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June 25, 2009

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WATER RESOURCES
WESTERN REGION

John Westra
Western Region Manager
Idaho Department of Water Resources
2735 Airport Way
Boise, ID 83705

Subject: Aquifer Test Plan for Permit 63-32185 - Clarification

Dear John:

In response to your letter of June 23, 2009, this letter provides clarification on two points associated with the proposed aquifer test pumping plan for permit 63-32185.

1. **Monitoring Wells.** Owners will be allowed to utilize their wells during the test, but will be encouraged to discontinue significant water uses such as irrigation for at least the day before the test and the day of the test. Most of these wells appear to be completed in permeable aquifer zones, and should recover quickly after occasional cycling on and off for limited domestic use. As such, the data from these wells should be adequate for the intended testing purposes.
2. **Test Procedure.** The test plan calls for the following pumping duration.

"Pumping will continue until a consistent water-level trend is identified in the pumping well and nearby monitoring wells. In no case, will pumping duration be less than 24 hours."

Therefore, the test duration is for a minimum of 24-hours, but can be extended if necessary until a consistent water-level trend develops. The 24-hour minimum test duration was selected as a compromise between optimum test duration and cost of test pumping.

We recognize that 24 hours will not be adequate test duration to allow pumping impacts to fully develop at all wells. In fact, pumping impacts may not be detectable in distant monitoring wells after 24 hours. However, the drawdown trends at the nearest monitoring wells should be sufficiently developed after 24-hours to determine aquifer parameters (transmissivity and storativity) and to extrapolate impacts under sustained pumping. Impacts to distant wells under sustained pumping can be calculated using the test-determined aquifer parameters. These calculated impacts will be conservative because they assume direct hydraulic connection that may or may not exist between the pumping well and distant monitoring wells.

Contractor costs for test pumping using a test pump and diesel test engine are expected to be approximately \$225 per hour. Adding associated monitoring costs, total test pumping cost is expected be approximately \$6,000 per day. Given this cost, I am reluctant to commit to more than 24-hours if adequate data can be obtained with a 24-hour test.

Please contact me with any questions or comments concerning these clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry M. Scanlan". The signature is fluid and cursive, with the first name "Terry" being more prominent.

Terry M. Scanlan, P.E., P.G.

Cc: Clair Kofoed – IDF&G Regional Habitat Biologist
Mike Maffey – IDF&G Engineering Bureau Chief

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