COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH

OFFICE OF RADIOLOGICAL HEALTH
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ENVIRONMENTAL RADIATION MONITORING PROGRAM

2018 QUARTERLY REPORT

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

COMMONWEALTH OF VIRGINIA
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Sampling Locations

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 & Filter
SPS-A-2	Jamestown	Beta Air Filter Gamma Charcoal & Filter
PSP-A-1	Pocahontas State Park	Beta Air Filter Gamma Charcoal & Filter
NAPS-A-1	Louisa (Outside North Anna Power Station)	Beta Air Filter Gamma Charcoal & Filter
NAPS-A-2	Bumpass	Beta Air Filter Gamma Charcoal & 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 @ Scotland Wharf	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	North Anna River @ Rt. 522	Gamma, Tritium

Sample Analysis Results for Surry & North Anna Power Stations

WEEK	FREQUENCY	PAGE	COMMENTS
Week 1: 01/01/18 – 01/08/18	Weekly	12	
Week 2: 01/08/18 – 01/15/18	Weekly	13	
Week 3: 01/15/18 – 01/22/18	Weekly	14	
Week 4: 01/22/18 – 01/29/18	Weekly	15	
Week 5: 01/29/18 – 02/05/18	Weekly	16	
Week 6: 02/05/18 – 02/12/18	Weekly	17	
Week 7: 02/12/20 – 02/19/18	Weekly	18	
Week 8: 02/19/18 – 02/26/18	Weekly	19	
Week 9: 02/26/18 – 03/05/18	Weekly	20	
Week 10: 03/05/18 – 03/12/18	Weekly	21	
Week 11: 03/12/18 – 03/19/18	Weekly	22	
Week 12: 03/19/18 - 03/26/18	Weekly	23	
Week 13: 03/26/18 – 04/02/18	Weekly	24	
Week 14: 04/02/18 – 04/09/18	Weekly	25	
Week 15: 04/09/18 – 04/16/18	Weekly	26	
Week 16: 04/16/18 – 04/23/18	Weekly	27	
Week 17: 04/23/18 – 04/30/18	Weekly	28	
Week 18: 04/30/18 – 05/07/18	Weekly	29	
Week 19: 05/07/18 – 05/14/18	Weekly	30	
Week 20: 05/14/18 - 05/21/18	Weekly	31	
Week 21: 05/21/18 – 05/28/18	Weekly	32	
Week 22: 05/28/18 – 06/04/18	Weekly	33	
Week 23: 06/04/18 - 06/11/18	Weekly	34	
Week 24: 06/11/18 – 06/18/18	Weekly	35	
Week 25: 06/18/18 – 06/25/18	Weekly	36	
Week 26: 06/25/18 - 07/02/18	Weekly	37	
Week 27: 07/02/18 – 07/09/18	Weekly	38	
Week 28: 07/09/18 – 07/16/18	Weekly	39	
Week 29: 07/16/18 – 07/23/18	Weekly	40	
Week 30: 07/23/19 – 07/30/18	Weekly	41	
Week 31: 07/30/18 – 08/06/18	Weekly	42	
Week 32: 08/06/18 – 08/13/18	Weekly	43	
Week 33: 08/13/18 – 08/20/18	Weekly	44	
Week 34: 08/20/18 – 08/27/18	Weekly	45	
Week 35: 08/27/18 – 09/03/18	Weekly	46	
Week 36: 09/03/18 – 09/10/18	Weekly	47	
Week 37: 09/10/18 – 09/17/18	Weekly	48	

Sample Analysis Results for Surry & North Anna Power Stations

WEEK	FREQUENCY	PAGE	COMMENTS
Week 38: 09/17/18 – 09/24/18	Weekly	49	
Week 39: 09/24/18 – 10/01/18	Weekly	50	
Week 40: 10/01/18 – 10/08/18	Weekly	51	
Week 41: 10/08/18 – 10/15/18	Weekly	52	
Week 42: 10/15/18 – 10/22/18	Weekly	53	
Week 43: 10/22/18 – 10/29/18	Weekly	54	
Week 44: 10/29/18 – 11/05/18	Weekly	55	
Week 45: 11/05/18 – 11/12/18	Weekly	56	
Week 46: 11/12/18 – 11/19/18	Weekly	57	
Week 47: 11/19/18 – 11/26/18	Weekly	58	
Week 48: 11/26/18 – 12/03/18	Weekly	59	
Week 49: 12/03/08 – 12/10/18	Weekly	60	
Week 50: 12/10/18 – 12/17/18	Weekly	61	
Week 51: 12/17/18 - 12/24/18	Weekly	62	
Week 52: 12/24/18 – 12/31/18	Weekly	63	

Other Sample Locations

SAMPLE	LOCATION	TYPE	FREQUENCY	PAGE
Surface Water				
NNSB-W-1	James River - NNSB-Pier 1	Surface Water	Quarterly	64
NNSB-W-2	James River - NNSB-Shipway 11	Surface Water	Quarterly	64
NNSY-W-1	Elizabeth River - NNSY - Drydock #4	Surface Water	Quarterly	65
NNSY-W-2	Elizabeth River - NNSY - Drydock #8	Surface Water	Quarterly	66
NNSY-W-3	Elizabeth River - NNSY - Wet Slip #1	Surface Water	Quarterly	67
Silt				
NNSB-S-1	James River - NNSB - Pier 1	Silt	Quarterly	68
NNSB-S-2	James River - NNSB-Shipway 11	Silt	Quarterly	69
NNSY-S-1	Elizabeth River - NNSY - Drydock #4	Silt	Quarterly	70
NNSY-S-2	Elizabeth River - NNSY - Drydock #8	Silt	Quarterly	71
NNSY-S-3	Elizabeth River - NNSY - Wet Slip #1	Silt	Quarterly	72

Other Sample Types for Surry & North Anna Power Stations

Sample	Location	Description	Frequency	Page
SILT				
SPS-S-1	James River – 1 ½ Mile Off Discharge Canal	Silt	2x per year	73
NAPS-S-1	Waste Treatment Shoreline Soil	Soil	2x per year	73
FISH				
NAPS-F-1	North Anna Lake – Second Cooling Lagoon	Edible Fish	2x per year	74
SPS-F-1	James River – .5 miles off Discharge Canal	Edible Fish	2x per year	74
SPS-R-1	James River- Various Locations	Shellfish	Annually	75
MILK				
SPS-M-1	Surry County-Epps Dairy	Raw	Quarterly	76
NAPS-M-1	Louisa County-Lakeside Dairy	Raw	Discontinued	77
VEGETATION				
SPS-V-1	Surry County – Local Farmers	Edible Vegetation	2x per year	78
NAPS-V-1	Louisa County – Local Farmers	Edible Vegetation	2x per year	78

