



U.S. DEPARTMENT *of* ENERGY

Office of Environmental Management

Quarterly Public Meeting

2024 Annual Site Environmental Report (ASER) Summary

West Valley Cleanup Alliance
December 17, 2025



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Environmental Monitoring Program Overview

Environmental Monitoring Program, including the following components.

- target analytes
- media
- locations
- sampling and analysis methods
- frequencies

which were decided based on

- historical records of isotope inventories at the plant – major isotope constituents
- site and regional geology
- regional topography
- regional climate
- regional vegetation, farming types,
- laboratory analysis capabilities, etc.

upon discussion with the federal/state regulatory agencies and the local health department.



On-Site Air Monitoring [radiological (rad)]

2 active stacks (outlined in red)

- Biweekly/Semiannual
- 13 radioisotopes + gross alpha/beta

Up to 15 Portable Ventilation Units (PVUs).
In 2024, WVDP used 8.

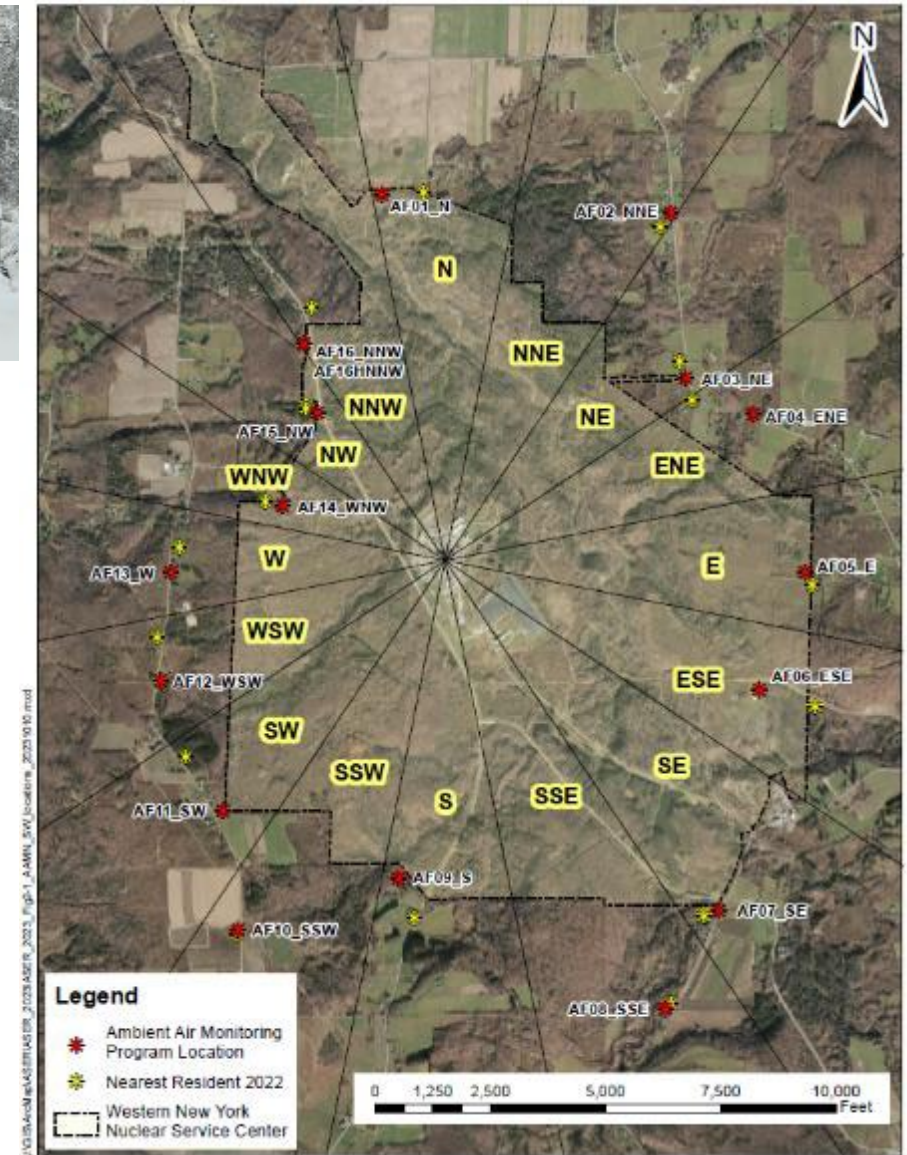
- Biweekly/Semiannual
- 14 radioisotopes + gross alpha/beta



Off-Site (Ambient) Air Monitoring [rad]



- 16 continuously running air samplers within approximately 1 – 2 miles of the WVDP site
- 1 sampler in each compass sector
- Additional 1 sampler in the critical receptor direction
- The WVDP ambient air samplers achieved 98.70% operability on average in 2024
- Background sampling location in Great Valley approx. 18 miles south of the site (*not on the map*)



On-Site Surface Water Monitoring

Surface Water Monitoring – 7 locations [rad]

- Continuous or grab sample monitoring
- Outfall 001 (from Lagoon 3) – treated water discharge point
- Number of analytes vary by location. At 001, 15 isotopes + Gross Alpha/Beta

State Pollutant Discharge Elimination Systems (SPDES) [non-rad]

- 19 stormwater discharge points
- Outfall 001 (WNSP001) is continuously sampled during the controlled discharges from Lagoon 3 to Erdman Brook (*not on the map*)



Off-Site Surface Water Monitoring [rad]

1 upstream location and 2 downstream locations.

