



Job Title: Hydrogeologist/Hydrogeophysicist
Job ID: 63966
Location: WIPP Site - SA
Ladder: Tech Staff
Level: Member Technical Staff
Occupation: Environmental Science
Department: 06712
Full/Part Time: Full-Time
Regular/Temporary: Regular
Clearance Required: Y
Clearance Required to Start: N
Job Requires a Polygraph: N
Posting Open Date: 10/22/2009
Posting Close Date: 12/21/2009

Department Description

The Waste Isolation Pilot Plant (WIPP) is the U.S. Department of Energy (DOE) deep geologic repository for defense-related transuranic (TRU) and mixed waste. WIPP is the world's only licensed and operating deep geologic repository for the disposal of TRU waste. The repository is located in a Permian bedded-salt formation 26 miles east of Carlsbad, NM. WIPP is operated by Washington TRU Solutions, under contract to the Department of Energy's Carlsbad Field Office (CBFO). Sandia National Laboratories (SNL) is the scientific advisor to the CBFO for the WIPP. Sandia's advisory responsibilities include investigations and monitoring of repository performance, long-term, probabilistic performance assessment (PA) of the repository with respect to regulatory requirements, impact assessments of modifications to the repository design and waste inventory, periodic recertification of the WIPP, and optimization of the national transuranic waste complex.

Job Description

The Repository Performance Department (06712), part of Sandia's Carlsbad Programs Group (CPG), maintains experimental, modeling, and hydrologic monitoring capabilities to support the DOE in assuring uninterrupted compliance of the WIPP with a variety of federal and state regulations. The selected individual will conduct field investigations (geophysical and hydrogeological) of the presence and extent of shallow groundwater near the WIPP surface facilities and of recharge and cross-formation leakage in karstic terrain west of the WIPP site, and may also participate in hydraulic well testing and well-test analysis. Tasks will also include development and implementation of appropriate conceptual models, selection and modification of appropriate numerical simulation codes, conducting simulations, and

presentation of results to internal and external customers. The position is in Carlsbad, NM. Occasional travel to Albuquerque is expected. The selected individual may also participate in other DOE projects and water-related projects for other clients.

Required / Desired Criteria

REQUIRED:

A PhD or equivalent degree in hydrogeology, (hydro)geophysics, applied mathematics, or engineering with experience in mathematical modeling and numerical simulation of geophysical and/or hydrogeological processes. Experience must include development of conceptual and numerical models, model calibration, pre- and post-processing of data, data analysis, interpretation, and reporting. Demonstrated excellence in the technical field as well as superior oral and written communication skills are mandatory, as is the ability to function effectively within a diverse team. Residence in Carlsbad, NM is mandatory.

DESIRED:

Proficiency using Linux, VMS, and Microsoft Windows operating systems; programming in Fortran and C++; expertise with (hydro)geophysical and vadose zone modeling; field experience with hydrogeophysical techniques and with aquifer testing; experience in coupling between hydrological, geophysical, and geomechanical processes; expertise in parameter estimation, geostatistics and uncertainty analysis; experience in conducting technical programs within a regulatory environment; site characterization and/or laboratory experimentation for derivation of model parameters. Experience with stringent QA/QC requirements, such as those associated with the WIPP or Yucca Mountain projects, is highly desirable. Familiarity with modern methods of well-test analysis (e.g., pressure derivatives) is also desirable.

Equal Employment Opportunity

Sandia National Laboratories is an Equal Opportunity Employer M/F/D/V. If this position requires a Department of Energy (DOE)-granted security clearance, U.S. citizenship and employee eligibility for clearance processing will be required at the time of hire. If you hold dual citizenship and you accept a job offer for a position that requires a DOE-granted security clearance, you may be asked by DOE to renounce your foreign citizenship and retain only your U.S. citizenship.