Dosimetry Locations for Surry & North Anna Power Stations

Dosimetry	Station	Frequency	Description	Page
Jamestown – Historical site	SPS-D-1	Quarterly	Gamma in Air	79- 81
Williamsburg – Airport	SPS-D-2	Quarterly	Gamma in Air	79- 81
Williamsburg – Busch Gardens	SPS-D-3	Quarterly	Gamma in Air	79- 81
Newport News - Lee Hall	SPS-D-4	Quarterly	Gamma in Air	79- 81
Naval Weapons Station – 1	SPS-D-5	Quarterly	Gamma in Air	79- 81
Newport News – Fort Eustis	SPS-D-6	Quarterly	Gamma in Air	79- 81
Surry – Route 628	SPS-D-7	Quarterly	Gamma in Air	79- 81
Surry – Lawnes Creek	SPS-D-8	Quarterly	Gamma in Air	79- 81
Surry Power Station	SPS-D-9	Quarterly	Gamma in Air	79- 81
Surry – Hog Point	SPS-D-10	Quarterly	Gamma in Air	79- 81
Surry – Bacon's Castle	SPS-D-11	Quarterly	Gamma in Air	79- 81
Surry – Alliance	SPS-D-12	Quarterly	Gamma in Air	79- 81
Surry – Scotland Wharf	SPS-D-13	Quarterly	Gamma in Air	79- 81
Surry – Lebanon Baptist Church	SPS-D-14	Quarterly	Gamma in Air	79- 81
Louisa County - Mineral	NAPS-D-1	Quarterly	Gamma in Air	79- 81
Louisa County – Wares Crossroads	NAPS-D-2	Quarterly	Gamma in Air	79- 81
Louisa County – Good Hope Church	NAPS-D-3	Quarterly	Gamma in Air	79- 81
Spotsylvania – Route 713	NAPS-D-4	Quarterly	Gamma in Air	79- 81
Spotsylvania Route 614	NAPS-D-5	Quarterly	Gamma in Air	79- 81
Spotsylvania – Levy	NAPS-D-6	Quarterly	Gamma in Air	79- 81
Louisa County – Bumpass Fire Dept.	NAPS-D-7	Quarterly	Gamma in Air	79- 81
Louisa County – Fred Hall	NAPS-D-8	Quarterly	Gamma in Air	79- 81
Louisa County – Aspen Hill	NAPS-D-9	Quarterly	Gamma in Air	79- 81
Louisa County – Route 685	NAPS-D-10	Quarterly	Gamma in Air	79- 81
Louisa County – Route 700	NAPS-D-11	Quarterly	Gamma in Air	79- 81
North Anna Power Station	NAPS-D-12	Quarterly	Gamma in Air	79- 81
Pocahontas State Park (Control)	PSP-D-1	Quarterly	Gamma in Air	79- 81
Radiological Health	ORH-D-1	Quarterly	Gamma in Air	79- 81
Radiological Health	ORH-D-2	Quarterly	Gamma in Air	79- 81

Sampling Locations - Babcock & Wilcox

SAMPLE	LOCATION	TYPE	FREQUENCY	PAGE
AIR				
B&W-A-1	Eastern Site Boundary – Ballfield	Air Particulate	Quarterly	83
SOIL				
B&W-S-1	Eastern Site Boundary – Ballfield	Soil	Annually	84
B&W-S-2	James River Riverside Park	Soil	Annually	84
SURFACE WATER				
B&W-W-1	Eastern Site Boundary – Ballfield	Surface Water	Annually	84
B&W-W-2	James River Riverside Park	Surface Water	Annually	84
VEGETATION				
B&W-V-1	Eastern Site Boundary – Ballfield	Grass	Annually	85
B&W-V-2	James River Riverside Park	Grass	Annually	85

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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 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).

MINIMUM DETECTABLE ACTIVITY "MDA"

MDA as used in this report is defined as the lowest level of radioactivity that can be consistently and accurately detected in a given sample that is identified in the spectrum.

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Analytical Results

Virginia Department of Health
Week 1: 01/01/18 – 01/08/18[1]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[1] Due to the MICL being serviced and the holiday, samples were not collected.

Virginia Department of Health
Week 2: 01/08/18 – 01/15/18[2]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[2] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 3: 01/15/18 – 01/22/18[3]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[3] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 4: 01/22/18 – 01/29/18[4]

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.003
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004
PSP-A-1	NDR	NDR	NDR	0.02 +/- 0.003
NAPS-A-1	NDR	NDR	NDR	0.03 +/- 0.005
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.003

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-1[5]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		6757 +/- 407
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 100

[4] Due to the MICL being serviced, and holiday 01/15, air samples collected 01/16 – 01/29.
[5] Due to 2 of 8 circulating water intake pumps not being in service, water sample had elevated tritium level.

Virginia Department of Health
Week 5: 01/29/18 – 02/05/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.01 +/- 0.002
SPS-A-2	NDR	NDR	NDR	0.02 +/- 0.003
PSP-A-1	NDR	NDR	NDR	0.02 +/- 0.003
NAPS-A-1	NDR	NDR	NDR	0.03 +/- 0.004
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.003

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		526 +/- 122
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		375 +/- 100
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		300 +/- 100
NAPS-W-1[6]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		6682 +/- 412
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		1126 +/- 158

[6] Due to 2 of 8 circulating water intake pumps not being in service, water sample had elevated tritium level.

Virginia Department of Health
Week 6: 02/05/18 – 02/12/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.02 +/- 0.004
NAPS-A-1	NDR	NDR	NDR	0.03 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.004

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		751 +/- 123
SPS-W-1 DCLS	<3.0	<5.0	<10	<5.0	<11	<9.0	<10	<5.0	<5.0	<28	64.7 +/- 10.7	
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-2 DCLS	<3.0	<3.0	<7.0	<3.0	<7.0	<6.0	<6.0	<3.0	<3.0	<16	6.4 +/- 1.1	
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3 DCLS	<3.0	<3.0	<7.0	<3.0	<7.0	<6.0	<7.0	<3.0	<3.0	<18	13.3 +/- 1.1	
NAPS-W-1[7]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		7508 +/- 425
NAPS-W-1 DCLS	<5.0	<5.0	<11	<5.0	<11	<9.0	<13	<5.0	<5.0	<33	3.0 +/- 0.9	
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-2 DCLS	<5.0	<5.0	<11	<5.0	<11	<10	<17	<5.0	<5.0	<39	8.4 +/- 1.2	
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3 DCLS	<3.0	<3.0	<7.0	<3.0	<7.0	<6.0	<9.0	<3.0	<3.0	<21	9.3 +/- 1.2	

[7] Due to 2 of 8 circulating water intake pumps not being in service, water sample had elevated tritium level.

