

# Water Security

# Drinking Water / Wastewater

## RADIATION DETECTION & MONITOR INSTRUMENT SYSTEMS























MODEL	PORTABLE	DESCRIPTION	USE LOCATION
<u>LIQ-X-H3</u>	Transportable	Tritium in Water Monitor. Continuous Real-Time. MID & HIGH Level Tritium Monitor.	Nuclear Reactors: HWR, Fusion, Molten Salt.
		Self – Measures at or below EPA/DHS PAG Levels. Protective Action Guideline (PAG) / Military Drinking Water limits. Computer System Integration.	Laboratory or Industry Liquid Waste Stream
<u>MEDA-5T</u>	YES	Major Event Radiation Water Detector. Automatic quick alarm in the event that a terrorist dumps radioactive material into a water source or in case of a large industrial, medical or Federal Government release or accident.	Surface Water: Reservoirs, Aqueduct, Rivers, Lakes, etc.
<u>MEDA-SP</u>	YES – 2 lbs	Manual Sample Radiation Water Detector. In field check of questionable water in the event that a terrorist dumps radioactive material into a water source or in case of an industrial, medical or Federal Government release or accident.	Anywhere Water is Questionable: Roadside Accident, Industrial Effluent etc. Hydrofracking
<u>MINI-TECT</u>	YES	NEXGEN-SSS portable, back pack or suitcase. Solar Powered with Battery Back Up ADD Chemical Detection Option:	Anywhere Water is Questionable: Roadside Accident, Industrial Effluent etc. Hydrofracking









MODEL	PORTABLE	DESCRIPTION	USE LOCATION
<u>NEXGEN-SSS</u>	NO / In-Line	Drinking Water Radiation Safety Water Monitor. Continuous Real-Time. Measures at or below EPA/DHS PAG Levels. Protective Action Guideline (PAG) / Military Drinking Water limits. Computer System Integration	Drinking Water, Wastewater, Water Utilities,
<u>NEXGEN-SEA</u>	NO	Sea Water Radiation Detection System – Water Protection. A multi-detector water monitor /controller designed for Sea Water. It provides simultaneous measuring of Alpha, Beta and Gamma-emitting radio nuclides in sea water. Optional: Tritium detection.	Liquid Effluent Around Sea Water Cooled Nuclear Power Plants & Desalination Plants.
<u>NEXBETA-ABG</u>	Transportable	Facility Drinking Water Radiation Safety Monitor. Continuous Real-Time Radiation Water Monitor. Measures at or below EPA/DHS PAG Levels. Protective Action Guideline and Military Drinking water limits. Alpha, Beta, Gamma.	Schools, Hospitals or Other Facilities with Vulnerable Populations - Water Inlet / Outlet Pipes Hydrofracking Water Discharge Nuclear Medicine Effluent
<u>NEX-BETA</u>	YES or In-Line	<b>Beta &amp; Gamma Only Water Monitor.</b> Continuous Real-Time Radiation In-Line Water Monitor. Measures at or below EPA/DHS PAG Levels. Protective Action Guideline and Military Drinking water limits.	Groundwater, Laboratory or Industry Liquid Waste Stream Hydrofracking Water Discharge Nuclear Medicine Effluent











MODEL	PORTABLE	DESCRIPTION	USE LOCATION
<u>NEXGAMMA-</u> <u>2</u>	NO / In Line	Drinking Water & Waste Water Gamma Radiation Monitor. Isotope Identification. Useful in complying with discharge requirements for waste water. Real-Time with alarms.	Drinking Water and Waste Water, Ground or Surface Water, Liquid Waste Steam, Industrial Process Water, Nuclear Medicine Effluent
<u>NEX-TRITIUM-H2O</u>	Transportable	Automated Low Level Tritium in Water Monitor. Real-Time Continuous. A Table Top or Rack mounted display analyzes Low Level Tritium No reagents, no waste. MEETS EPA DRINKING WATER LEVELS	Leaks from Nuclear Reactors: HWR, PWR, BWR, Molten Salt, Fusion, Fission, Tritium in Ground Water. Laboratory or Plant Liquid Waste Stream, Nuclear Medicine/Pharm Research Effluent
<u>NPP-H<sub>2</sub>O</u>	NO / In Line	<b>Highly Sensitive For Nuclear Power Plants</b> <b>Real-Time Continuous Water Monitor.</b> A multi detector water monitor /controller designed for Nuclear Power Plants. It provides simultaneous measuring of Alpha, Beta and Gamma-emitting radio nuclides. Optional Tritium and Carbon-14.	Onsite/"Inventory" Pipes, Drains, Pools, Surface Water -Underground Drainage Pipe Vado –Zone/Soil - Air -In the Aquifer Crossing site boundaries Liquid Waste Stream, Storm drains -Off-Site - Environmental Surface Water, Rivers Local Drinking Water
<u>PEMO-7</u>	NO	<b>Strap On Pipe Radiation Safety Monitor</b> Non-Invasive detection of <b>MID LEVEL</b> Gamma. AC operated. Read out in mR/hr or cps. 3" x 3" NaI with 2" lead shielding Flow rate is NOT an obstacle.	Water & Wastewater Utilities <b>Nuclear Reactors:</b> HWR, PWR, BWR, Molten Salt, Fusion, Fission <b>Nuclear Fuel Cycle:</b> Mining, Refining, Recycling





