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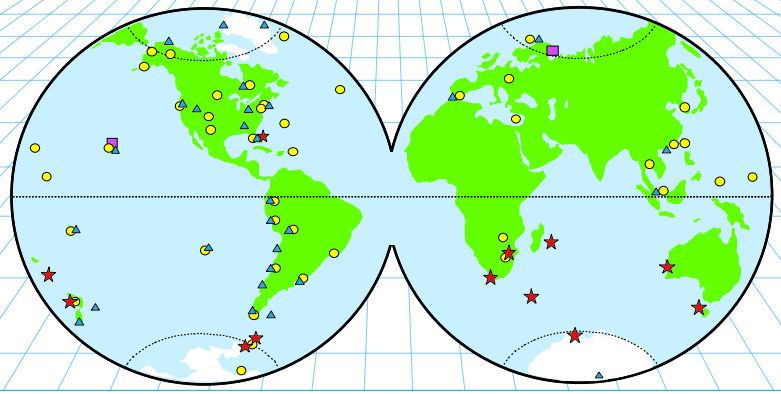
Environmental Measurements Laboratory

"A Federal Resource"

EML's Global Sampling Network



▲ SURFACE AIR STATIONS ● TOTAL DEPOSITION STATIONS ■ RADON SAMPLING SITES
★ REMOTE ATMOSPHERIC MEASUREMENTS PROGRAM STATIONS

EML maintains a worldwide network of aerosol and deposition sampling stations to document spatial and temporal trends in the distribution of artificial and naturally produced radionuclides in the atmosphere and to rapidly identify any new sources of activity due to accidental releases or violations of the Comprehensive Test Ban Treaty. Weekly high volume air samples are collected at 41 sites (see map above) and mailed to EML for analysis. For a subset of 12 of these sites, the air filters are analyzed on site using the EML Remote Atmospheric Sampling Systems (RAMS) and the data are transmitted by satellite back to EML. This allows near real-time measurements of short-lived radionuclides and rapid response capability for sites at remote locations where timely retrieval of samples is not practical. Radon concentrations in air are monitored continuously at two sites. Total deposition is measured at 43 sites using either plastic or stainless steel pots or, for most sites, ion exchange columns. Presently, samples are accumulated for a month at 7 sites and quarterly at the other 36 sites before being mailed to EML for analysis. Sampling at 22 other sites has been suspended although many of the sites are on standby status. The sampling frequency for all EML sampling sites is flexible and can be modified in the event of actual or potential atmospheric releases. EML maintains an extensive archive of samples collected over the past 40 years that are available for retrospective studies as well as a database of the results of the analyses of these samples for various radionuclides.

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Hi-Vol Surface Air Samplers

Deposition Collectors - Pots & Ion Exchange Column

RAMS System

AUTORAMP II System

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