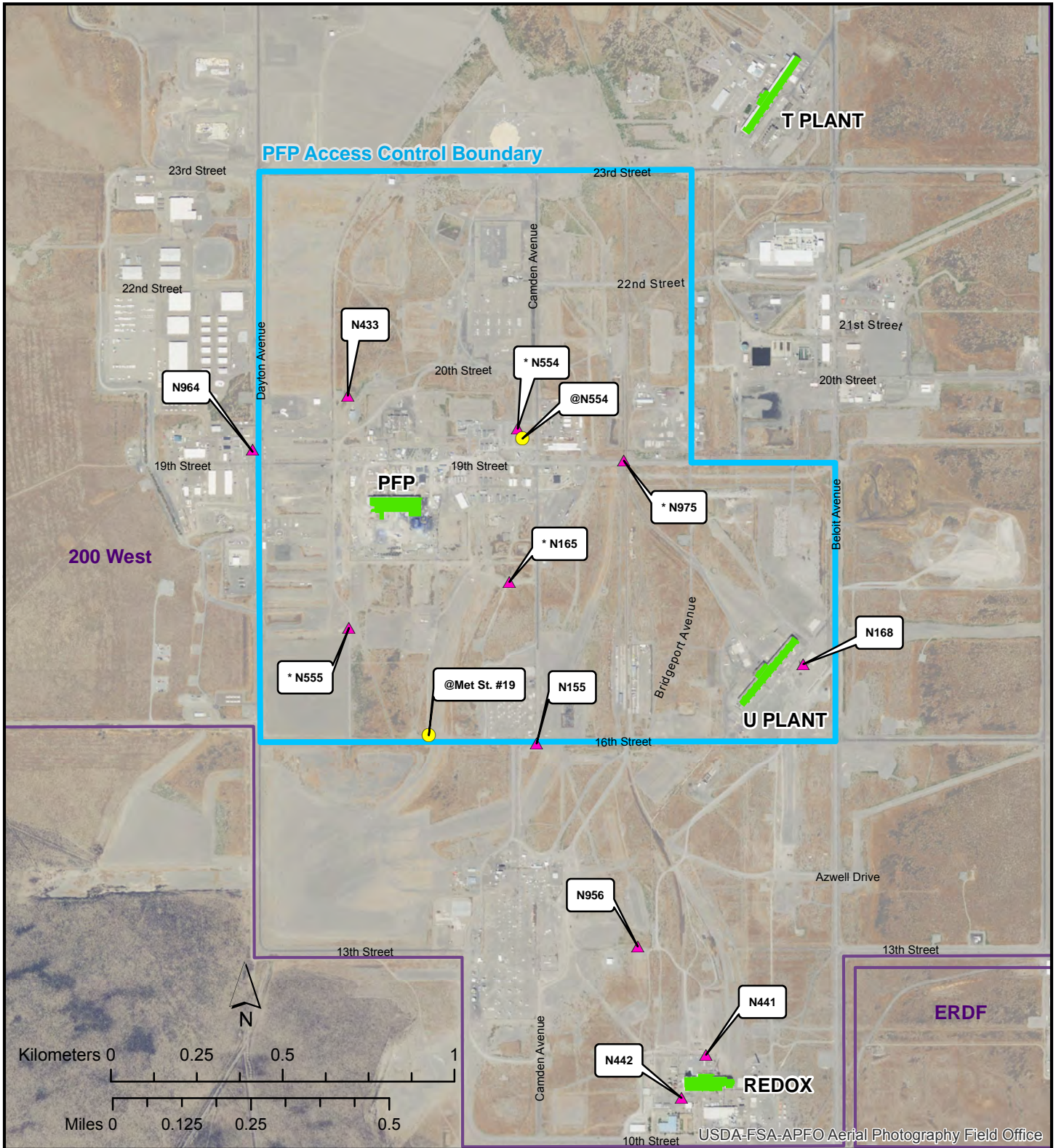


# Hanford Environmental Surveillance & Washington State Department of Health (DOH) High Volume Air Sampling Locations



- Continuous radioactive air sampling is conducted at all Hanford Environmental Surveillance locations by DOE and its contractor.
- High volume Air Sampling using different equipment was conducted by the DOH at the two locations shown and at the Rattlesnake Barricade on November 29, 2017.
- DOH performed isotopic analyses on air samples and collected radiological smear measurements at a select number of locations. Please see associated data package for more information.

