Ambient Air Concentrations Quarterly Update
First Quarter 2025 (January – March 2025)

Notes:

1) Ambient air is monitored at 16 air samplers, one in each compass sector, approximately one to two miles from the center of the West Valley Demonstration Project (WVDP) site. Additionally, a high-volume sampler with better detection capability is located in the north-northwest direction as a conservative measure because, historically, the predominant prevailing wind direction at the WVDP is toward the north-northwest.
2) The EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) Compliance Limit is 10 mrem/year. In the graphs on pages 3 and after, the 'NESHAP 10 mrem/year Limit' shows the concentration in air (in µCi/mL) for each isotope at each location that would result in a dose equivalent of 10 mrem/year if the concentration level is sustained for a full year.
3) Negative results in the data tables represent sampling results with zero activity present or where the instrument background slightly exceeds the instrument radioactivity count rate obtained for the sample.

In the first quarter of 2025, there was only one positive detection among all air monitoring filters. The detected isotope was iodine-129 at AF03 (Northeast) sampler. However, the detected activity was less than the laboratory minimum detection activity level and was considered an uncertain result. The resulting quarterly dose from this positive detection was 0.0002 mrem, 0.0002% of the NESHAP annual dose limit (10 mrerm/year).

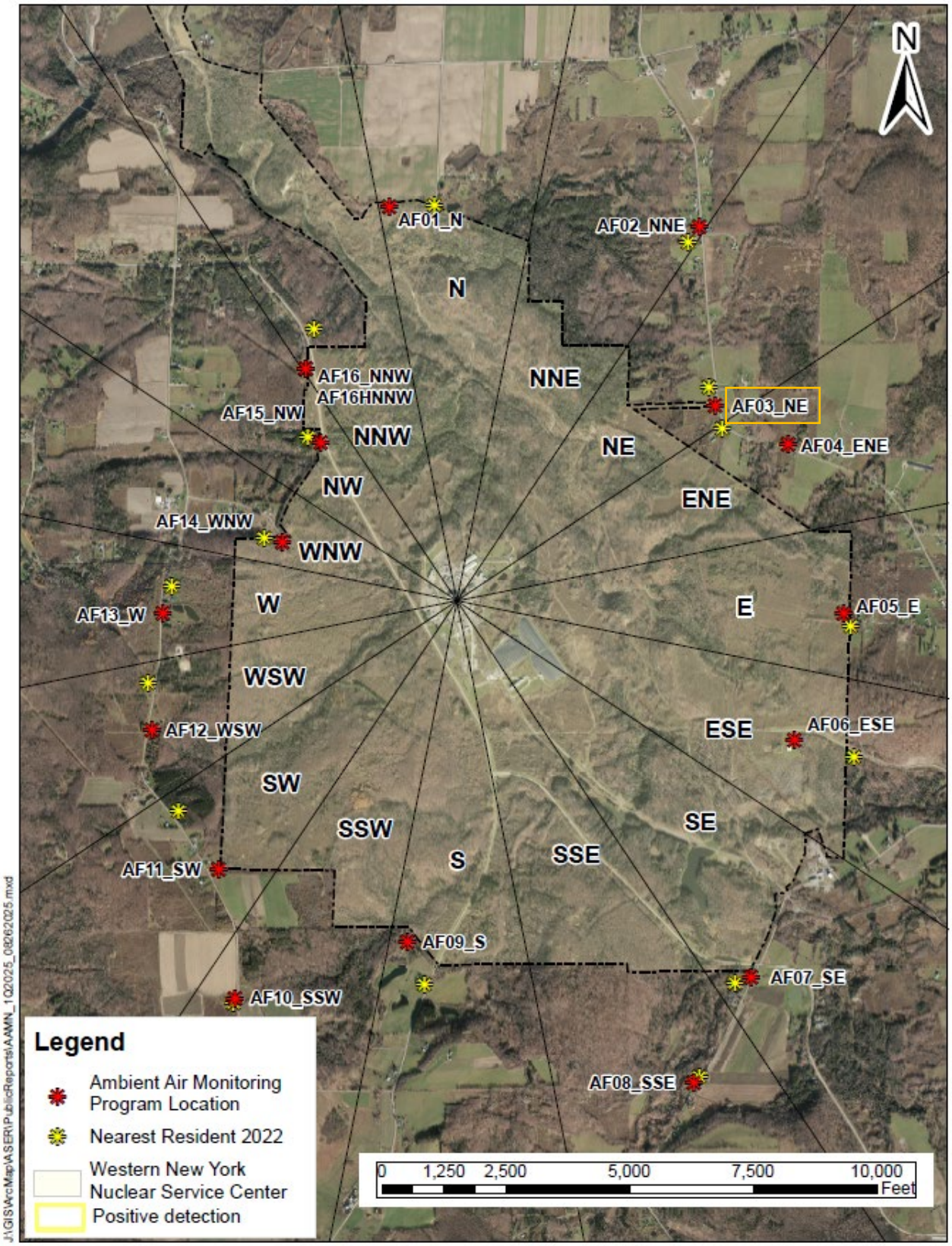
Table 1. Quarterly Positive Result for Q1 2025. (See the location on the next page.)

Location	Isotope	Quarterly Positive Concentration (µCi/mL)	Quarterly (%) of NESHAP Limit[a)]	Quarterly Dose[b)] (mrem/qtr)
AF03_NE	I-129	3.81E-17	0.0007%	0.0002

a) The concentration in air (µCi/mL) for each isotope at each location that would result in a dose equivalent of 10 mrem/year is listed in the following data tables.

b) NESHAP dose compliance limit from air emissions is 10 mrem/year.

Map 1. Ambient Monitoring Sampler Locations



Measurement History for Location with Positive Detection (Q1 2025)