

EPRI's MANAGES Software Integrates Groundwater Monitoring Data from Southern Company's Fossil, Nuclear and T&D Sites

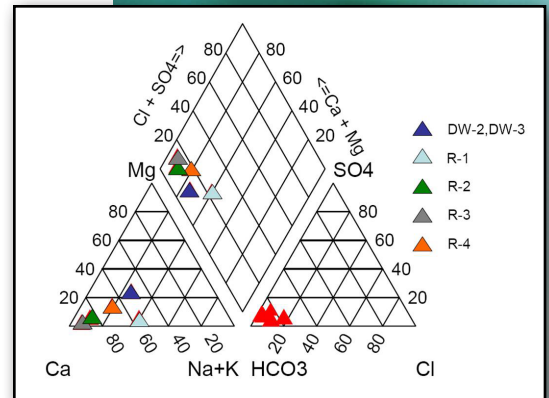
Southern Company Services, Inc. (SCS) has been a longtime user of EPRI's MANAGES database software to analyze and interpret groundwater data from ash management sites and wells at fossil power plants. MANAGES has helped SCS develop a standardized database for tracking and trending concentrations of contaminants in groundwater, and the software's reporting capabilities helped SCS provide these data to operating subsidiaries for meeting the needs of regulators. In recent years, changes to environmental regulations as well as emerging concerns about groundwater issues at nuclear power plants have led to a significant increase in the amount of groundwater data being generated. SCS believed that MANAGES could be expanded to include data from nuclear power plants, and asked EPRI to develop a new release of the software with these additional capabilities. EPRI's Environment and Nuclear researchers collaborated to produce MANAGES Version 3.2 in November 2010, and an EPRI workshop was held in July 2011 to train new and existing users throughout Southern Company's organization. SCS has expanded its use of MANAGES to include data from fossil, nuclear and transmission and distribution (T&D) sites. MANAGES provides SCS with a single database that can be accessed by environmental professionals within the company. It can generate approximately 100 different statistical analyses, reports and graphs, and can also produce reports that meet a variety of regulatory requirements. In addition, the MANAGES Forum allows SCS and other companies the opportunity to shape the development of future versions of the software and to collaborate with other users to share experiences and insights.

SCS Approaches EPRI to Expand MANAGES Capabilities

Companies that own or operate fossil power plants have had to monitor and report on groundwater concentrations of organic compounds and inorganic constituents for decades. Southern Company's operating subsidiaries supply electricity to 4.4 million retail customers in four states. SCS had collaborated with EPRI in the early 1990s to produce a database software called MANAGES that interprets water quality, soil quality and waste characterization data from fossil power plant and coal combustion byproduct disposal sites. The company has been using MANAGES for nearly 20 years, and relied on the software as a consistent and reliable tool for analyzing, trending and reporting groundwater data.

"MANAGES provides a stable, long-term platform for us to use in managing our groundwater data. This reliability and predictability is extremely valuable."

~ *Dan Patel, Principal Engineer, Southern Company Services, Inc.*



MANAGES calculates and exports stored data to a variety of specialty geochemistry platforms.

Challenge

Southern Company Services, Inc. needed to collect and manage increasingly large amounts of groundwater data at fossil, nuclear and transmission and distribution facilities to comply with regulations.

Solution

EPRI's MANAGES Version 3.2 software provided a single platform to integrate and report environmental data for a variety of media from multiple types of facilities.

Results and Benefits

Multiple graphs and reports are now generated to analyze groundwater concentration trends at Southern Company operating subsidiary facilities, providing data in reporting formats to satisfy specific regulatory requirements.

MANAGES data can be accessed by environmental professionals within the company, ensuring consistency and continuity.

The MANAGES Forum allows users to provide feedback to EPRI for improving the MANAGES software and collaborate with other users on data analysis and other groundwater issues.

In recent years, greater regulatory and public scrutiny of potential groundwater contamination from fossil, nuclear and T&D sites resulted in increased demands for collection and analysis of groundwater data. SCS needed to manage and report new data from its nuclear sites as well as handle increased amounts of data from fossil and T&D sites in order to meet regulatory requirements. The company approached EPRI about expanding the capabilities of MANAGES to include radionuclide data from nuclear power plants so that it could use MANAGES as a single repository of its groundwater data. According to SCS' David Morris, Manager, Earth Science & Environmental Engineering, "Since we work in both the fossil and nuclear areas, we wanted to have a tool which meets both needs."

EPRI's Environment and Nuclear Researchers Produce MANAGES 3.2

Integrating nuclear capabilities into the MANAGES platform added a significant degree of complexity to the program. Technical staff from EPRI's Environment and Nuclear sectors worked together to ensure the program included the additional functionality. "We provided the Environment sector with all of the necessary information for nuclear groundwater data analysis, and we worked together on beta testing. It was a very successful collaboration," said Karen Kim, a project manager in EPRI's Nuclear sector. MANAGES 3.2 was released in November 2010. The software can now manage data for a variety of constituent types, including 200 organic compounds, 100 inorganic constituents and 140 radionuclides

The additional nuclear capability allows SCS to perform many kinds of data analyses, including time series graphing, detecting changes in groundwater chemistry and comparing groundwater concentrations against regulatory limits. MANAGES also provides SCS with a single database that can be accessed by all environmental professionals within the company. Notes EPRI's senior project manager James Lingle, "The MANAGES platform gave SCS an opportunity to make everything consistent throughout the company and allowed a variety of people to examine the data." MANAGES contains about 100 reports, graphs and statistical tests and can run reports that will flag groundwater concentration results that are higher than regulatory limits. The software can also print data using a state-specific form or export data in a state-specified electronic format, which is especially useful for the quarterly reports that Southern Company subsidiaries provide to various regulatory agencies.

EPRI conducted a MANAGES training workshop in July 2011 to facilitate greater familiarity and use of the program at SCS and operating subsidiaries of Southern Company, and to help familiarize staff with the software's new capabilities. In addition, EPRI's ongoing MANAGES Forum provides SCS and other users with significant support, including training and webcasts, troubleshooting and an annual workshop. SCS plans to use the MANAGES Forum for maintaining expertise, collaborating with other users on a variety of groundwater issues, and expanding uses for the software. SCS believes that MANAGES 3.2 will significantly assist them in managing groundwater data and in meeting regulatory requirements. According to Steve Bearce, a senior geologist at SCS, "MANAGES now provides a seamless interface between fossil and nuclear uses. It ensures that our work is done in a consistent manner and that we have the same level of quality regardless of who is working on the project. It's a wonderful tool."

Related EPRI Products

Title	Product ID
Evaluation of Coal Combustion Product Damage Cases: Volume 2: Case Summaries	1020554
Evaluation of Coal Combustion Product Damage Cases: Volume 1: Data Summary and Conclusions	1020553
The Leaching Behavior of Arsenic and Selenium From Coal Fly Ash	1015545
Groundwater Remediation of Inorganic Constituents at Coal Combustion Product Management Sites	1012584

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (askepri@epri.com)

CONTACTS

James Lingle, Senior Project Manager, Environment Sector
414.355.5559, jingle@epri.com
Karen Kim, Project Manager, Nuclear Sector
650.855.2190, kkim@epri.com