Highly Sensitive for Nuclear Power Plants

Real-Time Continuous Water Monitor

Model: NPP-H_2O and NPP-H_2O-G, NPP-GAMMA, NPP-GAMMA-G, NPP-BETA, NPP-ALPHA

Description

Model NPP-H_2O is a multi detector water monitor /controller for simultaneous measuring of Alpha, Beta and Gamma-emitting radio nuclides. The electronics are microprocessor with color LCD display. The pre-amps are plug in modules allowing quick change, addition of functions, and rapid repair in the field.

The modular system is covered by TA's unique exchange warranty system in addition to the full one year warranty. On-site warrantees available in many areas.

Detector shields are made of lead encased in welded housing for long useful life and easy decontamination. The Alpha and Beta flow cells are easily changed via disconnect fittings. The Gamma Spec shield can be opened for cleaning with little effort. All connections are sealed against leaks. The standard water moving system is based on a high precision pump with a 10 liter per minute capacity.

A wide range of pump capacities are available to meet user's specific needs. The entire system is mounted in a wheeled, self-contained rugged cabinet. The NPP-H_2O comes complete with all cabling tubing and connectors in place and is ready to operate. 115 Volt 60Hz is standard; 220 Volt 50/60 Hz is optional.

System has Three Principal Detectors

1. **Alpha Detectors** A special plastic Alpha scintillator that consists of a light-tight detector assembly interfaces with the sample via quick disconnect coax cables and medical grade hoses. A matched pair of 5" diameter photo-multiplier tubes display the sample.

2. **Beta Scintillation Detectors** Sensitive area: 1,100cm_2

3. **Gamma Detectors** Choice of NaI (Tl) Scintillation or HPGe Solid State

Description of Alpha, Beta Pulse Analysis

This system conditions and analyzes the output from the photo-multiplier tubes by pulse height, duration and coincidence. In this way the system eliminates counting most background and noise counts. Sensitivity is enhanced by the use of stochastic resonance plus high gain, low noise PM tubes and pre-amps.

Measurement of Gamma-Emitter Content

An advanced high definition multi-channel analyzer (MCA) with drift free operation is utilized. The energy range is user settable. For example the MCA can be set for Gamma energy of 10 KeV to 3 MeV, (or 10 MeV).

This system consists of NaI (Tl) Scintillation crystals, a photomultiplier tube and provides pulse height and duration analysis. Sensitivity is enhanced with a high gain, low noise pre amp.

Use of the HPGe solid state consists of an intrinsic Germanium P-Type Coaxial detector. High count and excellent baseline are achieved.

CBRN
Real - Time Air & Water Specialists

TA
TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY

DIVISIONS OF
US NUCLEAR CORP

7051 ETON AVENUE, CANOGA PARK, CA 91303 | 818-883-7043 | F: 818-883-6103
RGOLDSTEINTA@USNUCLEARCORP.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM