DRINKING WATER SUPPLIERS TYPICALLY TEST FOR RADIONUCLIDES ONCE OR TWICE A YEAR

Public Safety and Infrastructure Protection from terrorist attack, illegal disposal, industrial accident requires continuous real time monitoring



NEI 07-07, the Nuclear Industry's Ground Water Protection Initiative

- The Ground Water Protection Initiative mandates utility actions for management and response to release of radioactive materials into subsurface soils and water.
- The Initiative specifies actions for timely and effective ground water protection program
- Objectives and acceptance criteria are specified.
- Reporting and Remediation is required.
- Implementation is mandatory.



Technical Associate's water monitoring instruments are presented in the <u>EPA Water and Wastewater Security</u> Product Guide

In: Technologies and Techniques for Early Warning Systems to Monitor and Evaluate Drinking Water Quality: A State of the Art Review

In: <u>Guidelines for Designing an Online</u> <u>Contaminant Monitoring System</u>. Section 4.1.5 Suggested Guidance for Selection of Instruments for Water Supply Systems.

In: <u>Methodology and Characteristics of Water</u> <u>System Infrastructure</u>

<u>In Use:</u> Jefferson National Laboratory, Virginia

<u>**In Production for:**</u> Army Corps of Engineers, Washington, DC



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REAL-TIME WATER MONITORS



CONTINUOUS REAL TIME WATER MONITORING

**TERRORIST ACTS **INDUSTRIAL ACCIDENTS **ILLEGAL DISPOSAL **NATURALLY OCCURING

NexBeta



- Real-time, In-Line 24/7 or Portable System
- Measures at or below 2009 EPA Protective Action Guideline (PAG) levels and Military Drinking water limits guidelines.
- High Sensitivity to Betas

MiniTect SC



ALL-IN-ONE SYSTEM CBRN MONITORING

- Solar Powered Portable
- Suitcase (SC) or Backpack (MiniTect BP)
- 7 Chemicals Detected
- Multiple Biological Contaminants Detected
- 4-10 Radionuclides Detected

ELIMINATE

Toxic disposal issues Lag time between sampling and testing Lab costs

REDUCE

Field labor costs

NexGen-SSS



CHEMIST-IN-A-BOX© The only system available with continuous alpha/beta, tritium, and radon monitoring. Also available as UNITECT with Chemical / Biological Detectors

FOR USE AT:

- Source reservoirs, Aqueducts, Filtration and Treatment plants.
- Measures at or below 2009 EPA Protective Action Guide line (PAG) levels and Military Drinking guidelines.
- Historical data retrieval, in addition to standard features of gamma emission monitoring, real time read out, and background noise screening.
- Easy integration into infrastructure.

PEMO-7





PEMO-7 PIPE MONITOR

Detection and quick alarm of waterborne radioactivity contamination flowing through one or more pipes, ducts or effluent streams **regardless of flow rate.**

SSS-22P



LIQUID SCINTILLATION PORTABLE COUNTING SYSTEM

- All BETA emitters
- Includes: Carbon-14,
- Tritium, SR-90, CS-137
- Field testing kit