Virginia Department of Health
Week 7: 02/12/18 – 02/19/18[8]

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.003
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.005
PSP-A-1	NDR	NDR	NDR	0.02 +/- 0.004
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.005
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.003

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		826 +/- 140
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		601 +/- 122
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 99
NAPS-W-1[9]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		6231 +/- 397
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 99
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 99

[8] Due to holiday, 02/19, samples were collected 02/20.
[9] Due to 2 of 8 circulating water intake pumps not being in service, water sample had elevated tritium level.

Virginia Department of Health
Week 8: 02/19/18 – 02/26/18[10]

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004
PSP-A-1	NDR	NDR	NDR	0.04 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.010

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		901 +/- 141
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 300
NAPS-W-1[11]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		9835 +/- 484
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		526 +/- 300
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		526 +/- 100

[10] Due to training, 02/26, samples were collected 02/27.
[11] Due to Dominion Power Station release of the Boron Recovery Tank, Tritium level was elevated.

Virginia Department of Health
Week 9: 02/26/18 – 03/05/18 [12]

Air

Site	Gamma & 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	NDR	NDR	NDR	0.04 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.04 +/- 0.004
PSP-A-1	NDR	NDR	NDR	0.05 +/- 0.005
NAPS-A-1	NDR	NDR	NDR	0.05 +/- 0.007
NAPS-A-2[13]				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		450 +/- 122
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		300 +/- 100
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 100
NAPS-W-1[14]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		6156 +/- 399
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 100
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 100

[12] Due to training on 03/05, samples were collected 03/06.
[13] Due to air sampler being unplugged, sample was not collected.
[14] Due to Dominion Power Station release of the Boron Recovery Tank, Tritium level was elevated.

Virginia Department of Health
Week 10: 03/05/18 – 03/12/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.02 +/- 0.004
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.005
NAPS-A-1	NDR	NDR	NDR	0.05 +/- 0.007
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.004

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		901 +/- 141
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 122
NAPS-W-1[15]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		6006 +/- 387
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71

[15] Due to Dominion Power Station release of the Boron Recovery Tank, Tritium level was elevated.

Virginia Department of Health
Week 11: 03/12/18 – 03/19/18[16]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[16] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 12: 03/19/18 - 03/26/18[17]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[17] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 13: 03/26/18 – 04/02/18[18]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[18] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 14: 04/02/18 – 04/09/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.005
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.005

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1051 +/- 158
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 245
NAPS-W-1[19]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		9159 +/- 464
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR

[19] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated.

Virginia Department of Health
Week 15: 04/09/18 – 04/16/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.04 +/- 0.005
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.005
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.006
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		901 +/- 158
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		300 +/- 100
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 122
NAPS-W-1[20]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		5781 +/- 387
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71

[20] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated.

Virginia Department of Health
Week 16: 04/16/18 – 04/23/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.005
SPS-A-2	NDR	NDR	NDR	0.04 +/- 0.006
PSP-A-1	NDR	NDR	NDR	0.04 +/- 0.006
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.006
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		601 +/- 123
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		75 +/- 224
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 71
NAPS-W-1[21]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		4880 +/- 361
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		676 +/- 123

[21] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated.

Virginia Department of Health
Week 17: 04/23/18 – 04/30/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.005
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.005
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.005
NAPS-A-1	NDR	NDR	NDR	0.05 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.010

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1[22]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3904 +/- 300
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		75 +/- 255
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-1[23]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		8183 +/- 442
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR

[22] Due to a batch release at Dominion Surry Power Plant, Tritium level was elevated.
[23] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated.

Virginia Department of Health
Week 18: 04/30/18 – 05/07/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.04 +/- 0.006
SPS-A-2	NDR	NDR	NDR	0.05 +/- 0.007
PSP-A-1	NDR	NDR	NDR	0.04 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.06 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		6006 +/- 380
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 141
NAPS-W-1[24]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		9159 +/- 463
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		526 +/- 122

[24] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated.

Virginia Department of Health
Week 19: 05/07/18 – 05/14/18

Air

Site	Gamma & Radiogas in Air			Air Particulate
	I-131 Activity pCi/meter³	Cs-134 Activity pCi/meter³	Cs-137 Activity pCi/meter³	Gross Beta Activity pCi/meter³
SPS-A-1[25]				
SPS-A-2	NDR	NDR	NDR	0.04 +/- 0.006
PSP-A-1	NDR	NDR	NDR	0.05 +/- 0.007
NAPS-A-1	NDR	NDR	NDR	0.06 +/- 0.008
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.005

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1276 +/- 173
SPS-W-1 DCLS	<5.0	<5.0	<9.0	<5.0	<11	<9.0	<7.0	<5.0	<5.0	<23	<69.9	
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		601 +/- 122
SPS-W-2 DCLS	<3.0	<3.0	<7.0	<3.0	<7.0	<5.0	<4.0	<3.0	<3.0	<12	<6.4	
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 122
SPS-W-3 DCLS	<3.0	<3.0	<7.0	<3.0	<7.0	<5.0	<5.0	<3.0	<3.0	<14	<6.4	
NAPS-W-1[26]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		7958 +/- 429
NAPS-W-1 DCLS	<5.0	<5.0	<10	<5.0	<11	<9.0	<11	<5.0	<5.0	<31	<69.9	
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		601 +/- 122
NAPS-W-2 DCLS	<5.0	<5.0	<10	<5.0	<11	<9.0	<10	<5.0	<5.0	<29	<6.4	
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3453 +/- 282
NAPS-W-3 DCLS	<3.0	<3.0	<6.0	<3.0	<7.0	<6.0	<7.0	<3.0	<3.0	<17	<6.4	

[25] Due to the inability to access the SPS-A-1 location, air sample was not collected.
[26] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated.

Virginia Department of Health
Week 20: 05/14/18 - 05/21/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.003
SPS-A-2[27]				
PSP-A-1	NDR	NDR	NDR	0.02 +/- 0.004
NAPS-A-1	NDR	NDR	NDR	0.03 +/- 0.005
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.003

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2027 +/- 211
SPS-W-2[28]												
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		601 +/- 211
NAPS-W-1[29]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		11111 +/- 428
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		826 +/- 141
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1577 +/- 186

[27] Due to air sampler equipment malfunction, sample was not collected.
[28] Due to flooding, a sample could not be collected safely.
[29] Due to Dominion Power Station release of the Boron Recovery Tank, Tritium level was elevated.

