Nu-PathNET® (EM)
Software Application for Environmental Monitoring

RTI International works with major industrial firms and electric utilities to develop comprehensive monitoring programs, databases, and analyses for understanding environmental conditions on site and in the surrounding area. The Nu-PathNET (EM) application addresses environmental monitoring needs by providing advanced analytical power to understand conventional and radiological environmental conditions and maintain data security and integrity. It also helps streamline work processes, improve oversight using real-time data to drive key performance metrics, and facilitate collaboration for effective decision making.

Nu-PathNET (EM) provides a powerful capability for understanding and analyzing the nature and extent of on-site and off-site environmental conditions related to routine effluent discharges and nonroutine events that may release materials to the environment. Nu-PathNET (EM) is the environmental monitoring application of Nu-PathNET®—a complex database and software platform that was originally developed for the nuclear industry.

**Features**
Coupled with advanced performance metrics and workflow optimization, Nu-PathNET (EM) makes data available with a keystroke as soon as they are generated, facilitating quick, efficient data review and decision making. Nu-PathNET (EM) provides the following features:

- Key performance indicator metrics for improved program oversight and operational performance
- Instant access to data for all media, constituents, and locations
- Integration of Nu-PathNET with radiological monitoring equipment and a laboratory information management system (LIMS)
- Manual data entry, editing, and audit trail for enhanced data control
- Graphical tools for easy-to-read data visualization
- Tabular data view and output for data query and sorting by user-defined parameters (e.g., date, location, dose rate)
- Spatial analysis for quick understanding of the nature and extent of conventional and radiological contamination
- Cross-functional work process integration to reduce redundancy, improve quality, and facilitate collaboration
- Multilevel access control and permissions
- Statistical analysis for assessment of conditions and trends
• Integrated data collected by field teams, generated by in-house and third-party laboratories and LIMS
• Shortened cycle time from sample collection to evaluation to decision making
• Compliance with rigorous U.S. and Canadian cybersecurity requirements for improved data security and integrity
• Secure data storage and management in redundant data centers

A Key Analytical Tool

Nu-PathNET (EM) serves as a state-of-the-art analytical tool that is used to manage, analyze, and visualize environmental data. The application's data intake and output capabilities facilitate consolidation, evaluation, and collaboration around key data—allowing users to make informed decisions to protect the public.

Consolidate. The software consolidates detailed information regarding on-site and off-site environmental conditions, including conventional and radiological measurements, meteorological data, and field sampling and measurements. To ensure optimal facility management, the application allows analysts to view these data in near real time or to examine data based on any specific timeframe at any location.

Evaluate. Nu-PathNET (EM) allows expert analysts to work with data in a single analytical framework and immediately apply data visualization and analysis tools. This ability ensures that analysts have the opportunity to quickly understand and evaluate the nature and extent of environmental conditions during normal and off-normal operations.

Collaborate. Managers and subject matter experts are provided with a program dashboard that displays program status in real time and provides alerts for abnormal conditions. Responsible persons can interact with the data directly from any location using secure login credentials. This online capability allows teams to collaborate in interpreting information and making decisions.

Nu-PathNET (EM) makes data available with a keystroke as soon as they are generated, including key performance indicator metrics.
Through these processes, Nu-PathNET (EM) provides the following benefits to environmental managers and decision makers:

- Improved operational performance
- Lower total costs due to elimination of redundant process steps
- Minimized human error potential
- Better collaboration across functional areas
- Reduced labor for managing data and more time devoted to understanding demands in sampling, data management, and reporting

**Recent Project Work**

Working in collaboration with ScottMadden, Inc., we helped Bruce Power improve environmental monitoring and reporting processes at its Tiverton, Canada, nuclear power plant. The plant is on a 2,300-acre site on the shore of Lake Huron, Ontario, and has the capability to power one in four hospitals, homes, and schools in Ontario. We worked with Bruce Power to implement the Nu-PathNET (EM) application, enhance processes for workflow optimization, and establish near real-time environmental data reporting. Nu-PathNET (EM) provides Bruce Power with a comprehensive array of key performance indicators and advanced analytical capabilities that are easily accessible through web-based tools.
Nu-PathNET (EM) includes a spatial viewer for quick understanding of the nature and extent of conventional and radiological contamination.

More Information
Tony Marimpietri, Senior Director
Sustainable Business Solutions
919.541.7118
abm@rti.org

Shel Brannan, Programmer/Analyst
Sustainable Business Solutions
919.316.3763
sbrannan@rti.org

RTI International
3040 E. Cornwallis Road, PO Box 12194
Research Triangle Park, NC 27709-2194 USA

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