## Legend

- ▲ Environmental Surveillance Locations
- \* DOH Co-located Stations
- DOH High Volume Sampler
- Major Facilities
- PFP Access Control Boundary
- Operational Areas

NOTE: Aerial Imagery, 2017, NAIP.

# DRAFT

United States Department of Energy  
Environmental Surveillance Radioactive Sampling Results  
Gross Alpha and Gross Beta Results  
From October 23, 2017 - January 2, 2018\*

\*Note - Data for station N956 did not collect from 10/23/2017 to 11/6/2017

Station	Sample ON	Sample OFF	isotope	result	unit	Uncertainty
N165	10/23/17	11/06/17	gross α	8.0E-03	pCi/m <sup>3</sup>	1.1E-03
N165	10/23/17	11/06/17	gross β	1.6E-02	pCi/m <sup>3</sup>	1.5E-03
N165	11/06/17	11/20/17	gross α	2.4E-02	pCi/m <sup>3</sup>	2.3E-03
N165	11/06/17	11/20/17	gross β	2.0E-02	pCi/m <sup>3</sup>	1.8E-03
N165	11/20/17	12/04/17	gross α	1.6E-02	pCi/m <sup>3</sup>	1.7E-03
N165	11/20/17	12/04/17	gross β	1.2E-02	pCi/m <sup>3</sup>	1.2E-03
N165	12/04/17	12/18/17	gross α	2.9E-02	pCi/m <sup>3</sup>	2.8E-03
N165	12/04/17	12/18/17	gross β	4.1E-02	pCi/m <sup>3</sup>	3.3E-03
N165	12/18/17	01/02/18	gross α	2.0E-03	pCi/m <sup>3</sup>	5.4E-04
N165	12/18/17	01/02/18	gross β	3.3E-02	pCi/m <sup>3</sup>	2.9E-03
N555	10/23/17	11/06/17	gross α	3.6E-03	pCi/m <sup>3</sup>	7.4E-04
N555	10/23/17	11/06/17	gross β	1.6E-02	pCi/m <sup>3</sup>	1.7E-03
N555	11/06/17	11/20/17	gross α	3.0E-03	pCi/m <sup>3</sup>	6.5E-04
N555	11/06/17	11/20/17	gross β	1.8E-02	pCi/m <sup>3</sup>	2.0E-03
N555	11/20/17	12/04/17	gross α	3.2E-02	pCi/m <sup>3</sup>	3.5E-03
N555	11/20/17	12/04/17	gross β	1.2E-02	pCi/m <sup>3</sup>	1.4E-03
N555	12/04/17	12/18/17	gross α	4.0E-02	pCi/m <sup>3</sup>	4.6E-03
N555	12/04/17	12/18/17	gross β	5.3E-02	pCi/m <sup>3</sup>	5.4E-03
N555	12/18/17	01/02/18	gross α	3.8E-03	pCi/m <sup>3</sup>	9.6E-04
N555	12/18/17	01/02/18	gross β	6.9E-02	pCi/m <sup>3</sup>	7.1E-03
N554	10/23/17	11/06/17	gross α	2.8E-03	pCi/m <sup>3</sup>	6.3E-04
N554	10/23/17	11/06/17	gross β	1.8E-02	pCi/m <sup>3</sup>	2.0E-03
N554	11/06/17	11/20/17	gross α	4.1E-03	pCi/m <sup>3</sup>	7.7E-04
N554	11/06/17	11/20/17	gross β	1.9E-02	pCi/m <sup>3</sup>	2.0E-03
N554	11/20/17	12/04/17	gross α	1.9E-03	pCi/m <sup>3</sup>	6.3E-04
N554	11/20/17	12/04/17	gross β	1.0E-02	pCi/m <sup>3</sup>	1.2E-03
N554	12/04/17	12/18/17	gross α	5.8E-03	pCi/m <sup>3</sup>	9.9E-04
N554	12/04/17	12/18/17	gross β	5.1E-02	pCi/m <sup>3</sup>	5.0E-03
N554	12/18/17	01/02/18	gross α	1.6E-03	pCi/m <sup>3</sup>	4.0E-04
N554	12/18/17	01/02/18	gross β	2.4E-02	pCi/m <sup>3</sup>	2.3E-03
N975	10/23/17	11/06/17	gross α	6.1E-03	pCi/m <sup>3</sup>	1.1E-03
N975	10/23/17	11/06/17	gross β	1.7E-02	pCi/m <sup>3</sup>	1.6E-03
N975	11/06/17	11/20/17	gross α	7.8E-03	pCi/m <sup>3</sup>	1.1E-03