Virginia Department of Health
Week 21: 05/21/18 – 05/28/18[30]

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.003
SPS-A-2[31]				
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.004
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.006
NAPS-A-2	NDR	NDR	NDR	0.02 +/- 0.003

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		676 +/- 122
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 70
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		5105 +/- 428
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1502 +/- 199

[30] Due to holiday, 05/28, sample was collected 05/29.
[31] Due to air sampler being serviced, sample was not collected.

Virginia Department of Health
Week 22: 05/28/18 – 06/04/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.01 +/- 0.003
SPS-A-2	NDR	NDR	NDR	0.02 +/- 0.008
PSP-A-1	NDR	NDR	NDR	0.02 +/- 0.003
NAPS-A-1	NDR	NDR	NDR	0.02 +/- 0.004
NAPS-A-2	NDR	NDR	NDR	0.01 +/- 0.002

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1727 +/- 199
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3 +/- 122
NAPS-W-1[32]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		5931 +/- 386
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1126 +/- 158
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71

[32] Due to Dominion Power Station refueling outage and the reduction of intake pumps, Tritium level was elevated

Virginia Department of Health
Week 23: 06/04/18 - 06/11/18[33]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[33] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 24: 06/11/18 – 06/18/18[34]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[34] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 25: 06/18/18 – 06/25/18[35]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[35] Due to the MICL being serviced, samples were not collected.

Virginia Department of Health
Week 26: 06/25/18 - 07/02/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.05 +/- 0.010
SPS-A-2	NDR	NDR	NDR	0.06 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.06 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.12 +/- 0.020
NAPS-A-2	NDR	NDR	NDR	0.12 +/- 0.020

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 70
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		6907 +/- 397
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2477 +/- 243

Virginia Department of Health
Week 27: 07/02/18 – 07/09/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.05 +/- 0.007
PSP-A-1	NDR	NDR	NDR	0.06 +/- 0.008
NAPS-A-1	NDR	NDR	NDR	0.08 +/- 0.011
NAPS-A-2	NDR	NDR	NDR	0.12 +/- 0.016

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		5856 +/- 374
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2778 +/- 264

Virginia Department of Health
Week 28: 07/09/18 – 07/16/18[36]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[36] Due to the North Anna Power Station Graded Exercise, no samples were collected.

Virginia Department of Health
Week 29: 07/16/18 – 07/23/18[37]

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

[37] Due to the North Anna Power Station Graded Exercise, no samples were collected.

Virginia Department of Health
Week 30: 07/23/19 – 07/30/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.02 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.05 +/- 0.007
PSP-A-1	NDR	NDR	NDR	0.05 +/- 0.007
NAPS-A-1	NDR	NDR	NDR	0.09 +/- 0.013
NAPS-A-2	NDR	NDR	NDR	0.07 +/- 0.009

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		75 +/- 222
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3303 +/- 289
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		751 +/- 222
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2853 +/- 263

Virginia Department of Health
Week 31: 07/30/18 – 08/06/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.04 +/- 0.010
SPS-A-2	NDR	NDR	NDR	0.07 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.05 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.10 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.11 +/- 0.010

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 100
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		976 +/- 158
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		4204 +/- 323
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		450 +/- 100
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2778 +/- 264

Virginia Department of Health
Week 32: 08/06/18 – 08/13/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.005
SPS-A-2	NDR	NDR	NDR	0.05 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.05 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.10 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.07 +/- 0.010

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		75 +/- 212
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		300 +/- 100
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		75 +/- 212
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		4505 +/- 324
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		NDR
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3529 +/- 283

Virginia Department of Health
Week 33: 08/13/18 – 08/20/18[38]

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.005
SPS-A-2	NDR	NDR	NDR	0.06 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.06 +/- 0.010
NAPS-A-1[39]				
NAPS-A-2	NDR	NDR	NDR	0.07 +/- 0.010

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 100
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		375 +/- 100
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3604 +/- 300
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3604 +/- 283

[38] Starting in the 3rd quarter of 2018 submission of duplicate water samples to DCLS was discontinued.
[39] Due to the electrical breaker trip, no air sample was collected.

Virginia Department of Health
Week 34: 08/20/18 – 08/27/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.05 +/- 0.007
SPS-A-2	NDR	NDR	NDR	0.09 +/- 0.013
PSP-A-1	NDR	NDR	NDR	0.08 +/- 0.011
NAPS-A-1	NDR	NDR	NDR	0.01 +/- 0.002
NAPS-A-2	NDR	NDR	NDR	0.12 +/- 0.015

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 70
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 70
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 70
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3453 +/- 290
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 70
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2553 +/- 254

Virginia Department of Health
Week 35: 08/27/18 - 09/03/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.04 +/- 0.010
SPS-A-2	NDR	NDR	NDR	0.09 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.09 +/- 0.010
NAPS-A-1	NDR	NDR	NDR	0.12 +/- 0.020
NAPS-A-2	NDR	NDR	NDR	0.15 +/- 0.020

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		751 +/- 141
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		4880 +/- 338
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2703 +/- 254

Virginia Department of Health
Week 36: 09/04/18 – 09/10/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.005
SPS-A-2	NDR	NDR	NDR	0.06 +/- 0.008
PSP-A-1	NDR	NDR	NDR	0.04 +/- 0.006
NAPS-A-1	NDR	NDR	NDR	0.05 +/- 0.007
NAPS-A-2	NDR	NDR	NDR	0.04 +/- 0.005

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1[40]												
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 71
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3078 +/- 282
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		225 +/- 71
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2553 +/- 254

[40] Due to flooding, no sample was collected

Virginia Department of Health
Week 37: 09/10/18 – 09/17/18

Air

Site	Gamma & Radiogas in Air			Air Particulate
	I-131 Activity pCi/meter³	Cs-134 Activity pCi/meter³	Cs-137 Activity pCi/meter³	Gross Beta Activity pCi/meter³
SPS-A-1	NDR	NDR	NDR	0.02 +/- 0.003
SPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.004
NAPS-A-1	NDR	NDR	NDR	0.03 +/- 0.004
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.004

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1652 +/- 199
SPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		150 +/- 70
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		1727 +/- 199
NAPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		3979 +/- 315
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		75 +/- 223
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR	NDR		2778 +/- 263

Virginia Department of Health
Week 38: 09/17/18 – 09/24/18

Air

Site	Gamma & 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	NDR	NDR	NDR	0.03 +/- 0.004
SPS-A-2	NDR	NDR	NDR	0.04 +/- 0.010
PSP-A-1	NDR	NDR	NDR	0.03 +/- 0.005
NAPS-A-1	NDR	NDR	NDR	0.04 +/- 0.010
NAPS-A-2	NDR	NDR	NDR	0.03 +/- 0.005

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		1426 +/- 186
SPS-W-2[41]												
SPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		826 +/- 141
NAPS-W-1[42]	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		6006 +/- 378
NAPS-W-2	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		826 +/- 141
NAPS-W-3	NDR	NDR	NDR	NDR	NDR	NDR	NDR	N D R	NDR	NDR		1877 +/- 211

[41] Due to flooding, no sample was collected.
[42] Due to Dominions release of Boron Recovery Tank, tritium level was elevated.