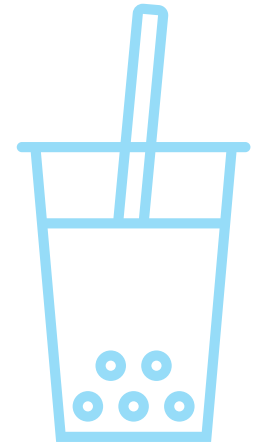
- WFFELBR – Cattaraugus Creek at Felton Bridge. First point of public access to surface water, potentially impacted by the WVDP activities. Sampled monthly. Sr-90, Cs-137, H3, Gross Alpha/Beta
- WFBCTCB – Buttermilk Creek at Thomas Corners Road. Sampled semiannually. Sr-90, Cs-137, H3, Gross Alpha/Beta
- WFBCBKG – Buttermilk Creek approx. 2 miles south of the site (upstream). Sampled semiannually. 14 isotopes + Gross Alpha/Beta



Drinking Water

On-Site potable water is supplied by two wells. Tested for:

- Chemical/bacterial parameters – total coliform, nitrate, principal organic chemicals, primary organic chemicals, lead and copper
- Radiological parameters – gross alpha/beta, tritium
- EPA emerging chemicals – 6 PFAS constituents, PFAS Hazard Index based on 4 PFAS constituents, and 1,4-Dioxane [New in 2024]



2024 Results – Radiological results and PFAS/1,4-Dioxane results were below EPA and NYS limits and standards



Biota

Sampling schedule (near site, background) :

- **Deer: Every year**
- **Milk: One near-site farm sampled every year;**
Additional near site/background every 5 years
- Fish: Every 5 years
- Crops (apples, beans, corn): Every 5 years
- Soil/sediments: Every 5 years

Next 5-year samples will be collected in 2027



2024 Results – No near-site results were higher than background results



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Compliance

Demonstrated against limits/standards/guidelines in concentration/dose

Category	Threshold	Type	Method
Stack Emission	Compared to DOE-STD-1196-2022 Derived Concentration Standard (DCS) ($\mu\text{Ci/mL}$)	Concentration (leads to 100 mrem (1 mSv)/year dose)	Comparison
Off-Site Air (Individual)	Title 40 CFR Part 61, National Emission Standards for Hazardous Air Pollution (NESHAP) Appendix E	Concentration (leads to 10 mrem (0.1 mSv)/year dose)	<u>Ratio</u> against a concentration limit per radionuclide per location. If MEOSI* <u>ratio</u> is < 1, considered compliant
Off-Site Air (Population) (50 miles [80km] radius)	DOE-HDBK-1216-2015	Dose. 100 person-rem (1 person-Sv) <i>guideline</i>	Comparison/Trend
Surface Water * Maximally Exposed Off-Site Individual	Compared to DOE-STD-1196-2022 DCS ($\mu\text{Ci/mL}$)	Concentration (leads to 100 mrem (1 mSv)/year dose)	<u>Ratio</u> against a concentration limit per radionuclide per location. If sum of <u>ratio</u> is < 1, considered compliant



2024 Compliance Results

WVDP was fully compliant with all environmental compliance guidelines

On-Site Air [rad]

- Annual average concentrations of all isotopes ($\mu\text{Ci/mL}$) were multiple orders of magnitude lower than the DCSs

Off-Site (Ambient) Air [rad]

- The highest ratio against the NESHAP concentration limit based on the annual concentration averages was < 0.136 (WNW direction)

Surface Water [rad]

- No exceedance of DCS concentrations. Sum of ratios at Outfall 001 was 0.25

NYS SPDES (surface water discharge) [non-rad]

- No exceedance of State permit limits



2024 Results (Annual Dose)

- Dose estimates account for multiple pathways (e.g., inhalation, ingestion, external exposure)
- WVDP was fully compliant with all environmental compliance guidelines
- For dose calculations, multiple exposure pathways are considered specific to airborne or waterborne releases
- For dose calculations, EPA- or DOE-approved dose modeling software are used
- During the Main Process Plant Building deconstruction, no exceedance of regulatory limits/standard occurred

Exposure Pathways	Critical Receptor (Air)/ MEOSI (Water)	Comparison to EPA and DOE Standards	Comparison to Natural Background (310 mrem/year)	Estimated Collective Population Dose (50 miles/80 km radius)
Airborne Releases	0.18 mrem (0.0018 mSv)	1.8 % of 10 mrem/year EPA Standard	0.06 %	0.069 person-rem (0.00069 person-Sv)
Waterborne Releases	0.004 mrem (0.00004 mSv)	No EPA/DOE Standard	0.001 %	0.038 person-rem (0.00038 person-Sv)
Total	0.184 mrem (0.00184 mSv)	0.18 % of 100 mrem DOE Standard	0.06 %	0.107 person-rem (0.00107 person-Sv)

For more details of the WVDP Environmental Monitoring Program and 2024 monitoring results, please refer to the 2024 Annual Site Environmental Report at



QUESTIONS



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