NORTH WIND
RADIOLOGICAL & WASTE SERVICES

RADVISION

North Wind Radiological and Waste Services specializes in radiological surveying and mapping services. Using proven equipment and software packages, supplemented with customized settings and processing techniques.

North Wind Radiological and Waste Services is a Small Business Administration (SBA)-certified Small, Disadvantaged Business (SB) and part of a family of companies with common ownership under North Wind Group, which is owned by Alaska Native Corporation (ANC) Cook Inlet Region, Inc. (CIRI).

Key Discriminators

- Real-time isotopic identification
- Real-time radiological contamination mapping
- Large volume NaI Detectors (8.4 liters)
- Shielded and un-shielded configurations
- Rapidly deployable
- Extremely stable operation
- No dead-time for high activity measurements
- Wide dynamic range for improved throughput
- Self-diagnosis with error notification

An advanced digital spectrometer provides high resolution (1024 channels), multiple peak gain stabilization using naturally occurring isotopes.

RADVISION

RadVision is a mobile contamination monitoring system that can accurately identify both volumetrically distributed and discrete radioactive particles (DRP) at speeds up to 2 m/s (5 mph), with excellent detection capabilities and superior quality control.

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Applications

- Environmental contaminations
- Emergency response

Quality Control is Paramount

- Separate gamma scans include a data package that gets peer reviewed and approved
- Software for data processing is validated and verified, asssuring processed data is accurate

RadVision system in action using the unshielded configuration

About RadVision

RadVision collects gamma radiation data utilizing two 4 x 4 x 16-inch sodium iodide (NaI) detectors with an insulated and temperature-stabilized system.

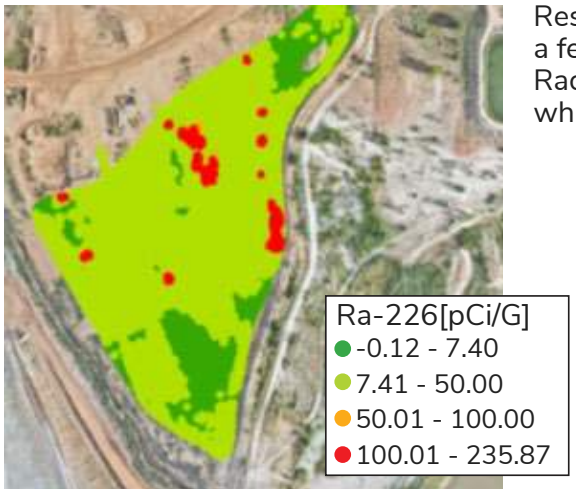
The collected data is processed through a multi-channel analyzer (MCA), recorded, then further analyzed using regions of interest (ROI), and 'stripping' the spectra to remove the influence on naturally occurring terrestrial radionuclides.

This approach identifies and quantifies each contributor to the spectra. It is effectively the same as 25 3 x 3-inch NaI detectors, but with the background removed and gamma spectroscopy to improve signal-to-noise ratio immediately identifying the gamma emitting radionuclides present.

RadVision greatly improves signal-to-noise ratio and detection capability because it:

- is shielded to reduce cosmic radiation and nearby on-site sources of radiation
- uses gamma spectrum stripping to eliminate terrestrial radiation signal from K-40 and the U-238 and Th-232 natural series, enhancing minimum detectable activity (MDA) for fission and activation poducts to a fraction of a pCi/g
- is a gamma spectrometer tuned to user defined ROI

These features allow a minimum detectable activity of <0.1 uCi for surface particles and 0.5 pCi/g and lower for distributed sources.



Results are recorded and mapped with a GPS with accuracy within a few inches as shown in the figure above. The drive-over speed for RadVision can be increased to meet customers detectability needs while preventing the finding of radioactivity at nuisance levels.

Uranium mill site survey map of over 16,000 individual measurements (cleanup DGGL is 5 pCi/g plus background of 2.4 pCi/g)

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