Mobile radioactive gaseous monitoring laboratory

for routine monitoring and emergency response

The Mission Support MS-RML are custom-made products based on mobile chassis (user selectable MAN, Mercedes, Ford etc.), or 20/40 feet containers designed to solve specific tasks related to radioactive airborne particulate concentration and surface contamination measurement. Designed for use as early warning and emergency response solutions in areas where the risk of accidents involving radioactive airborne emissions by alpha, beta and gamma radioactive isotopes is elevated.

For primary use by first responders, nuclear power plants, fire brigades and environment protection agencies. Mobile laboratories can be customised to meet various needs and concepts of operation.

While measuring, all detectors inside the MS-RML lab are connected into a single network, keeping combined records of measurements before/after decontamination, air concentration, personal exposure measurement etc., which allows keeping a centralised database with pictures and geo-tagging for easy diagnosis and treatment assignment.

The MS-RML mobile laboratory can be additionally equipped with mobile fast deployable decontamination equipment, weather station, diesel generators etc.

FUNCTIONAL HIGHLIGHTS

- Fast deployable, ready for immediate operation
- Complete set of instruments for measurement of gaseous effluent releases
- Customizable to meet particular customer's needs
- May be used as transportable solution for the MS-GRD base UHF station

POTENTIAL APPLICATIONS

- Emergency response at early stages of nuclear accidents
- Mobile checkpoints and perimeter control
- Environmental monitoring
- Radon and thoron progeny measurement
- Demolition monitoring
- Effluent releases monitoring

MS-RML — installed equipment and layout

The regular range of equipment installed in the mobile lab is:

- Continuous radioiodine monitor. To measure air activity of I-131, I-133 and I-129 releases, based on high resolution gamma spectroscopy;
- Continuous alpha- beta- active particulates monitor. To measure the slightest traces of concentration activity of industrial and NPP releases in case of emergency;
- Dust and air quality monitor;
- Noble gas monitor;
- RPM monitor — built-in into the vehicles or transportable and deployable;
- Food/water contamination monitor;
- Weather sensors (wind speed and direction, humidity, rain, temperature etc.).

One application of the mobile vehicle lab is as a transportable solution for the base UHF station. In this case it makes it possible to collect data from remote MS-GRD environmental gamma sensors, to provide security of the local area, for example public safety during a sport event, especially in urban areas where the large number of buildings makes long-range signal communication complicated.