

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH

OFFICE OF RADIOLOGICAL HEALTH
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**ENVIRONMENTAL
RADIATION
MONITORING
PROGRAM**

**2026
Second and Third Quarter
Report**



Sampling Locations for Surry & North Anna Nuclear Power Station*



Surry Power Station



North Anna Power Station

Air		
SPS-A-1	Surry Power Station	Beta Air Filter Gamma Charcoal and Filter
SPS-A-2	Jamestown	Beta Air Filter Gamma Charcoal and Filter
PSP-A-1	Pocahontas State Park	Beta Air Filter Gamma Charcoal and Filter
NAPS-A-1	Louisa County (outside North Anna Power Station)	Beta Air Filter Gamma Charcoal and Filter
NAPS-A-2	Bumpass Volunteer Fire Station	Beta Air Filter Gamma Charcoal and Filter
Water		
SPS-W-1	Surry Power Station Discharge Canal	Gamma, Tritium
SPS-W-2	James River @ Robious Landing	Gamma, Tritium
SPS-W-3	James River @ Lawnes Creek	Gamma, Tritium
NAPS-W-1	North Anna Power Station Discharge Canal	Gamma, Tritium
NAPS-W-2	North Anna River @ Rt 651	Gamma, Tritium
NAPS-W-3	Pleasants Landing	Gamma, Tritium

*Variations in sampling frequency reflect the temporary decommissioning of the mobile laboratory for routine refurbishment and upgrades.

Other Sample Types for Surry & North Anna Power Stations

Sample	Location	Description	Frequency
SILT			
SPS-S-1	James River – 1 ½ Mile Off Discharge Canal	Silt	2x per year
NAPS-S-1	Waste Treatment Shoreline Soil	Soil	2x per year
FISH			
NAPS-F-1	North Anna Lake – Second Cooling Lagoon	Edible Fish	2x per year
SPS-F-1	James River – .5 miles off Discharge Canal	Edible Fish	2x per year
SPS-R-1	James River- Various Locations	Shellfish	Annually
MILK			
SPS-M-1	Williamsburg - MO Smith Farm	Raw	2x per year
VEGETATION			
SPS-V-1	Surry County – various locations	Edible Vegetation	2x per year
NAPS-V-1	Louisa County – various locations	Edible Vegetation	2x per year

Dosimetry Locations for Surry & North Anna Power Stations

Dosimetry	Station	Frequency	Description
Jamestown – Historical site	SPS-D-1	Quarterly	Gamma in Air
Williamsburg – Airport	SPS-D-2	Quarterly	Gamma in Air
Williamsburg – Busch Gardens	SPS-D-3	Quarterly	Gamma in Air
Newport News - Lee Hall	SPS-D-4	Quarterly	Gamma in Air
Naval Weapons Station – 1	SPS-D-5	Quarterly	Gamma in Air
Newport News – Fort Eustis	SPS-D-6	Quarterly	Gamma in Air
Surry – Route 628	SPS-D-7	Quarterly	Gamma in Air
Surry – Lawnes Creek	SPS-D-8	Quarterly	Gamma in Air
Surry Power Station	SPS-D-9	Quarterly	Gamma in Air
Surry – Hog Point	SPS-D-10	Quarterly	Gamma in Air
Surry – Bacon’s Castle	SPS-D-11	Quarterly	Gamma in Air
Surry – Alliance	SPS-D-12	Quarterly	Gamma in Air
Surry – Scotland Wharf	SPS-D-13	Quarterly	Gamma in Air
Surry – Surry County Courthouse	SPS-D-14	Quarterly	Gamma in Air
Louisa County - Mineral	NAPS-D-1	Quarterly	Gamma in Air
Louisa County – Wares Crossroads	NAPS-D-2	Quarterly	Gamma in Air
Louisa County – Good Hope Church	NAPS-D-3	Quarterly	Gamma in Air
Spotsylvania – Route 713	NAPS-D-4	Quarterly	Gamma in Air
Spotsylvania Route 614	NAPS-D-5	Quarterly	Gamma in Air
Spotsylvania – Levy	NAPS-D-6	Quarterly	Gamma in Air
Louisa County – Bumpass Fire Dept.	NAPS-D-7	Quarterly	Gamma in Air
Louisa County – Fred Hall	NAPS-D-8	Quarterly	Gamma in Air
Louisa County – Aspen Hill	NAPS-D-9	Quarterly	Gamma in Air
Louisa County – Route 685	NAPS-D-10	Quarterly	Gamma in Air
Louisa County – Route 700	NAPS-D-11	Quarterly	Gamma in Air
North Anna Power Station	NAPS-D-12	Quarterly	Gamma in Air
Pocahontas State Park (Control)	PSP-D-1	Quarterly	Gamma in Air
Radiological Health	ORH-D-1	Quarterly	Gamma in Air
Radiological Health	ORH-D-2	Quarterly	Gamma in Air

Other Sample Locations*

Newport News Shipbuilder – Surface Water and Silt
Norfolk Naval Shipyard – Surface Water and Silt
Babcock and Wilcox – Air Particulate

*Sample frequency to be determined

NO DETECTABLE RESULTS "NDR"

In order for a nuclide to be identified in the spectrum and entered into this report, constraints set by the HPGe analysis software need to be satisfied and the results of the confidence index calculation must be greater than the threshold (usually 0.3).