Virginia Department of Health
Week 39: 09/24/18 – 10/01/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 40: 10/01/18 – 10/08/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Virginia Department of Health
Week 41: 10/08/18 – 10/15/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 42: 10/15/18 – 10/22/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 43: 10/22/18 – 10/29/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 44: 10/29/18 – 11/05/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 45: 11/05/18 – 11/12/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 46: 11/12/18 – 11/19/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 47: 11/19/18 – 11/26/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 48: 11/26/18 – 12/03/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 49: 12/03/08 – 12/10/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 50: 12/10/18 – 12/17/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 51: 12/17/18 - 12/24/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

Week 52: 12/24/18 – 12/31/18

Air

Site	Gamma & 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				
SPS-A-2				
PSP-A-1				
NAPS-A-1				
NAPS-A-2				

Water

Site	Gamma and Tritium Activity – pCi/Liter											
	Mn 54	Co 58	Fe 59	Co 60	Zn 65	Zr 95	I 131	Cs 134	Cs 137	Ba 140	Gross Beta	H3 Activity
SPS-W-1												
SPS-W-2												
SPS-W-3												
NAPS-W-1												
NAPS-W-2												
NAPS-W-3												

SURFACE WATER

January 1, 2018 through September 30, 2018

Newport News Shipyard

James River – Pier 1
NNSB-W-1

Qtr.	Date collected	Gamma Activity – pCi/liter						Gross Beta pCi/liter
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95	
1st	03/29/18[43]							
2nd	06/19/18	<21.0	<5.0	<6.0	<5.0	<11.0	<9.0	126.5±14.2
3rd	09/26/18[44]							

James River – Shipway #11
NNSB-W-2

Qtr.	Date collected	Gamma Activity – pCi/liter						Gross Beta pCi/liter
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95	
1st	03/29/18[45]							
2nd	06/19/18	<26.0	<5.0	<9.0	<5.0	<11.0	<9.0	122.5±14.3
3rd	09/26/18[46]							

[43] Water sample was rejected by Division of Consolidated Lab Services.
[44] Due to NNSY boat mechanical issue, sample was not collected.
[45] Water sample was rejected by Division of Consolidated Lab Services.
[46] Due to NNSY boat mechanical issue, sample was not collected.

Virginia Department of Health
SURFACE WATER

January 1, 2018 through September 30, 2018

Norfolk Naval Shipyard

Elizabeth River – Dry Dock #4
Norfolk Naval Shipyard NNSY-W-1

Qtr.	Date collected	Gamma Activity – pCi/liter					
	03/28/18[47]						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
1st							
Gross Beta							
	06/19/18						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
2nd		<11.0	<3.0	<3.0	<3.0	<8.0	<6.0
Gross Beta		163.3±16.7					
	09/26/18[48]						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
3nd		NDR	4.73	8.40	.512	NDR	1.91

[47] Water sample was rejected by Division of Consolidated Lab Services
[48] NNSY-W-1 sample was counted at VDH-ORH Laboratory and all future NNSY-W-1 samples will be analyzed at VDH-ORH Laboratory.

Virginia Department of Health
SURFACE WATER

January 1, 2018 through September 30, 2018

Norfolk Naval Shipyard

Elizabeth River – Dry Dock #8
Norfolk Naval Shipyard NNSY-W-2

Qtr.	Date collected	Gamma Activity – pCi/liter					
	03/29/18[49]						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
1st							
Gross Beta							
	06/19/18						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
2nd		<15.0	<3.0	<5.0	<3.0	<7.0	<3.0
Gross Beta		156.7±16.1					
	09/26/18[50]						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
3rd		NDR	NDR	8.19	NDR	15.2	1.62

[49] Water sample was rejected by Division of Consolidated Lab Services
[50] NNSY-W-2 sample was counted at VDH-ORH Laboratory and all future NNSY-W-2 samples will be analyzed at VDH-ORH Laboratory.

Virginia Department of Health
SURFACE WATER

January 1, 2018 through September 30, 2018

Norfolk Naval Shipyard

Elizabeth River – Wet Slip #1
Norfolk Naval Shipyard NNSY-W-3

Qtr.	Date collected	Gamma Activity – pCi/liter					
	03/29/18[51]						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
1st							
Gross Beta							
	06/19/18						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
2nd		<15.0	<3.0	<5.0	<3.0	<7.0	<5.0
Gross Beta		156.1±15.5					
	09/26/18[52]						
		Ba-140	Cs-137	I-131	Mn-54	Zn-65	Zr95/Nb95
3rd		NDR	2.32	2.03	NDR	14.3	3.33

[51] Water sample was rejected by Division of Consolidated Lab Services.
[52] NNSY-W-3 sample was counted at VDH-ORH Laboratory and all future NNSY-W-3 samples will be analyzed at VDH-ORH Laboratory.

Virginia Department of Health
SILT

January 1, 2018 through September 30, 2018

Newport News Shipyard

Location	Date Collected	Gamma Activity pCi/gram			
James River – Pier 1 NNSB-S-1	03/29/18	**Cs-134**	**Cs-137**	**Co-58**	**Co-60**
		< 0.01	0.01 ± 0.01	< 0.01	< 0.01
James River – Pier 1 NNSB-S-1	06/19/18	**Cs-134**	**Cs-137**	**Co-58**	**Co-60**
		< 0.01	0.01 ± 0.01	< 0.01	< 0.01
James River – Pier 1 NNSB-S-1	09/28/18[53]	**Cs-134**	**Cs-137**	**Co-58**	**Co-60**

[53] Due to NNSY boat mechanical issue, sample was not collected.

Virginia Department of Health
SILT

January 1, 2018 through September 30, 2018

Newport News Shipyard

Location	Date Collected	Gamma Activity pCi/gram			
James River – Shipway 11 NNSB-S-2	03/29/18	**Cs-134**	**Cs-137**	**Co-58**	**Co-60**
		< 0.01	0.03 ± 0.01	< 0.01	< 0.01
James River – Shipway 11 NNSB-S-2	06/19/18	**Cs-134**	**Cs-137**	**Co-58**	**Co-60**
		< 0.01	0.02 ± 0.01	< 0.01	< 0.01
James River – Shipway 11 NNSB-S-2	09/26/18[54]	**Cs-134**	**Cs-137**	**Co-58**	**Co-60**

[54] Due to NNSY's boat mechanical issue, sample was not collected.

