TES
TPMC-EnergySolutions
Environmental Services, LLC

[Form 2 (<u>to be reported</u> to Committee on Countermeasures for Contaminated Water Treatment and to be disclosed to public)

Technology Information	
Area	6-1A
Title	Understanding the Groundwater Flow
Submitted by	TES

1. Problem Statement

2. Experience with difficult geological formations at U.S. Department of Energy's Los Alamos National Laboratory, New Mexico, Unites States of America (USA) and the U.S. Department of Energy's River Corridor Closure Project (RCCP), Richland, Washington, United States.

3. Overview of Technologies (features, specification, functions, owners, etc.)

What can be delivered to meet these technology areas

Technologies needed by IRID

Collect data necessary to investigate groundwater flow (geological condition/ groundwater data measurement system, etc.)

- **Investigating area**
  Geological structure, water permeability, groundwater level, groundwater pressure, groundwater velocity
  Simple measuring techniques besides the boring system, or an unmanned-controllable boring apparatus

- **Analyze water quality**

Analyzing radioactivity material density (tritium and strontium) within a couple of hours.

To be able to administrate sampling apparatus with ease.

To be able to repair sampling apparatus on the spot, considering the difficulties to convey such apparatus outside the site.

- **Dig observation holes**
  Digging observation holes with minimum numbers of workers and working hours (less than 10 workers *day/ 30-meter-deep hole).

  Preventing the sampling water taken from the observation holes from being mixed with the contaminated materials interfused from the surrounding soil.