For the maximum confidence index, the following conditions need to be met.

- The nuclide energy peak needs to be within the energy tolerance of the library lines for that nuclide.
- A nuclide with multiple lines, must match the library peaks in the spectrum.
- The number of half-lives that has elapsed, between when the sample was taken and when it was counted, must be less than 10 half-lives or the confidence in the identification is small.

If the confidence index threshold and/or any of the three criteria are not met, then the nuclide is deemed no detectable results, (NDR).

Analytical Results

April – September 2026
Air

Sample Site Date	Gamma* and Radiogas in Air			Air Particulate
	I-131 Activity pCi/meter ³	Cs-134 Activity pCi/meter ³	Cs-137 Activity pCi/meter ³	Gross Beta Activity pCi/meter ³
SPS-A-1				
7/27/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/3/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/17/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
SPS-A-2				
7/27/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/3/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/17/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
PSP-A-1				
7/27/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/3/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/17/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
NAPS-A-1				
7/27/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/3/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/17/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
NAPS-A-2				
7/27/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/3/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed
8/17/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Not Analyzed

*Gamma testing performed by Division of Consolidated Laboratory Services (DCLS).

April – September 2026
Water

[illegible]

*Gamma testing performed by Division of Consolidated Laboratory Services (DCLS).

Newport News Shipbuilder SURFACE WATER

Newport News Shipbuilding NNSB-W-1

James River – Pier #1

Date Collected	Gamma Activity – pCi/liter					
	Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
7/14/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Newport News Shipbuilding NNSB-W-2

James River – Shipway #11

Date Collected	Gamma Activity – pCi/liter					
	Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
7/14/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Norfolk Naval Shipyard SURFACE WATER

Norfolk Naval Shipyard NNSY-W-1

Elizabeth River – Dry Dock #8

Date Collected	Gamma Activity – pCi/liter					
	Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
4/21/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Norfolk Naval Shipyard NNSY-W-2

Elizabeth River – Dry Dock #4

Date Collected	Gamma Activity – pCi/liter					
	Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
4/21/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Norfolk Naval Shipyard NNSY-W-3

Elizabeth River – Dry Dock #1

Date Collected	Gamma Activity – pCi/liter					
	Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
4/21/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Newport News Shipbuilder SILT

Newport News Shipbuilder NNSB-S-1

James River – Pier #1

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
7/14/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Newport News Shipbuilder NNSB-S-2

James River – Shipway #11

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
7/14/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Norfolk Naval Shipyard SILT

Norfolk Naval Shipyard NNSY-S-1

Elizabeth River – Dry Dock #8

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
4/21/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Norfolk Naval Shipyard NNSY-S-2

Elizabeth River – Dry Dock #4

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
4/21/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Norfolk Naval Shipyard NNSY-S-3

Elizabeth River – Dry Dock #1

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
4/21/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

North Anna Power Station SILT

NAPS-S-1

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
4/27/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

Surry Power Station SILT

SPS-S-1 (Chickahominy)

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
8/11/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

SPS-S-1 (Discharge Canal)

Date Collected	Gamma Activity – pCi/gram			
	Cs134	Cs137	Co58	Co60
8/11/2026	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified	Isotope Not Identified

FISH

North Anna and Surry Power Stations

Location Sample Type Date Collected	Isotope		Location Sample Type Date Collected	Isotope	
Surry Discharge Canal SPS-R-1 4/10/2026	Cs-134	Isotope Not Detected	North Anna Discharge Canal NAPS-F-1 5/12/2026	Cs-134	Isotope Not Detected
	Cs-137	Isotope Not Detected		Cs-137	Isotope Not Detected
	Co-60	Isotope Not Detected		Co-60	Isotope Not Detected
	Zn-65	Isotope Not Detected		Zn-65	Isotope Not Detected
	Co-58	Isotope Not Detected		Co-58	Isotope Not Detected
	Fe-59	Isotope Not Detected		Fe-59	Isotope Not Detected
	Mn-54	Isotope Not Detected		Mn-54	Isotope Not Detected
	Ru-106	Isotope Not Detected		Ru-106	Isotope Not Detected
	Nb-95	Isotope Not Detected		Nb-95	Isotope Not Detected
	Ag-110M	Isotope Not Detected		Ag-110M	Isotope Not Detected
	Ba-140	Isotope Not Detected		Ba-140	Isotope Not Detected
	I-131	Isotope Not Detected		I-131	Isotope Not Detected

Milk

SPS-M-1 Williamsburg MO Smith Farm Collection Date:	
Isotope	Results - pCi/liter
Ba-140	
Cs-134	
Cs-137	
K-40	
I-131	
Sr-89	
Sr-90	