Washington State Department of Health  
Environmental Surveillance Radioactive Sampling Results  
Gross Alpha and Gross Beta Results \*  
From November 6, 2017 - December 20, 2017

\*Note - Data presented is what is available as of 1/18/2018

Station	Sample OFF	isotope	result	unit	Uncertainty
N165	11/20/2017	gross α	1.95E-02	pCi/m <sup>3</sup>	3.00E-03
N165	11/20/2017	gross β	1.45E-02	pCi/m <sup>3</sup>	9.00E-04
N165	12/4/2017	gross α	1.89E-02	pCi/m <sup>3</sup>	2.90E-03
N165	12/4/2017	gross β	6.80E-03	pCi/m <sup>3</sup>	6.30E-04
N165	12/20/2017	gross α	2.99E-02	pCi/m <sup>3</sup>	4.40E-03
N165	12/20/2017	gross β	3.54E-02	pCi/m <sup>3</sup>	1.60E-03
N555	11/20/2017	gross α	2.01E-03	pCi/m <sup>3</sup>	5.40E-04
N555	11/20/2017	gross β	1.29E-02	pCi/m <sup>3</sup>	9.00E-04
N555	12/4/2017	gross α	3.68E-02	pCi/m <sup>3</sup>	5.30E-03
N555	12/4/2017	gross β	1.14E-02	pCi/m <sup>3</sup>	8.00E-04
N554	11/20/2017	gross α	3.17E-02	pCi/m <sup>3</sup>	4.80E-03
N554	11/20/2017	gross β	1.61E-02	pCi/m <sup>3</sup>	1.00E-03
N554	12/4/2017	gross α	1.15E-03	pCi/m <sup>3</sup>	3.70E-04
N554	12/4/2017	gross β	7.61E-03	pCi/m <sup>3</sup>	6.40E-04
N975	11/20/2017	gross α	1.83E-03	pCi/m <sup>3</sup>	5.20E-04
N975	11/20/2017	gross β	7.36E-03	pCi/m <sup>3</sup>	6.60E-04

