

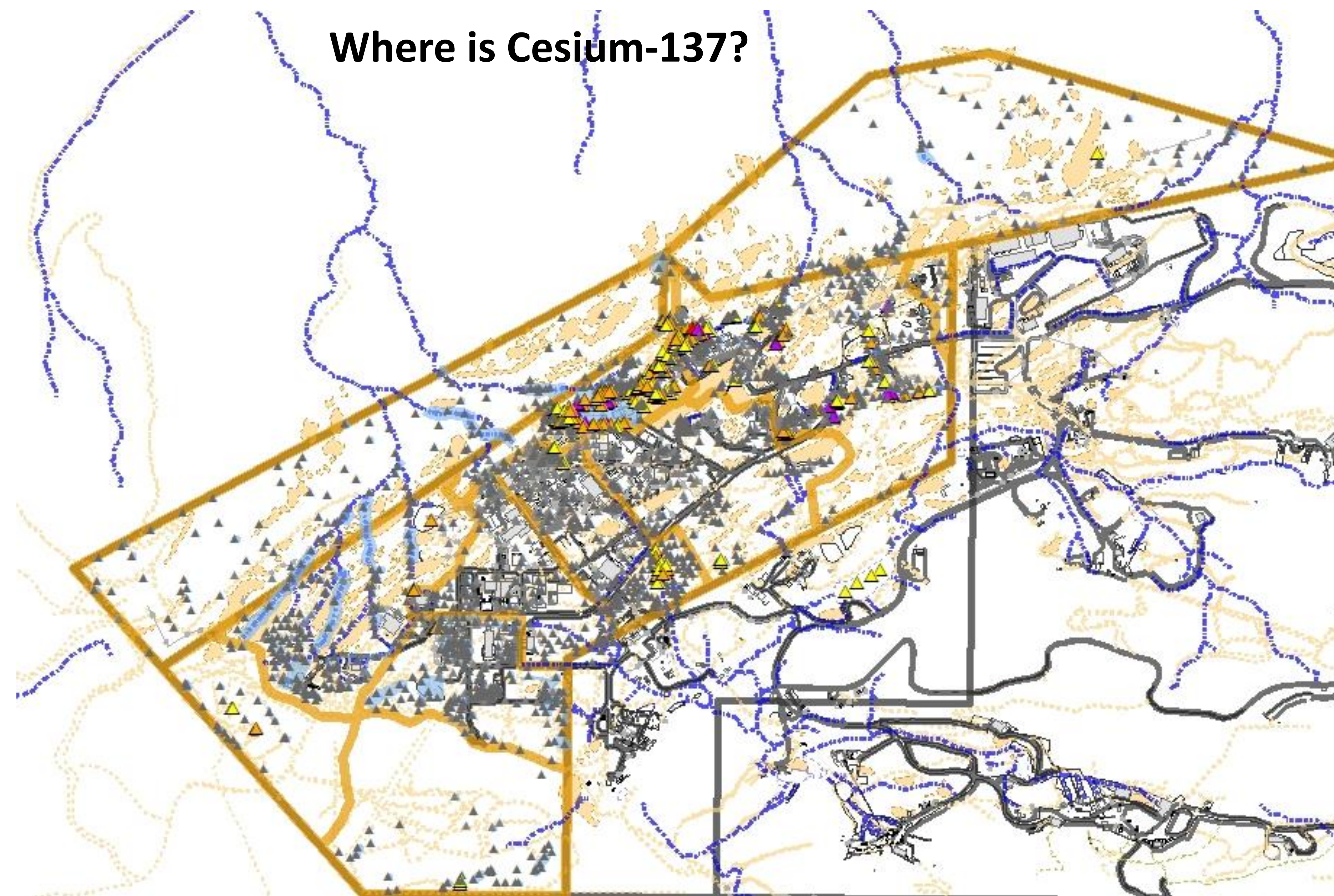
Area IV – Where are the radionuclide contaminants?

In 2012, U.S. EPA completed a radiological study. Over 3,500 soil and sediment samples were collected in Area IV and the Northern Buffer Zone. The key radionuclides of concern were Cesium-137 (Cs-137) and Strontium-90 (Sr-90).

The radionuclide data were compared to local background values or method detection limits. Results that were higher than these values (e.g., exceedances) were used to identify **preliminary radionuclide areas** for cleanup (shown in blue). **The extent of each area is based on exceedances of all detected radionuclides, but is mostly due to exceedances of Cs-137 and Sr-90.** Cs-137 exceedance is where it is greater than its background. Sr-90's background is less than its routinely achievable detection limit, so the Sr-90 exceedance is where Sr-90 is greater than the method detection limit. Sr-90 was also compared to its Human Health Residential Risk-Based Screening Level to show where the highest concentrations are located on site.

Radionuclides were found mostly in and near former operational areas within Area IV. **The worst radionuclides are confined to the site, mostly within Area IV, and do not extend off site. Off-site soil/sediment radionuclide data from nearby properties are consistent with this finding. Sr-90 exceedances within Area IV are mostly at levels not considered to be harmful to human health. Regardless, all identified cleanup areas will be addressed as required under the 2010 Administrative Order on Consent.**

Where is Cesium-137?



Where is Strontium-90?

▲ Sr-90 Not a threat - Nondetects and detects less than provisional Look-up Table (pLUT) value

Strontium-90 Detects: Not a threat - Values greater than pLUT but less than Risk-Based Screening Level (RBSL)

▲ >1 – 2 x pLUT value (Minimum Detectable Concentration; MDC: 0.117pCi/g)

▲ >2 -10 x pLUT value (MDC: 0.117pCi/g)

→ Range between EPA labs' method MDCs (0.117 – 1.02 pCi/g)

▲ > EPA Lab A MDC and <Residential RBSL (between 1.02 to 3.85 pCi/g)

Strontium-90 Detects: Greater than Risk-Based Screening Level

◆ > Residential risk-based screening level (>3.85 pCi/g)

Cesium-137 detects > provisional LUT background value (pLUT; 0.225 pCi/g)

▲ 1 – 2 x pLUT value

▲ 2 – 10 x pLUT value

▲ 10 x 100 pLUT value

▲ >100 x pLUT value

▲ Cs-137 nondetects and detects < pLUT