VEGETATION

Location	Date collected	Type	Isotope	Results pCi/Gram (wet weight)
Various locations within the 10 mile EPZ				
SPS-V-1		Mixed Greens	I-131	
			Cs-134	
			Cs-137	
Various locations within the 10 mile EPZ				
NAPS-V-1		Mixed Greens	I-131	
			Cs-134	
			Cs-137	

AMBIENT GAMMA EXPOSURE

FIRST QUARTER

Location	Station	Net Exposure Rate mR/Std Qtr +/- 2S.D.		
Jamestown – Historical site	SPS-D-1	22.83	+/-	9.56
Williamsburg – Airport	SPS-D-2	22.87	+/-	9.56
Williamsburg – Busch Gardens	SPS-D-3	22.71	+/-	9.53
Newport News - Lee Hall	SPS-D-4	27.58	+/-	10.50
Naval Weapons Station – 1	SPS-D-5	21.66	+/-	9.31
Newport News – Fort Eustis*	SPS-D-6		+/-	
Surry – Route 628	SPS-D-7	19.32	+/-	8.79
Surry – Lawnes Creek	SPS-D-8	27.82	+/-	10.55
Surry Power Station	SPS-D-9	22.48	+/-	9.48
Surry – Hog Point	SPS-D-10	23.36	+/-	9.67
Surry – Bacon's Castle	SPS-D-11	21.79	+/-	9.34
Surry – Alliance	SPS-D-12	18.14	+/-	8.52
Surry – Scotland Wharf	SPS-D-13	27.91	+/-	10.57
Surry – Lebanon Baptist Church	SPS-D-14	28.77	+/-	10.73
Louisa County - Mineral	NAPS-D-1	26.06	+/-	10.21
Louisa County – Wares Crossroads	NAPS-D-2	25.76	+/-	10.15
Spotsylvania – Good Hope Church	NAPS-D-3	29.31	+/-	10.83
Spotsylvania – Route 713	NAPS-D-4	23.51	+/-	9.70
Spotsylvania Route 614	NAPS-D-5	25.52	+/-	10.10
Spotsylvania – Levy	NAPS-D-6	23.81	+/-	9.76
Louisa County – Bumpass Fire	NAPS-D-7	29.29	+/-	10.82
Louisa County – Fred Hall	NAPS-D-8	26.75	+/-	10.34
Louisa County – Aspen Hill	NAPS-D-9	31.84	+/-	11.28
Louisa County – Route 685	NAPS-D-10	26.13	+/-	10.22
Louisa County – Route 700	NAPS-D-11	27.42	+/-	10.47
North Anna Power Station	NAPS-D-12	22.14	+/-	9.41
Pocahontas State Park (Control)	PSP-D-1	26.37	+/-	10.27
Radiological Health*	ORH-D-1		+/-	
Radiological Health*	ORH-D-2		+/-	

*Not analyzed due to equipment malfunction

BABCOCK & WILCOX
AIR PARTICULATE COMPOSITE SAMPLES

Eastern Site Boundary – Ball field

	Start	Date	Stop	Gross Alpha Activity
B&W-A-1				
	4/8/2026		4/14/2026	0.8 $\pm$ 0.1 cpm

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EMERGENCY PREPAREDNESS

The Office of Radiological Health (ORH) located within the Virginia Department of Health (VDH) is one of the lead response agencies for emergencies involving the potential or actual release of radioactive materials. Overall, state level emergency response is described in the Commonwealth of Virginia Radiological Emergency Response Plan (COVERERP), which is developed and maintained by the Virginia Department of Emergency Management (VDEM). In addition to generic guidelines for responding to any major radiological emergency, the response procedures contain segments addressing response to several specific types of radiological incidents. This includes sections which provide information needed for response to Licensee and Transportation accidents. Other sections contain background information and response guidance for accidents at fixed nuclear facilities. Plans are also being developed to respond to possible radiological terrorist attacks, which may include detonation of a radiological dispersion device (RDD aka “dirty bomb”), an improvised nuclear device (IND), or a military grade nuclear warhead.

When responding to any radiological emergency, the primary tasks of the Office of Radiological Health are to locate, identify, and predict the impact of any radioactive materials released to the environment. Based on the predicted or known impact, ORH then recommends appropriate measures to protect the public. ORH would also be tasked with helping to supervise the cleanup of radiological contamination and ensuring the proper disposal of radioactive waste. An ORH duty officer maintains 24-hour coverage to provide initial assessment/assistance for local responders and may also initiate the mobilization/deployment of other trained staff to respond to a radiological emergency when needed.

Under the provisions of current Federal Emergency Management Agency (FEMA) regulations, ORH conducts or participates in periodic drills that are designed to provide team training and to test emergency plans and procedures. The scope of these drills ranges from receiving and acknowledging simulated emergency communications to full-scale team deployment.

Federal regulations for commercial nuclear power generating facilities stipulate that a full-scale exercise involving appropriate local government participation and testing all significant response elements must be conducted and evaluated every other year. Because there are two such facilities, Surry and North Anna Nuclear Power Stations, Commonwealth of Virginia agencies will perform exercise activities on a yearly basis, alternating between the sites each year.