N975	11/06/17	11/20/17	gross $\beta$	1.8E-02	pCi/m <sup>3</sup>	1.7E-03
N975	11/20/17	12/04/17	gross $\alpha$	1.7E-03	pCi/m <sup>3</sup>	4.8E-04
N975	11/20/17	12/04/17	gross $\beta$	1.1E-02	pCi/m <sup>3</sup>	1.2E-03
N975	12/04/17	12/18/17	gross $\alpha$	7.5E-02	pCi/m <sup>3</sup>	6.2E-03
N975	12/04/17	12/18/17	gross $\beta$	5.1E-02	pCi/m <sup>3</sup>	4.2E-03
N975	12/18/17	01/02/18	gross $\alpha$	1.5E-03	pCi/m <sup>3</sup>	4.6E-04
N975	12/18/17	01/02/18	gross $\beta$	3.2E-02	pCi/m <sup>3</sup>	2.6E-03
N441	10/23/17	11/06/17	gross $\alpha$	1.8E-03	pCi/m <sup>3</sup>	4.7E-04
N441	10/23/17	11/06/17	gross $\beta$	1.8E-02	pCi/m <sup>3</sup>	1.7E-03
N441	11/06/17	11/20/17	gross $\alpha$	2.0E-03	pCi/m <sup>3</sup>	5.1E-04
N441	11/06/17	11/20/17	gross $\beta$	2.0E-02	pCi/m <sup>3</sup>	1.7E-03
N441	11/20/17	12/04/17	gross $\alpha$	2.8E-03	pCi/m <sup>3</sup>	5.9E-04
N441	11/20/17	12/04/17	gross $\beta$	9.7E-03	pCi/m <sup>3</sup>	1.0E-03
N441	12/04/17	12/18/17	gross $\alpha$	2.5E-02	pCi/m <sup>3</sup>	2.7E-03
N441	12/04/17	12/18/17	gross $\beta$	5.1E-02	pCi/m <sup>3</sup>	4.6E-03
N441	12/18/17	01/02/18	gross $\alpha$	1.5E-03	pCi/m <sup>3</sup>	4.7E-04
N441	12/18/17	01/02/18	gross $\beta$	3.1E-02	pCi/m <sup>3</sup>	2.5E-03
N442	10/23/17	11/06/17	gross $\alpha$	2.2E-03	pCi/m <sup>3</sup>	6.0E-04
N442	10/23/17	11/06/17	gross $\beta$	2.2E-02	pCi/m <sup>3</sup>	2.2E-03
N442	11/06/17	11/20/17	gross $\alpha$	3.1E-03	pCi/m <sup>3</sup>	6.3E-04
N442	11/06/17	11/20/17	gross $\beta$	2.4E-02	pCi/m <sup>3</sup>	2.0E-03
N442	11/20/17	12/04/17	gross $\alpha$	1.9E-03	pCi/m <sup>3</sup>	5.2E-04
N442	11/20/17	12/04/17	gross $\beta$	1.1E-02	pCi/m <sup>3</sup>	1.1E-03
N442	12/04/17	12/18/17	gross $\alpha$	1.3E-02	pCi/m <sup>3</sup>	1.6E-03
N442	12/04/17	12/18/17	gross $\beta$	4.9E-02	pCi/m <sup>3</sup>	4.0E-03
N442	12/18/17	01/02/18	gross $\alpha$	1.3E-03	pCi/m <sup>3</sup>	4.4E-04
N442	12/18/17	01/02/18	gross $\beta$	3.2E-02	pCi/m <sup>3</sup>	2.9E-03
N433	10/23/17	11/06/17	gross $\alpha$	3.4E-03	pCi/m <sup>3</sup>	6.9E-04
N433	10/23/17	11/06/17	gross $\beta$	2.2E-02	pCi/m <sup>3</sup>	2.1E-03
N433	11/06/17	11/20/17	gross $\alpha$	2.7E-03	pCi/m <sup>3</sup>	6.1E-04
N433	11/06/17	11/20/17	gross $\beta$	2.0E-02	pCi/m <sup>3</sup>	1.8E-03
N433	11/20/17	12/04/17	gross $\alpha$	2.7E-03	pCi/m <sup>3</sup>	6.0E-04
N433	11/20/17	12/04/17	gross $\beta$	9.4E-03	pCi/m <sup>3</sup>	1.1E-03
N433	12/04/17	12/18/17	gross $\alpha$	7.6E-03	pCi/m <sup>3</sup>	1.1E-03
N433	12/04/17	12/18/17	gross $\beta$	5.3E-02	pCi/m <sup>3</sup>	4.3E-03
N433	12/18/17	01/02/18	gross $\alpha$	1.4E-03	pCi/m <sup>3</sup>	4.9E-04
N433	12/18/17	01/02/18	gross $\beta$	3.0E-02	pCi/m <sup>3</sup>	2.5E-03
N956	11/06/17	11/20/17	gross $\alpha$	5.2E-03	pCi/m <sup>3</sup>	1.1E-03
N956	11/06/17	11/20/17	gross $\beta$	3.2E-02	pCi/m <sup>3</sup>	2.9E-03