#### Water Security **Drinking Water ~ Nuclear Power Plant**



Wastewater ~ Industrial Liquid Effluent



MODEL	PORTABLE	DESCRIPTION	USE LOCATION
PEMO-7LE	YES	Portable Strap On Pipe Radiation Safety Monitor Any pipe size. Velcro straps. Battery operated. Measures HIGH LEVEL Gamma. Battery Operated. Read out in mR/hr or cps. Serial port for data transfer. Flow rate is NOT an obstacle.	Water & Wastewater Utilities <b>Nuclear Reactors:</b> HWR, PWR, BWR, Molten Salt, Fusion, Fission <b>Nuclear Fuel Cycle:</b> Mining, Refining, Recycling
<u>RADON-7</u>	YES	Portable Radon in Water Alarm System Detect Rising Radon Levels in aquifer for drinking water to protect the health and safety of consumers and for successful compliance to current EPA standards by Utilities and Water Districts.	Drinking Water Utilities, Hydrofracking
<u>RADIUM-MCA</u>	YES	Radium in Water Monitor. System gives on site measurements, detects Radium, Sensitivity 3 Pico curie per Liter Total Radium. Identifies specific Radium nuclides.	Drinking Water Hydrofracking Radium Removal Industry
RAD-CLEAN SYSTEM-600	NO	Radium Removal from Drinking Water. Installation provided anywhere within the USA. Ion exchange system.	Radium Removal for Small Water Systems
<u>RAWA-GP</u>	YES or In Line	Gamma Silt and Particulate Raw Water Monitor. Model RAWA-GP is a single detector measuring Gamma emitting radionuclides in RAW WATER. Model RAWA-BGP is a dual detector water measuring Beta & Gamma emitting radionuclides in RAW WATER.	Drinking Water Filtration & Waste Water Systems. Surface water such as storm drain runoff, rivers, lakes, etc.





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MODEL	PORTABLE	DESCRIPTION	USE LOCATION
<u>SSS-12P</u>	YES	<b>Portable Scintillation Counting System.</b> 1 Vial sample for detecting Alpha, Beta, Gamma emitters. Liquid scintillation is the most sensitive technique for on the spot radiation measurement.	Anywhere Water is Questionable & Requires a Quick In-Field Check. Crime Scenes, First Responders, Environmental Monitoring
<u>SSS-22P</u>	YES	Liquid Scintillation Counting System. 3 Vial sample for LOW LEVEL measurement of Alpha, Beta, Gamma emitters. Liquid scintillation is the most sensitive technique for on the spot Tritium measurement.	Anywhere Water is Questionable & Requires a Quick In-Field Check. Crime Scenes, First Responders, Environmental Monitoring Military Potable Water Sources
<u>SSS-33-DHC</u>	YES	<b>Down Hole Tritium In Water Monitor</b> Continuous Real-Time. Measures at or below EPA/DHS PAG Levels. Protective Action Guideline (PAG) / Military Drinking Water Limits	Wells, Monitoring Bore Holes
<u>SSS-33M8R</u>	YES	Radon Water Monitor. Real Time Continuous Quantitative Measurement. Detects and alerts to rise in radon levels in drinking water.	Hydrofracking Waste Water, Laboratory or Industry Liquid Waste Stream
<u>TRIMARAN</u> <u>H₂O</u>	In-Line	Automated Flow Through Tritium Monitor. Lowest Level Process Monitor available. Monitoring changes in Tritium concentration in primary and secondary coolant, entering or leaving the Recombiner, make-up pond or spent fuel pool, etc.	Nuclear Reactors: HWR, PWR, BWR, Molten Salt, Fusion, Fission Nuclear Fuel Cycle: Mining, Refining, Recycling. Groundwater, Surface water such as storm drain runoff, rivers, lakes, etc.











<u>UNITECT</u>	NO	A Robust, Integrated Chemical & Radiation Water Monitoring System. Measures at or below EPA/DHS PAG Levels. Protective Action Guideline levels and Military Drinking water limits. Continuous real-time monitoring. Multiple detection goals; all RAD Emitters, 7 chemicals. Chemist-In-A-Box. Computer System Integration	Drinking Water Utilities Wastewater Utilities Hydrofracking Waste Water Homeland Security
<u>VAP-X (H3)</u>	YES	Vapor Extraction Tool & Tritium Monitor. A sensitive, rugged, portable instrument for detection and measurement of Tritium vapor in the soil. Map underground plume and detect leak source.	Nuclear Power Plant Soil. <b>Nuclear Fuel Cycle:</b> Mining, Refining, Recycling.
PROTECTIVE ACTION GUIDE (PAG)		2009 Chart of Revisions to the Protective Action Guides Manual for Radiological Incidents. Table 4-1. Derived Response Levels (DRLs) Associated with a Committed Effective Dose (CED) of 0.5 rem Resulting from 1 Year of Ingestion.	For Your Information
PAG- EMMISSIONS		<b>Chart of Major Radiation Emissions</b> Gleaned from Revisions to the Protective Action Guides Manual of listed Nuclides.	For Your Information





