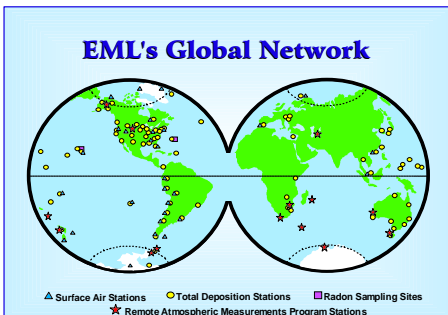


The Surface Air Sampling Program, part of EML's Global Sampling Network, has been in continuous operation since 1963, supplying the scientific community with basic data used to assess nuclear fallout, accidental releases of radioactivity, and levels of naturally occurring radionuclides, such as ⁷Be and ²¹⁰Pb, in the surface air.



In the mid 1980s the first RAMP system was developed, and in 1987, four such systems were installed in the South Pacific. These units, which are still operating, use a sodium iodide detector and multichannel analyzer (MCA) in a temperature controlled enclosure. Pseudo computer operation is achieved with customized ROMs, and the data is batch transmitted via Argos satellites in about 24 hours.



A second generation system offered significant improvements, due in part to the addition of a computer which controlled all operations. This system added great flexibility and simple program modification via a floppy disk. It also reduced data transmission time.

Contact: Norman Latner
 Voice: 212-620-3400
 E-mail: nlatner@eml.doe.gov



For special situations calling for maximum sensitivity and minimum transmission time, a third generation system was built. Based on a mechanically cooled germanium detector, this computerized system can transmit detailed spectral data in 7 hours using the geostationary Meteosat satellite network.

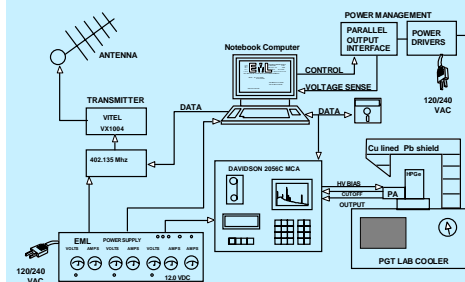
In those applications requiring minimum human intervention, a totally automatic and unattended system - AUTORAMP - has been developed. This unit is particularly suited to continuous monitoring applications, such as nuclear decontamination and decommissioning operations or CTBT treaty verification.

Features:

- ▲ on-site analysis with rapid data transmission
- ▲ simple to operate - computer menu choices
- ▲ no routine maintenance (long operating history)
- ▲ operates anywhere on standard residential power
- ▲ reliable satellite transmission - but can use modem/phone if desired
- ▲ required manpower of less than 30 minutes/week (none for AUTORAMP)
- ▲ battery backup of 5-7 hours
- ▲ initial setup takes only a few hours
- ▲ 2' x 4' footprint or 2' x 2' if stacked



Germanium RAMP System



Stations:

- ▲ Perth, Australia
- ▲ Cape Grim, Tasmania
- ▲ Norfolk Island, South Pacific
- ▲ Lower Hutt, New Zealand
- ▲ Palmer Station, Antarctica
- ▲ Marsh, Antarctica
- ▲ Mawson, Antarctica
- ▲ Reunion, Indian Ocean
- ▲ Pretoria, South Africa
- ▲ Cape Town, South Africa
- ▲ Marion Island, South Indian Ocean
- ▲ New York City, USA (2 units)
- ▲ Pinedale, Wyoming (retired)
- ▲ Eielson AFB, Alaska (retired)
- ▲ Turkmenistan, Asia (retired)
- ▲ Cocoa Beach, Florida