N956	11/20/17	12/04/17	gross $\alpha$	2.5E-03	pCi/m <sup>3</sup>	5.6E-04
N956	11/20/17	12/04/17	gross $\beta$	1.1E-02	pCi/m <sup>3</sup>	1.2E-03
N956	12/04/17	12/18/17	gross $\alpha$	1.3E-02	pCi/m <sup>3</sup>	1.5E-03
N956	12/04/17	12/18/17	gross $\beta$	4.8E-02	pCi/m <sup>3</sup>	3.9E-03
N956	12/18/17	01/02/18	gross $\alpha$	2.0E-03	pCi/m <sup>3</sup>	5.4E-04
N956	12/18/17	01/02/18	gross $\beta$	3.6E-02	pCi/m <sup>3</sup>	3.0E-03
N964	10/23/17	11/06/17	gross $\alpha$	3.0E-03	pCi/m <sup>3</sup>	7.3E-04
N964	10/23/17	11/06/17	gross $\beta$	1.9E-02	pCi/m <sup>3</sup>	1.8E-03
N964	11/06/17	11/20/17	gross $\alpha$	2.5E-03	pCi/m <sup>3</sup>	5.8E-04
N964	11/06/17	11/20/17	gross $\beta$	1.9E-02	pCi/m <sup>3</sup>	1.7E-03
N964	11/20/17	12/04/17	gross $\alpha$	2.2E-03	pCi/m <sup>3</sup>	5.5E-04
N964	11/20/17	12/04/17	gross $\beta$	1.0E-02	pCi/m <sup>3</sup>	1.1E-03
N964	12/04/17	12/18/17	gross $\alpha$	4.2E-02	pCi/m <sup>3</sup>	3.8E-03
N964	12/04/17	12/18/17	gross $\beta$	4.1E-02	pCi/m <sup>3</sup>	3.4E-03
N964	12/18/17	01/02/18	gross $\alpha$	2.9E-03	pCi/m <sup>3</sup>	6.0E-04
N964	12/18/17	01/02/18	gross $\beta$	3.4E-02	pCi/m <sup>3</sup>	2.9E-03
N155	10/23/17	11/06/17	gross $\alpha$	1.8E-03	pCi/m <sup>3</sup>	4.7E-04
N155	10/23/17	11/06/17	gross $\beta$	1.7E-02	pCi/m <sup>3</sup>	1.6E-03
N155	11/06/17	11/20/17	gross $\alpha$	2.7E-03	pCi/m <sup>3</sup>	6.0E-04
N155	11/06/17	11/20/17	gross $\beta$	1.9E-02	pCi/m <sup>3</sup>	1.7E-03
N155	11/20/17	12/04/17	gross $\alpha$	8.2E-03	pCi/m <sup>3</sup>	1.1E-03
N155	11/20/17	12/04/17	gross $\beta$	1.1E-02	pCi/m <sup>3</sup>	1.1E-03
N155	12/04/17	12/18/17	gross $\alpha$	5.4E-02	pCi/m <sup>3</sup>	4.6E-03
N155	12/04/17	12/18/17	gross $\beta$	4.6E-02	pCi/m <sup>3</sup>	3.9E-03
N155	12/18/17	01/02/18	gross $\alpha$	2.0E-03	pCi/m <sup>3</sup>	5.1E-04
N155	12/18/17	01/02/18	gross $\beta$	2.9E-02	pCi/m <sup>3</sup>	2.4E-03
N168	10/23/17	11/06/17	gross $\alpha$	2.6E-03	pCi/m <sup>3</sup>	5.9E-04
N168	10/23/17	11/06/17	gross $\beta$	1.8E-02	pCi/m <sup>3</sup>	1.7E-03
N168	11/06/17	11/20/17	gross $\alpha$	2.7E-03	pCi/m <sup>3</sup>	5.9E-04
N168	11/06/17	11/20/17	gross $\beta$	2.0E-02	pCi/m <sup>3</sup>	2.0E-03
N168	11/20/17	12/04/17	gross $\alpha$	1.8E-03	pCi/m <sup>3</sup>	5.4E-04
N168	11/20/17	12/04/17	gross $\beta$	1.1E-02	pCi/m <sup>3</sup>	1.2E-03
N168	12/04/17	12/18/17	gross $\alpha$	3.8E-03	pCi/m <sup>3</sup>	7.1E-04
N168	12/04/17	12/18/17	gross $\beta$	4.7E-02	pCi/m <sup>3</sup>	3.7E-03
N168	12/18/17	01/02/18	gross $\alpha$	1.8E-03	pCi/m <sup>3</sup>	4.8E-04
N168	12/18/17	01/02/18	gross $\beta$	3.1E-02	pCi/m <sup>3</sup>	2.6E-03



Washington State Department of Health  
 Environmental Surveillance Radioactive Sampling Results  
 Isotopic Results \*

From November 6, 2017 - December 20, 2017 \*\*

\*Note - (G) indicates results via gamma analysis

\*\*Note - Samples collected for approximately two weeks. Date indicated is when filter was collected.

