

# U.S. Department of Energy

## Portsmouth Annual Environmental Data for 2006

*The changing mission  
of the Portsmouth  
Gaseous Diffusion  
Plant . . .*



*Shutdown of the gaseous diffusion uranium enrichment process and demolition of structures no longer needed such as the X-616 Liquid Effluent Control Facility*



*Construction of the Depleted Uranium Hexafluoride Conversion Facility*



*Removal of wastes from the X-7725 Building for construction of the USEC American Centrifuge uranium enrichment facility*

**U.S. Department of Energy  
Portsmouth Annual Environmental Data  
for 2006  
Piketon, Ohio**

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# CONTENTS

TABLES .....	v
ACRONYMS .....	vii
1. INTRODUCTION .....	1-1
2. ENVIRONMENTAL MONITORING .....	2-1
3. DOSE .....	3-1
4. GROUNDWATER .....	4-1

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## TABLES

2.1	Radionuclide concentrations in DOE and USEC NPDES outfall water samples – 2006 .....	2-2
2.2	DOE NPDES permit summary – 2006 .....	2-5
2.3	DOE NPDES discharge and compliance rates – 2006.....	2-6
2.4	USEC NPDES discharge monitoring results – 2006 .....	2-8
2.5	Radionuclides and PCBs in surface water runoff samples from DOE depleted uranium cylinder storage yards – 2006 .....	2-11
2.6	Drainage basin monitoring of surface water and sediment for DOE depleted uranium cylinder storage yards – 2006 .....	2-14
2.7	Ambient air monitoring program summary for radionuclides and fluoride – 2006.....	2-16
2.8	DOE environmental radiation monitoring program (mrem) – 2006.....	2-20
2.9	Environmental radiation monitoring (mrem) at locations near DOE depleted uranium cylinder storage yards – 2006 .....	2-21
2.10	Local surface water monitoring program results for chemical and radiological parameters – 2006.....	2-22
2.11	Sediment monitoring program results – 2006.....	2-28
2.12	Soil and vegetation monitoring at ambient air monitoring stations – 2006 .....	2-34
2.13	Biota (fish) monitoring program results – 2006.....	2-37
2.14	Biota (crops) monitoring program results – 2006.....	2-38
2.15	Off-site dairy monitoring – 2006 .....	2-39
3.1	Emissions (Ci/year) from DOE PORTS air emission sources – 2006.....	3-1
3.2	Predicted radiation doses from airborne releases at PORTS – 2006 .....	3-2
3.3	Dose calculations for ambient air monitoring stations – 2006.....	3-2
4.1	Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2006.....	4-4
4.2	Results for radionuclides at the X-749/X-120/PK Landfill – 2006 .....	4-13
4.3	Volatile organic compounds detected at the Quadrant I Groundwater Investigative Area – 2006.....	4-17

4.4	Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2006 .....	4-21
4.5	Volatile organic compounds detected at the Quadrant II Groundwater Investigative Area – 2006.....	4-31
4.6	Results for radionuclides at the Quadrant II Groundwater Investigative Area – 2006 .....	4-33
4.7	Volatile organic compounds detected at the X-701B Holding Pond – 2006 .....	4-39
4.8	Results for radionuclides at the X-701B Holding Pond – 2006.....	4-43
4.9	Results for chromium at the X-633 Pumphouse/Cooling Towers Area – 2006.....	4-51
4.10	Volatile organic compounds detected at the X-616 Chromium Sludge Surface Impoundments – 2006 .....	4-52
4.11	Results for chromium at the X-616 Chromium Sludge Surface Impoundments – 2006 .....	4-53
4.12	Results for radionuclides at the X-616 Chromium Sludge Surface Impoundments – 2006 .....	4-54
4.13	Volatile organic compounds detected at the X-740 Waste Oil Handling Facility – 2006 .....	4-56
4.14	Results for radionuclides at the X-740 Waste Oil Handling Facility – 2006.....	4-58
4.15	Results for beryllium and chromium at the X-611A Former Lime Sludge Lagoons – 2006.....	4-61
4.16	Results for radionuclides at the X-735 Landfills – 2006 .....	4-62
4.17	Volatile organic compounds detected at the X-734 Landfills – 2006.....	4-67
4.18	Results for radionuclides at the X-734 Landfills – 2006 .....	4-68
4.19	Results for cadmium, cobalt, and nickel at the X-533 Switchyard Area – 2006 .....	4-72
4.20	Volatile organic compounds detected at surface water monitoring locations – 2006.....	4-73
4.21	Results for radionuclides at surface water monitoring locations – 2006 .....	4-75
4.22	Results for radionuclides at exit pathway monitoring locations – 2006 .....	4-78

## ACRONYMS

°C	degrees Celsius
Ci	curie
cm	centimeter
DCG	derived concentration guide
DOE	U.S. Department of Energy
DOE PORTS	facilities operated by the DOE (not leased to USEC) at the Portsmouth Gaseous Diffusion Plant
EPA	Environmental Protection Agency
g	gram
GWTF	groundwater treatment facility
kg	kilogram
km	kilometer
L	liter
m	meter
m <sup>3</sup>	cubic meter
μg	microgram
mg	milligram
MGD	million gallons per day
mrem	millirem
na	not analyzed
ND	not detected
ng	nanogram
NPDES	National Pollutant Discharge Elimination System
PCB	polychlorinated biphenyl
pCi	picocurie
PK	Peter Kiewit
PORTS	Portsmouth Gaseous Diffusion Plant
SU	standard unit
SW	surface water
TUa	acute toxicity unit
USEC	United States Enrichment Corporation
VOC	volatile organic compound



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# 1. INTRODUCTION

Environmental monitoring at the Portsmouth Gaseous Diffusion Plant (PORTS) is conducted throughout the year. Monitoring demonstrates that the site is a safe place to work, that plant operations do not adversely affect neighboring communities, and that activities comply with federal and state regulations.

This document is a compilation of the environmental monitoring data for calendar year 2006 and is intended as a tool for analysts in environmental monitoring, environmental restoration, and other related disciplines. The data in this document form the basis for the summary information in the *Portsmouth Annual Environmental Report for 2006* (DOE/PPPO/03-0045&D1).

Radiological monitoring data presented in this Data Report and discussed in the *Annual Environmental Report for 2006* indicate that the maximum dose a member of the public could receive from radionuclides released by PORTS in 2006 or detected by environmental monitoring programs in 2006 is 4.6 millirem (mrem), which is significantly less than the 100 mrem limit set by the Department of Energy (DOE).

Other non-radiological chemicals such as polychlorinated biphenyls (PCBs), metals, and volatile organic compounds are also monitored. Discharges of metals and other chemicals to surface water are controlled by National Pollutant Discharge Elimination System (NPDES) permits. None of the discharge limitations in these permits were exceeded during 2006. The *Annual Environmental Report for 2006* provides more information about non-radiological chemicals released from PORTS or detected by PORTS monitoring programs during 2006.

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