



## U.S. DEPARTMENT OF ENERGY PORTSMOUTH GASEOUS DIFFUSION PLANT

3930 U.S. Route 23 South  
Piketon, OH 45661

# ASER Summary...



Detailed information and results on more than 10,000 environmental samples on and around the former Portsmouth Gaseous Diffusion Plant in Pike County.

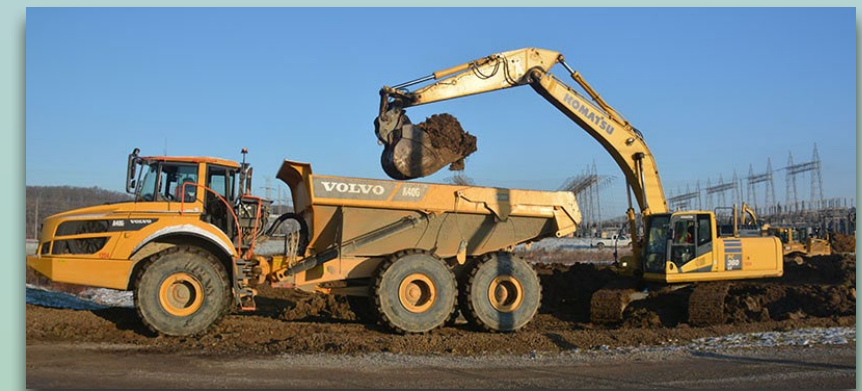
- All results are below limits set by U.S. and Ohio environmental laws.
- Includes data from air, water, soil, sediment, vegetation, wildlife, crops, milk and eggs.
- Average American receives 620 millirems of radiation in one year from natural and man-made sources; annual dose from Portsmouth plant is 0.95 millirem.

## Protecting Our Employees, Community, and Environment

The U.S. Department of Energy is dedicated to ensuring communities near our facilities are safe for our workers, our neighbors, and our environment.

The Annual Site Environmental Report (ASER) summarizes the environmental monitoring and compliance activities at the U.S. Department of Energy Portsmouth Gaseous Diffusion Plant (PORTS) for 2019.

The Department of Energy is responsible for the environmental cleanup of the former gaseous diffusion facility which enriched uranium for defense and commercial uses.



**UPDATED**  
**2019 Annual Site**  
**Environmental**  
**Report Now**  
**Available**

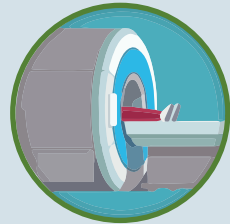




# RELATIVE DOSES FROM RADIATION SOURCES

millirems (mrem)

Whole body CT scan (single procedure)



1,000 mrem

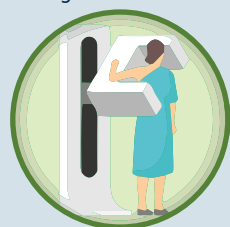
Naturally occurring background radiation (annual)



311 mrem

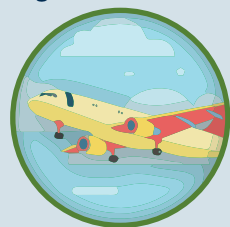
Mammogram (single procedure)

\*From the International Commission on Radiological Protection 2007



42 mrem

One way flight from Washington, D.C. to Seattle



1.92 mrem

1,000

700

500

250

0

All doses are from the National Council on Radiation Protection & Measurements, Report No. 160 (unless otherwise noted)

\* A millirem is a unit of absorbed radiation.

The average American is exposed to 620 millirem per year



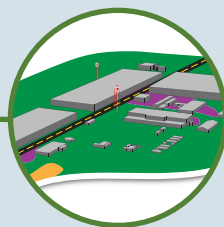
620 mrem

U.S. Department of Energy annual dose limit to public



100 mrem

Annual dose to public from PORTS as reported in the 2019 ASER



0.95 mrem

## What did sampling find?

Environmental data published in the 2019 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 2019 ASER reports the total annual dose was much less at 0.95 millirem per year.

## Environmental Monitoring Data Now Available On Line 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. Beginning in summer 2021, PEGASIS will be also 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. The 2019 ASER will be published in early 2021.



Go to [pegasis.ports.pppo.gov/pegasis](http://pegasis.ports.pppo.gov/pegasis) to see 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...



Crops



Surface Water



Groundwater



Ambient Air



Soil



Wildlife

## 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](http://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

\* Hours may be temporarily impacted by COVID-19

If needed, after-hour appointments shall be available.

## Local Libraries

Copies of the 2019 ASER will be available in early 2021 at public libraries in Jackson, Pike, Ross & Scioto counties.