Location	Date	isotope	result	unit	Error
N165	11/20/2017	Am-241 (G)	5.30E-03	pCi/m <sup>3</sup>	3.10E-03
N165	11/20/2017	Be-7	5.20E-02	pCi/m <sup>3</sup>	1.60E-02
N165	12/4/2017	Am-241	2.80E-03	pCi/m <sup>3</sup>	3.00E-04
N165	12/4/2017	Am-241 (G)	2.56E-03	pCi/m <sup>3</sup>	4.70E-04
N165	12/4/2017	Be-7	2.40E-02	pCi/m <sup>3</sup>	9.40E-03
N165	12/4/2017	Pu-238	8.40E-04	pCi/m <sup>3</sup>	1.10E-04
N165	12/4/2017	Pu-239/240	1.24E-02	pCi/m <sup>3</sup>	9.00E-04
N165	12/20/2017	Am-241	3.70E-03	pCi/m <sup>3</sup>	4.00E-04
N165	12/20/2017	Am-241 (G)	7.50E-03	pCi/m <sup>3</sup>	1.90E-03
N165	12/20/2017	Be-7	4.00E-02	pCi/m <sup>3</sup>	1.00E-02
N165	12/20/2017	Pu-238	7.00E-04	pCi/m <sup>3</sup>	9.00E-05
N165	12/20/2017	Pu-239/240	2.30E-02	pCi/m <sup>3</sup>	2.00E-03
N554	11/20/2017	Am-241	6.90E-03	pCi/m <sup>3</sup>	6.00E-04
N554	11/20/2017	Am-241 (G)	1.27E-02	pCi/m <sup>3</sup>	4.20E-03
N554	11/20/2017	Be-7	4.40E-02	pCi/m <sup>3</sup>	1.30E-02
N554	11/20/2017	Pu-238	1.70E-03	pCi/m <sup>3</sup>	2.00E-04
N554	11/20/2017	Pu-239/240	1.90E-02	pCi/m <sup>3</sup>	1.00E-03
N554	12/4/2017	Am-241	9.00E-06	pCi/m <sup>3</sup>	1.40E-05
N554	12/4/2017	Am-241 (G)	-1.10E-03	pCi/m <sup>3</sup>	2.00E-03
N554	12/4/2017	Be-7	4.95E-02	pCi/m <sup>3</sup>	5.40E-03
N554	12/4/2017	Pu-238	0.00E+00	pCi/m <sup>3</sup>	1.40E-05
N554	12/4/2017	Pu-239/240	0.00E+00	pCi/m <sup>3</sup>	2.20E-05
N554	12/20/2017	Am-241 (G)	5.20E-04	pCi/m <sup>3</sup>	9.80E-04
N554	12/20/2017	Be-7	5.34E-02	pCi/m <sup>3</sup>	7.20E-03
N555	11/20/2017	Am-241 (G)	-3.00E-04	pCi/m <sup>3</sup>	1.20E-03
N555	11/20/2017	Be-7	4.30E-02	pCi/m <sup>3</sup>	1.80E-02
N555	12/4/2017	Am-241	8.50E-03	pCi/m <sup>3</sup>	8.00E-04
N555	12/4/2017	Am-241 (G)	2.03E-02	pCi/m <sup>3</sup>	1.80E-03
N555	12/4/2017	Be-7	4.17E-02	pCi/m <sup>3</sup>	5.60E-03
N555	12/4/2017	Pu-238	1.80E-03	pCi/m <sup>3</sup>	2.00E-04
N555	12/4/2017	Pu-239/240	2.40E-02	pCi/m <sup>3</sup>	2.00E-03
N555	12/20/2017	Am-241 (G)	6.00E-04	pCi/m <sup>3</sup>	2.20E-03
N555	12/20/2017	Be-7	4.10E-02	pCi/m <sup>3</sup>	1.10E-02
N975	11/20/2017	Am-241 (G)	4.00E-04	pCi/m <sup>3</sup>	6.00E-04
N975	12/4/2017	Am-241 (G)	-1.40E-04	pCi/m <sup>3</sup>	7.10E-04
N975	12/4/2017	Be-7	4.50E-02	pCi/m <sup>3</sup>	1.50E-02
N975	12/20/2017	Am-241 (G)	7.41E-03	pCi/m <sup>3</sup>	8.30E-04
N975	12/20/2017	Be-7	1.62E-02	pCi/m <sup>3</sup>	8.10E-03



Washington State Department of Health  
 High Volume Air Sampling Results \*  
 Collected on November 29, 2017 \*\*

\*Note - (G) indicates results via gamma analysis

\*Note - Additional Samples taken only at Rattlesnake Gate on 12/19 and 12/20  
 also included