Virginia Department of Health
SILT
January 1, 2018 through September 30, 2018

Newport News Shipyard

Location	Date Collected	Gamma Activity pCi/gram			
Elizabeth River Drydock #4	03/28/18				
NNSY-S-1	**Cs134**	**Cs137**	**Co58**	**Co60**	
	< 0.01	0.02 ± 0.01	< 0.01	< 0.01	
Elizabeth River Drydock #4	06/19/18				
NNSY-S-1	**Cs134**	**Cs137**	**Co58**	**Co60**	
	< 0.01	0.02 ± 0.01	< 0.01	< 0.01	
Elizabeth River Drydock #4	09/26/18[55]				
NNSY-S-1	**Cs134**	**Cs137**	**Co58**	**Co60**	
	NDR	NDR	NDR	NDR	

[55] NNSY-S-1 sample was counted at VDH-ORH Laboratory and all future NNSY-S-1 samples will be analyzed at VDH-ORH Laboratory.

Virginia Department of Health
SILT
January 1, 2018 through September 30, 2018

Newport News Shipyard

Location	Date Collected	Gamma Activity pCi/gram			
Elizabeth River Drydock #8	03/28/18				
NNSY-S-2	**Cs134**	**Cs137**	**Co58**	**Co60**	
	< 0.01	0.02 ± 0.01	< 0.01	< 0.01	
Elizabeth River Drydock #8	06/19/18				
NNSY-S-2	**Cs134**	**Cs137**	**Co58**	**Co60**	
	< 0.01	0.02 ± 0.01	< 0.01	< 0.01	
Elizabeth River Drydock #8	09/26/18[56]				
NNSY-S-2	**Cs134**	**Cs137**	**Co58**	**Co60**	
	NDR	NDR	NDR	NDR	

[56] NNSY-S-2 sample was counted at VDH-ORH Laboratory and all future NNSY-S-2 samples will be analyzed at VDH-ORH Laboratory.

Virginia Department of Health
SILT

January 1, 2018 through September 30, 2018

Newport News Shipbuilder

Location	Date Collected	Gamma Activity pCi/gram			
Elizabeth River Wet Slip #1	03/28/18				
NNSY-S-3	**Cs134**	**Cs137**	**Co58**	**Co60**	
	< 0.01	0.03 ± 0.01	< 0.01	< 0.01	
Elizabeth River Drydock #8	06/19/18				
NNSY-S-2	**Cs134**	**Cs137**	**Co58**	**Co60**	
	< 0.01	0.02 ± 0.01	< 0.01	< 0.01	
Elizabeth River Wet Slip #1	09/28/18[57]				
NNSY-S-3	**Cs134**	**Cs137**	**Co58**	**Co60**	
	NDR	NDR	NDR	NDR	

[57] NNSY-S-3 sample was counted at VDH-ORH Laboratory and all future NNSY-S-3 samples will be analyzed at VDH-ORH Laboratory.

Virginia Department of Health
SILT

January 1, 2018 through September 30, 2018

Surry Power Station
Discharge Canal, James River – SPS-S-1

Quarter	Date Collected	Gamma Activity pCi/gram			
		Cs-134	Cs-137	Co-58	Co-60
1st	02/05/18	<0.01 pCi/g	<0.01 pCi/g	<0.01 pCi/g	<0.01 pCi/g
		Cs-134	Cs-137	Co-58	Co-60
3rd	08/06/18	<0.01 pCi/g	<0.01 pCi/g	<0.01 pCi/g	<0.01 pCi/g

North Anna Power Station
Waste Treatment NAPS-S-1

Quarter	Date Collected	Gamma Activity pCi/gram			
		Cs-134	Cs-137	Co-58	Co-60
2nd	04/12/18	<0.01 pCi/g	<0.01 pCi/g	<0.01 pCi/g	<0.01 pCi/g

Note: Silt samples are collected bi-annually.

Virginia Department of Health
FISH

January 1, 2018 through September 30, 2018

Dominion Nuclear Power Station

Location Type of fish	Date Collected	Isotope	pCi/gram
North Anna 2nd Cooling Lagoon	**04/18/18**	Ba-140	<0.05 pCi/g
		Cs-134	<0.01 pCi/g
		Cs-137	0.01 +/- 0.01 pCi/g
		Co-58	<0.01 pCi/g
NAPS- F-1		Co-60	<0.01 pCi/g
(Fish)		I-131	<0.02 pCi/g
		Fe-59	<0.01 pCi/g
		Mn-54	<0.01 pCi/g
		Ru-106	<0.05 pCi/g
		Ag-110M	<0.01 pCi/g
		Zn-65	<0.01 pCi/g
		Nb-95	<0.01 pCi/g
Surry Discharge Canal	**04/23/18**	Ba-140	<0.07 pCi/g
		Cs-134	<0.01 pCi/g
		Cs-137	<0.01 pCi/g
		Co-58	<0.01 pCi/g
		Co-60	<0.01 pCi/g
SPS-F-1		I-131	<0.04 pCi/g
(Fish)		Fe-59	<0.02 pCi/g
		Mn-54	<0.01 pCi/g
		Ru-106	<0.05 pCi/g
		Ag-110M	<0.01 pCi/g
		Zn-65	<0.01 pCi/g
		Nb-95	<0.01 pCi/g

Note: Fish samples collected during the 2nd and 4th quarter.

Virginia Department of Health
SHELLFISH

January 1, 2018 through September 30, 2018

Dominion Nuclear Power Station

Location Type of fish	Date Collected	Isotope	pCi/gram
Surry Power Station	**04/23/18**	Ba-140	<0.16 pCi/g
		Cs-134	<0.01 pCi/g
		Cs-137	<0.01 pCi/g
		Co-58	<0.01 pCi/g
		Co-60	<0.01 pCi/g
SPS-R-1		I-131	<0.16 pCi/g
(Clams and Oysters)		Fe-59	<0.02 pCi/g
		Mn-54	<0.01 pCi/g
		Ru-106	<0.05 pCi/g
		Ag-110M	<0.01 pCi/g
		Zn-65	<0.01 pCi/g
		Nb-95	<0.01 pCi/g

Note: Shellfish are collected annually when available.

