

**From:** Paul Michalak  
**To:** MThomas@uranerz.com  
**Date:** 08/21/2006 5:54:50 PM  
**Subject:** FYI: Some thoughts on your GW Work Plan

Mike,  
Below are some initial general comments on your ground water work plan. Give me a call tomorrow afternoon and we can discuss further.

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#### URANERZ Ground Water Work Plan

What are the objectives of the work plan? Need to lay them out for the reader.

#### Example:

For the Hank Site, need to demonstrate that the F-Sand (i.e., unit of interest) is confined and underlain by low permeable units throughout the permitted area.

- Plan should lay out what is already known about the permit area (in actuality, the work plan should be designed to confirm what you already believe to be true about the site)
- Work plan should contain cross sections using geophysical logs from the exploratory borings used to establish the existence of the ore body and current monitor wells (use of a typical well is not sufficient)
- Hydraulic testing (i.e., pump tests).

Need to establish hydraulic properties of F-Sand, and confining and underlying layers

- Pump tests
- Basis for the location of the proposed pumping and monitoring wells (e.g., location and depth related to their use during hydraulic pump tests). What, where, and why! Information can be provided in tabular format as well as on figures

Need to establish background water quality

- Present existing data in tabular format (or appendix), to be supplemented by additional sampling (what do you already know about background water quality)
- Info should include well locations, aquifer (saturated units), sampling schedule, parameters, (quote, identify relevant section(s) of NUREG-1569).
- SOPs for ground water sampling (in work plan appendix) - how will the samples be collected?

Basis for the statement "This pump test will be conducted for approximately 2 days to define the vertical connection between the F-Sand and two adjacent sands." (i.e., how was the length of the test derived - preliminary hydraulic analysis based on assumptions of aquifer properties?, (show the reader your preliminary analysis), more detail on reason/impact of partial penetrating on test design (if any), impact on pumping length, well location, etc.)

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