Location	Date	isotope	result	unit	Error
Met St. #19	11/29/2017	Am-241	1.50E-04	pCi/m <sup>3</sup>	1.40E-04
Met St. #19	11/29/2017	Co-60	3.40E-03	pCi/m <sup>3</sup>	4.40E-03
Met St. #19	11/29/2017	Cs-134	-2.00E-03	pCi/m <sup>3</sup>	4.40E-03
Met St. #19	11/29/2017	Cs-137	1.10E-03	pCi/m <sup>3</sup>	4.10E-03
Met St. #19	11/29/2017	Eu-152	-3.00E-03	pCi/m <sup>3</sup>	1.00E-02
Met St. #19	11/29/2017	Eu-154	3.90E-03	pCi/m <sup>3</sup>	7.20E-03
Met St. #19	11/29/2017	Eu-155	-3.00E-03	pCi/m <sup>3</sup>	1.10E-02
Met St. #19	11/29/2017	Pu-238	6.00E-05	pCi/m <sup>3</sup>	3.10E-04
Met St. #19	11/29/2017	Pu-239/240	2.80E-04	pCi/m <sup>3</sup>	2.50E-04
Met St. #19	11/29/2017	Ru-106	-8.00E-03	pCi/m <sup>3</sup>	4.10E-02
Met St. #19	11/29/2017	Sb-125	-5.00E-03	pCi/m <sup>3</sup>	1.30E-02
N554	11/29/2017	Am-241	1.10E-04	pCi/m <sup>3</sup>	1.50E-04
N554	11/29/2017	Co-60	1.30E-03	pCi/m <sup>3</sup>	4.70E-03
N554	11/29/2017	Cs-134	2.00E-04	pCi/m <sup>3</sup>	4.40E-03
N554	11/29/2017	Cs-137	6.00E-04	pCi/m <sup>3</sup>	3.90E-03
N554	11/29/2017	Eu-152	3.20E-03	pCi/m <sup>3</sup>	5.40E-03
N554	11/29/2017	Eu-154	-4.40E-03	pCi/m <sup>3</sup>	3.90E-03
N554	11/29/2017	Eu-155	5.00E-04	pCi/m <sup>3</sup>	5.20E-03
N554	11/29/2017	Pu-238	3.90E-04	pCi/m <sup>3</sup>	4.20E-04
N554	11/29/2017	Pu-239/240	1.00E-02	pCi/m <sup>3</sup>	9.80E-04
N554	11/29/2017	Ru-106	-2.00E-03	pCi/m <sup>3</sup>	3.40E-02
N554	11/29/2017	Sb-125	-1.00E-03	pCi/m <sup>3</sup>	1.10E-02
Rattlesnake	11/29/2017	Am-241	1.40E-04	pCi/m <sup>3</sup>	1.60E-04
Rattlesnake	11/29/2017	Co-60	6.00E-04	pCi/m <sup>3</sup>	4.40E-03
Rattlesnake	11/29/2017	Cs-134	-4.60E-03	pCi/m <sup>3</sup>	5.00E-03
Rattlesnake	11/29/2017	Cs-137	-8.00E-04	pCi/m <sup>3</sup>	3.90E-03
Rattlesnake	11/29/2017	Eu-152	9.00E-04	pCi/m <sup>3</sup>	7.10E-03
Rattlesnake	11/29/2017	Eu-154	2.40E-03	pCi/m <sup>3</sup>	5.00E-03
Rattlesnake	11/29/2017	Eu-155	1.04E-02	pCi/m <sup>3</sup>	7.40E-03
Rattlesnake	11/29/2017	Pu-238	1.70E-04	pCi/m <sup>3</sup>	2.20E-04
Rattlesnake	11/29/2017	Pu-239/240	6.00E-05	pCi/m <sup>3</sup>	9.90E-05
Rattlesnake	11/29/2017	Ru-106	-2.20E-02	pCi/m <sup>3</sup>	3.50E-02
Rattlesnake	11/29/2017	Sb-125	-5.00E-03	pCi/m <sup>3</sup>	9.80E-03
Rattlesnake	12/19/2017	Am-241	-2.00E-05	pCi/m <sup>3</sup>	1.40E-04
Rattlesnake	12/19/2017	Am-241 (G)	-1.10E-02	pCi/m <sup>3</sup>	1.10E-02
Rattlesnake	12/19/2017	Pu-238	-3.80E-05	pCi/m <sup>3</sup>	9.60E-05
Rattlesnake	12/19/2017	Pu-239/240	0.00E+00	pCi/m <sup>3</sup>	4.00E-05
Rattlesnake	12/20/2017	Am-241	1.00E-05	pCi/m <sup>3</sup>	1.40E-04
Rattlesnake	12/20/2017	Am-241 (G)	-1.70E-03	pCi/m <sup>3</sup>	7.50E-03
Rattlesnake	12/20/2017	Pu-238	-2.00E-05	pCi/m <sup>3</sup>	1.10E-04
Rattlesnake	12/20/2017	Pu-239/240	-1.50E-04	pCi/m <sup>3</sup>	1.10E-04