Virginia Department of Health
Milk
January 1, 2018 through September 30, 2018

Surry County - Epps Dairy SPS-M-1 1st Quarter Date:01/09/18	
Isotope	**Results - pCi/liter**
Ba-140	< 12.0 pCi/L
Cs-134	< 3.0 pCi/L
Cs-137	< 4.0 pCi/L
K-40*	1.6 +/- 0.1 g/L
I-131	< 3.0 pCi/L
Sr-89	< 4.0 pCi/L
Sr-90	< 0.5 pCi/L

Surry County - Epps Dairy SPS-M-1 2nd Quarter Date: 04/02/2018	
Isotope	**Results - pCi/liter**
Ba-140	< 20.0 pCi/L
Cs-134	< 5.0 pCi/L
Cs-137	< 4.0 pCi/L
K-40	1.5 ± 0.1 g/L
I-131	< 6.0 pCi/L
Sr-89	< 4.0 pCi/L
Sr-90	<0.4 pCi/L

Surry County - Epps Dairy SPS-M-1 3rd Quarter Date: 07/02/2018	
Isotope	**Results - pCi/liter**
Ba-140	< 12.0 pCi/L
Cs-134	< 3.0 pCi/L
Cs-137	< 4.0 pCi/L
K-40	1.5 ± 0.1 g/L
I-131	< 4.0 pCi/L
Sr-89	< 4.0 pCi/L
Sr-90	<0.71 ± 0.1 pCi/L

Virginia Department of Health
Milk
January 1, 2018 through September 30, 2018

Louisa County Lake Side Dairy
NAPS-M-1

Lake Side Dairy is no longer in operation. There are no longer any dairy farms located within the 10 mile EPZ for milk sampling.

Virginia Department of Health

VEGETATION

January 1, 2018 through September 30, 2018

Location	Date collected	Type	Isotope	Results pCi/Gram (wet weight)
Surry County	**04/25/18**			
Private garden		Mixed Greens	I-131	<0.01
SPS-V-1			Cs-134	<0.01
			Cs-137	<0.01
Louisa County	**04/23/18**			
Private Garden		Mixed Greens	I-131	<0.01
NAPS-V-1			Cs-134	<0.01
			Cs-137	<0.01

Note: Vegetation is collected bi-annually when available.

Virginia Department of Health
AMBIENT GAMMA EXPOSURE
November 6, 2017 through February 5, 2018

FIRST QUARTER

Location	Station	Net Exposure Rate mR/Std Qtr +/- 2S.D.		
Jamestown – Historical site	SPS-D-1	**30.60**	**+/-**	**11.06**
Williamsburg – Airport	SPS-D-2	**22.44**	**+/-**	**9.47**
Williamsburg – Busch Gardens	SPS-D-3	**31.68**	**+/-**	**11.26**
Newport News - Lee Hall	SPS-D-4	**33.29**	**+/-**	**11.54**
Naval Weapons Station – 1	SPS-D-5	**23.15**	**+/-**	**9.62**
Newport News – Fort Eustis	SPS-D-6	**28.14**	**+/-**	**10.61**
Surry – Route 628	SPS-D-7	**27.34**	**+/-**	**10.46**
Surry – Lawnes Creek	SPS-D-8	**30.11**	**+/-**	**10.97**
Surry Power Station	SPS-D-9	**26.66**	**+/-**	**10.33**
Surry – Hog Point	SPS-D-10	**25.54**	**+/-**	**9.91**
Surry – Bacon's Castle	SPS-D-11	**23.28**	**+/-**	**9.65**
Surry – Alliance	SPS-D-12	**27.24**	**+/-**	**10.49**
Surry – Scotland Wharf	SPS-D-13	**25.21**	**+/-**	**10.04**
Surry – Lebanon Baptist Church	SPS-D-14	**24.14**	**+/-**	**9.83**
Louisa County - Mineral	NAPS-D-1	**26.66**	**+/-**	**10.33**
Louisa County – Wares Crossroads	NAPS-D-2	**27.11**	**+/-**	**10.41**
Louisa County – Good Hope Church	NAPS-D-3	**31.03**	**+/-**	**11.14**
Spotsylvania – Route 713	NAPS-D-4	**27.38**	**+/-**	**10.47**
Spotsylvania Route 614	NAPS-D-5	**26.44**	**+/-**	**10.28**
Spotsylvania – Levy	NAPS-D-6	**31.14**	**+/-**	**11.16**
Louisa County – Bumpass Fire Dept.	NAPS-D-7	**38.93**	**+/-**	**10.76**
Louisa County – Fred Hall	NAPS-D-8	**24.14**	**+/-**	**9.83**
Louisa County – Aspen Hill	NAPS-D-9	**33.69**	**+/-**	**11.61**
Louisa County – Route 685	NAPS-D-10	**27.11**	**+/-**	**10.41**
Louisa County – Route 700	NAPS-D-11	**33.51**	**+/-**	**11.58**
North Anna Power Station	NAPS-D-12	**30.80**	**+/-**	**11.10**
Pocahontas State Park (Control)	PSP-D-1	**42.70**	**+/-**	**13.07**
Radiological Health	ORH-D-1	**15.05**	**+/-**	**7.76**
Radiological Health	ORH-D-2	**14.38**	**+/-**	**7.583**

Virginia Department of Health
AMBIENT GAMMA EXPOSURE
February 5, 2018 through May 7, 2018

SECOND QUARTER

Location	Station	Net Exposure Rate mR/Std Qtr +/- 2S.D.		
Jamestown – Historical site	SPS-D-1	**23.55**	**+/-**	**9.70**
Williamsburg – Airport	SPS-D-2	**29.82**	**+/-**	**10.92**
Williamsburg – Busch Gardens	SPS-D-3	**29.82**	**+/-**	**10.92**
Newport News - Lee Hall	SPS-D-4	**37.31**	**+/-**	**12.22**
Naval Weapons Station – 1	SPS-D-5	**27.13**	**+/-**	**10.42**
Newport News – Fort Eustis	SPS-D-6	**27.90**	**+/-**	**10.56**
Surry – Route 628	SPS-D-7	**10.13**	**+/-**	**6.36**
Surry – Lawnes Creek	SPS-D-8	**28.25**	**+/-**	**10.63**
Surry Power Station	SPS-D-9	**27.34**	**+/-**	**10.46**
Surry – Hog Point	SPS-D-10	**23.78**	**+/-**	**9.75**
Surry – Bacon's Castle	SPS-D-11	**26.29**	**+/-**	**10.26**
Surry – Alliance	SPS-D-12	**22.57**	**+/-**	**9.50**
Surry – Scotland Wharf	SPS-D-13	**27.54**	**+/-**	**10.50**
Surry – Lebanon Baptist Church	SPS-D-14	**20.60**	**+/-**	**9.08**
Louisa County - Mineral	NAPS-D-1	**36.20**	**+/-**	**12.03**
Louisa County – Wares Crossroads	NAPS-D-2	**25.53**	**+/-**	**10.11**
Louisa County – Good Hope Church	NAPS-D-3	**29.55**	**+/-**	**10.87**
Spotsylvania – Route 713	NAPS-D-4	**24.88**	**+/-**	**9.98**
Spotsylvania Route 614	NAPS-D-5	**25.72**	**+/-**	**10.14**
Spotsylvania – Levy	NAPS-D-6	**31.99**	**+/-**	**11.31**
Louisa County – Bumpass Fire Dept.	NAPS-D-7	**31.76**	**+/-**	**11.27**
Louisa County – Fred Hall	NAPS-D-8	**24.88**	**+/-**	**9.98**
Louisa County – Aspen Hill	NAPS-D-9	**34.81**	**+/-**	**11.80**
Louisa County – Route 685	NAPS-D-10	**32.61**	**+/-**	**11.42**
Louisa County – Route 700	NAPS-D-11	**31.30**	**+/-**	**11.19**
North Anna Power Station	NAPS-D-12	**34.61**	**+/-**	**11.77**
Pocahontas State Park (Control)	PSP-D-1	**41.77**	**+/-**	**12.93**
Radiological Health	ORH-D-1	**15.48**	**+/-**	**7.87**
Radiological Health	ORH-D-2	**15.86**	**+/-**	**7.96**

