring data on a quarterly basis. All other environmental data will be updated annually along with the publication of the ASER.



Go to pegasis.ports.pppo.gov/pegasis.

How do we monitor to protect our community?

Environmental monitoring includes more than 10,000 sampling results from the collection of air, water, soil, sediment, and biota (vegetation, deer, fish, crops, milk, and eggs) on and off site.

The monitoring goes on throughout the year to ensure operations protect human health and the environment by complying with all state and federal regulations.

Environmental Sampling Includes...



Annual Site Environmental Report (ASER)

- The Annual Site Environmental Report, ASER, is prepared annually for the public. It is a comprehensive summary of environmental activities and monitoring data from the U.S. Department of Energy's Portsmouth Gaseous Diffusion Plant.

- Current and past copies of the ASER are available to the public at:



- Online at eic.ports.pppo.gov

- DOE Environmental Information Center (EIC) at the OSU Endeavor Center, 1864 Shyville Road, Piketon, Ohio

EIC Hours of Operation

- Monday & Tuesday
9:00 – 12:00
- Wednesday & Thursday
12:00 – 4:00

If needed, after-hour appointments shall be available.

Local Libraries

Copies of the 2022 ASER will be available in late 2023 at public libraries in Jackson, Pike, Ross & Scioto counties.



Public Outreach – Online

- Online version available at:
 - eic.ports.pppo.gov
 - portsdemo.com
- Detailed data available at:
 - pegasis.ports.pppo.gov/pegasis
 - portsdemo.com

PPPO Environmental Geographic Analytical Spatial Information System


Welcome to the Portsmouth version of PEGASIS!
PEGASIS was designed to provide dynamic mapping and environmental monitoring data display for the
U.S. Department of Energy (DOE) - Portsmouth/Paducah Project Office (PPPO).

Site GIS Viewer

Analytical Data
and Plotting

Well and Bore
Logs

Environmental
Reports



What is
PEGASIS?


Public
Documents


User
Instructions

Paducah
PEGASIS

Contact Information:
[Site Admin](#)

PREPARING THE FUTURE
PORTS
D&D PROJECT

 **U.S. DEPARTMENT OF
ENERGY**

 Portsmouth Gas Diffusion Plant
VIRTUAL MUSEUM

"Please Note: The system is best viewed with Google Chrome. Some compatibility issues have been found with some versions of Internet Explorer."



Public Outreach – Print

- Printed copies of the full ASER report available at:
 - Public libraries in Pike, Ross, Jackson, & Scioto counties
 - DOE Environmental Information Center (EIC) at the OSU Endeavor Center





Public Outreach – Student ASER

- Partnership with Ohio University Voinovich School of Leadership and Public Service
- ASER 12 with Waverly High School students recently printed
- Northwest and Eastern High Schools participating for Student ASER 13 to summarize 2021 ASER

*Summary of the U.S. Department
of Energy Portsmouth Annual Site
Environmental Report (ASER) for 2020*