## Washington State Department of Health

## Radiological Smear Measurements\*

Collected on December 15 and December 20, 2017 \*\*

\*Note - (G) indicates results via gamma analysis

\*\*Note- One wipe performed on 12/15, two wipes performed on 12/20  
for each location except Met Station #19

Location	Date	isotope	result	unit	Error
N165	12/15/2017	Am-241 (G)	2.60E+00	pCi/wipe	3.60E+00
N165	12/15/2017	Cs-137	-3.30E-01	pCi/wipe	3.50E-01
N165 - 1st	12/20/2017	Am-241 (G)	2.00E-01	pCi/wipe	3.30E+00
N165 - 1st	12/20/2017	gross $\alpha$	3.30E-01	pCi/wipe	1.90E-01
N165 - 1st	12/20/2017	gross $\beta$	3.68E+00	pCi/wipe	8.60E-01
N165 - 2nd	12/20/2017	Am-241 (G)	2.00E-01	pCi/wipe	1.10E+00
N165 - 2nd	12/20/2017	gross $\alpha$	6.80E-01	pCi/wipe	6.10E-01
N165 - 2nd	12/20/2017	gross $\beta$	2.36E+00	pCi/wipe	6.20E-01
N554	12/15/2017	Am-241 (G)	-1.00E-01	pCi/wipe	1.10E+00
N554	12/15/2017	Cs-137	-5.10E-01	pCi/wipe	4.30E-01
N554 - 1st	12/20/2017	Am-241 (G)	-1.00E-01	pCi/wipe	1.10E+00
N554 - 1st	12/20/2017	gross $\alpha$	6.10E-02	pCi/wipe	7.80E-02
N554 - 1st	12/20/2017	gross $\beta$	1.70E-01	pCi/wipe	1.10E-01
N554 - 2nd	12/20/2017	Am-241 (G)	5.00E-01	pCi/wipe	4.90E-01
N554 - 2nd	12/20/2017	gross $\alpha$	8.10E-02	pCi/wipe	8.90E-02
N554 - 2nd	12/20/2017	gross $\beta$	1.00E-01	pCi/wipe	1.40E-01
N555	12/15/2017	Am-241 (G)	5.00E-01	pCi/wipe	1.20E+00
N555	12/15/2017	Cs-137	1.20E-01	pCi/wipe	4.30E-01
N555 - 1st	12/20/2017	Am-241 (G)	-2.60E+00	pCi/wipe	4.20E+00
N555 - 1st	12/20/2017	gross $\alpha$	8.00E-02	pCi/wipe	1.20E-01
N555 - 1st	12/20/2017	gross $\beta$	1.10E-01	pCi/wipe	1.70E-01
N555 - 2nd	12/20/2017	Am-241 (G)	1.20E+00	pCi/wipe	4.60E+00
N555 - 2nd	12/20/2017	gross $\alpha$	6.10E-02	pCi/wipe	7.80E-02
N555 - 2nd	12/20/2017	gross $\beta$	1.60E-01	pCi/wipe	1.00E-01
N975	12/15/2017	Am-241 (G)	-1.05E+00	pCi/wipe	5.20E-01
N975	12/15/2017	Cs-137	-7.00E-02	pCi/wipe	6.40E-01
N975 - 1st	12/20/2017	Am-241 (G)	4.55E+00	pCi/wipe	9.10E-01
N975 - 1st	12/20/2017	gross $\alpha$	8.80E+00	pCi/wipe	3.70E+00
N975 - 1st	12/20/2017	gross $\beta$	9.00E-01	pCi/wipe	3.40E-01
N975 - 2nd	12/20/2017	Am-241 (G)	3.81E+01	pCi/wipe	3.30E+00
N975 - 2nd	12/20/2017	gross $\alpha$	3.80E+01	pCi/wipe	1.60E+01
N975 - 2nd	12/20/2017	gross $\beta$	3.53E+00	pCi/wipe	8.30E-01
Met Station	12/15/2017	Am-241 (G)	8.00E-01	pCi/wipe	3.40E+00
Met Station	12/15/2017	Cs-137	-1.50E-01	pCi/wipe	3.30E-01