Virginia Department of Health
AMBIENT GAMMA EXPOSURE
May 7, 2018 through August 6, 2018

THIRD QUARTER

Location	Station	Net Exposure Rate mR/Std Qtr +/- 2S.D.		
Jamestown – Historical site	SPS-D-1	**29.17**	**+/-**	**10.80**
Williamsburg – Airport	SPS-D-2	**23.73**	**+/-**	**9.74**
Williamsburg – Busch Gardens	SPS-D-3	**32.01**	**+/-**	**11.32**
Newport News - Lee Hall	SPS-D-4	**33.47**	**+/-**	**11.57**
Naval Weapons Station – 1	SPS-D-5	**22.19**	**+/-**	**9.42**
Newport News – Fort Eustis	SPS-D-6	**27.45**	**+/-**	**10.48**
Surry – Route 628[58]	SPS-D-7		**+/-**	
Surry – Lawnes Creek	SPS-D-8	**28.59**	**+/-**	**10.69**
Surry Power Station	SPS-D-9	**26.89**	**+/-**	**10.37**
Surry – Hog Point	SPS-D-10	**25.68**	**+/-**	**10.13**
Surry – Bacon's Castle	SPS-D-11	**21.88**	**+/-**	**9.35**
Surry – Alliance	SPS-D-12	**26.91**	**+/-**	**10.37**
Surry – Scotland Wharf	SPS-D-13	**23.59**	**+/-**	**9.71**
Surry – Lebanon Baptist Church	SPS-D-14	**23.22**	**+/-**	**9.64**
Louisa County - Mineral	NAPS-D-1	**28.27**	**+/-**	**10.63**
Louisa County – Wares Crossroads	NAPS-D-2	**27.20**	**+/-**	**10.43**
Louisa County – Good Hope Church	NAPS-D-3	**32.73**	**+/-**	**11.44**
Spotsylvania – Route 713	NAPS-D-4	**26.31**	**+/-**	**10.26**
Spotsylvania Route 614	NAPS-D-5	**27.34**	**+/-**	**10.46**
Spotsylvania – Levy	NAPS-D-6	**28.27**	**+/-**	**10.63**
Louisa County – Bumpass Fire Dept.	NAPS-D-7	**29.77**	**+/-**	**10.91**
Louisa County – Fred Hall	NAPS-D-8	**23.08**	**+/-**	**9.61**
Louisa County – Aspen Hill	NAPS-D-9	**35.84**	**+/-**	**11.97**
Louisa County – Route 685	NAPS-D-10	**27.16**	**+/-**	**10.42**
Louisa County – Route 700	NAPS-D-11	**33.27**	**+/-**	**11.54**
North Anna Power Station	NAPS-D-12	**32.42**	**+/-**	**11.39**
Pocahontas State Park (Control)	PSP-D-1	**42.86**	**+/-**	**13.09**
Radiological Health	ORH-D-1	**12.62**	**+/-**	**7.11**
Radiological Health	ORH-D-2	**13.80**	**+/-**	**7.43**

[58] SPS-D-7 Due to a torn beta window, TLD was not analyzed.

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF HEALTH

OFFICE OF RADIOLOGICAL HEALTH
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BABCOCK & WILCOX

Virginia Department of Health

AIR PARTICULATE COMPOSITE SAMPLES

January 1, 2018 through September 30, 2018

Eastern Site Boundary – Ball field

FIRST QUARTER REPORT

	Start	Date	Stop	Gross Alpha Activity pCi/meter^3
B&W-A-1				
1st	01/03/2018	-	01/09/2018	0.001

SECOND QUARTER REPORT

	Start	Date	Stop	Gross Alpha Activity pCi/meter^3
B&W-A-1				
2nd	04/04/2018	-	04/10/2018	0.001

THIRD QUARTER REPORT

	Start	Date	Stop	Gross Alpha Activity pCi/meter^3
B&W-A-1				
3rd	07/11/2018	-	07/18/2018	0.002

Virginia Department of Health
SOIL

January 1, 2018 through September 30, 2018

Eastern Site Boundary / Six Mile Bridge Shoreline

Location	Date	Distance & Direction	Type	Alpha Activity ppm
Eastern Site Boundary Ball field B&W-S-1	**N/A**	Site Boundary	Soil	+/-
James River Shoreline Near Six Mile Bridge "control" B&W-S-2	**N/A**	1.5 miles SW	Soil	+/-

Soil samples collected annually.
Note: Uranium separation followed by alpha counting.

SURFACE WATER

January 1, 2018 through September 30, 2018

Eastern Site Boundary Shoreline / Six Mile Bridge Shoreline

Location	Date	Distance & Direction	Alpha Activity ppb
James River Shoreline Near Ball field at eastern site boundary B&W-W-1	**N/A**	Approx. 3 miles downstream	+/-
James River Shoreline Near Six Mile Bridge "control" B&W-W-2	**N/A**	Approx. 1.5 miles upstream	+/-

Surface water samples collected annually.
Note: Uranium separation followed by alpha counting.

Virginia Department of Health
VEGETATION

January 1, 2018 through June 30, 2018

Eastern Site Boundary / James River Shoreline

Location	Date	Distance & Direction	Alpha Activity ppm
Eastern site boundary Ball field B&W-V-1	**N/A**	Approx. 3 miles downstream	+/-
James River Shoreline off Rt. 460 "control" B&W-V-2	**N/A**	Approx. 4.5 Miles SW	+/-

Vegetation collected annually.
Note: Uranium separation followed by alpha counting.

COMMONWEALTH OF VIRGINIA
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EMERGENCY PREPAREDNESS

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 (COVRERP), 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.