

INL Site contractors and their regional ambient air surveillance monitoring activities.

MEDIA SAMPLED	TYPE OF ANALYSIS	FREQUENCY	NUMBER OF LOCATIONS		MINIMUM DETECTABLE CONCENTRATION
			ONSITE	OFFSITE	
ICP Contractor					
Air (low-volume)	Gross alpha	Bi-weekly	8	1	7E-16 µCi/mL
	Gross beta	Bi-weekly	8	1	1E-15 µCi/mL
	Specific gamma	Quarterly	8	1	1.2E-16 µCi/mL
	Americium-241	Quarterly	8	1	9.9E-18 µCi/mL
	Plutonium-238	Quarterly	8	1	8.9E-18 µCi/mL
	Plutonium-239/240	Quarterly	8	1	8.8E-18 µCi/mL
	Uranium-233/234	Quarterly	8	1	1.9E-17 µCi/mL
	Uranium-238	Quarterly	8	1	1.3E-17 µCi/mL
	Strontium-90	Quarterly	8	1	1.1E-16 µCi/mL
INL Contractor ^a					
Air (low-volume) ^{b,c,d}	Gross alpha	Weekly	20	16	7E-16 µCi/mL
	Gross beta	Weekly	20	16	1E-15 µCi/mL
	Specific gamma ^e	Quarterly	20	16	1.2E-16 µCi/mL
	Plutonium-238	Quarterly	20	16	8.9E-18 µCi/mL
	Plutonium-239/240	Quarterly	20	16	8.8E-18 µCi/mL
	Americium-241	Quarterly	20	16	9.9E-18 µCi/mL
	Chlorine-36 ^f	Quarterly	3	0	5.0E-17 µCi/mL
	Strontium-90	Quarterly	20	16	1.1E-16 µCi/mL
	Uranium-233/234 ^f	Quarterly	20	16	1.9E-17 µCi/mL
	Uranium-238 ^f	Quarterly	20	16	1.3E-17 µCi/mL
	Iodine-131	Weekly	20	16	3.7E-13 µCi/mL
Air (high-volume)	Gross beta scan	Bi-weekly	—	1	1E-15 µCi/mL
	Gamma scan	Continuous	—	1	NA
	Specific gamma ^e	Annually ^g	—	1	1E-14 µCi/mL
	Isotopic Uranium and Plutonium	Every 4 Years	—	1	2E-18 µCi/mL
Air (atmospheric moisture) ^h	Tritium	3–6/Quarter	3	5	5E-12 µCi/mL (air)
Air (precipitation) ⁱ	Tritium	Monthly	0	1	95 pCi/L
		Weekly	1	2	

- a. The INL contractor monitors airborne effluents at the Materials and Fuels Complex (MFC) and collects samples on, around, and off the INL Site to demonstrate compliance with NE O 458.1A, "Radiation Protection of the Public and the Environment." The Idaho Cleanup Project (ICP) contractor monitors air around waste management facilities to comply with DOE O 435.1, "Radioactive Waste Management" and DOE O 458.1, "Radiation Protection of the Public and the Environment."
- b. Low-volume air samplers are operated on the INL Site by the INL contractor at the following locations: Advanced Test Reactor (ATR) Complex, Central Facilities Area (CFA), Experimental Breeder Reactor-I (EBR-I), the Experimental Field Station (EFS), Gate 4, Highway 26 Rest Area, Idaho Nuclear Technology and Engineering Center (INTEC) (two air samplers), Main Gate, MFC (two air samplers), Naval Reactors Facility (NRF), Power Burst Facility (PBF), Remote-Handled Low-level Waste (RHLLW), RWMC (two air samplers), Specific Manufacturing Capability (SMC), and Van Buren Boulevard. Additionally, there are rotating duplicate samplers for quality assurance. This table does not include high-volume 'event' surveillance monitoring by the INL contractor.
- c. The INL contractor operates low-volume samplers at INL Site boundary locations. These include the communities of Arco, Atomic City, Blue Dome, Howe, Montevue, and Terreton, Idaho. Furthermore, there is a rotating duplicate sampler for quality assurance.
- d. The INL contractor operates low-volume samplers offsite at Blackfoot; Craters of the Moon; Dubois; Idaho Falls; the INL Research Center (IRC) (two air samplers); and Sugar City, Idaho; as well as a sampler located in Jackson, Wyoming. In addition, there is a rotating duplicate sampler for quality assurance.
- e. The minimum detectable concentration shown is for ¹³⁷Cs.
- f. The radionuclide is a contributor to the estimated maximally exposed individual (MEI) dose. MFC is listed as the location from which most of the ³⁶Cl originates, therefore, additional air samplers were placed there for ³⁶Cl analysis.
- g. If gross beta activity is greater than 1 pCi/m³, then a gamma scan is performed at NAREL. Otherwise, an annual composite is analyzed.
- h. Atmospheric moisture samples are collected onsite at the EFS, INTEC, MFC, RHLLW, SMC, and Van Buren Boulevard by the INL contractor. Samples are collected offsite at Atomic City, Craters of the Moon, Howe, and Idaho Falls (two samplers) by the INL contractor.
- i. Precipitation samples are currently collected onsite at EFS, INTEC, RHLLW, SMC, Van Buren, and offsite at Atomic City, Howe, and Idaho Falls by the INL contractor.