



State of Idaho

## DEPARTMENT OF WATER RESOURCES

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C. L. "BUTCH" OTTER  
Governor

GARY SPACKMAN  
Interim Director

November 21, 2011

SPF Water Engineering  
Attn. Roxanne Brown  
300 E. Mallard Drive, Suite 350  
Boise, ID 83706

**RE: Review Comments Concerning the 'Amended Groundwater Level Monitoring Plan Permit 61-12090'**

Dear Roxanne,

This letter is a summary of my review comments regarding the Amended Groundwater Level Monitoring Plan for permit 61-12090 received by the Department on June 20, 2011. After initial review my comments are as follows:

- **Timeline:** The monitoring plan should provide a timeline that forecasts anticipated completion of production well, start of pump test, irrigation period (or other beneficial use), end of pump test, hand measurements, and other measurement times and describe how these milestones fit within the context of the permit development period. If possible the timeline and all items described therein should be described by actual calendar dates and not by arbitrary units. Describe how the monitoring plan shall continue after the end of the first year. As long as beneficial use continues monitoring shall not cease unless prior approval is obtained by the Department in writing.
- **Section 2.1.a:** Ideally the monitoring well should be completed to the same depth as the proposed pumping well to ensure that the observation well is open to the same aquifer as the pumping well. If this is not the case, are we certain that the monitoring well is completed in the same aquifer as the proposed pumping well and will provide meaningful data? Permit holder should provide comment.
- **Section 2.1.a & 2.6:** I would suggest taking multiple (perhaps monthly) water surface elevation measurements in shallow observation well between now and start of pump test to establish seasonal variability sans pumping.
- **Section 2.4.b:** Consistent with Section II.B.3 of the Department's Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices, "*The installed flow rate*

*accuracy of magnetic flow meters must be +/- 5.0% as compared to a second, standard flow meter.”* Revise monitoring plan accordingly.

- **Section 2.5:** I would suggest weekly corroborating water level hand measurements for the first month, transitioning to monthly measurements thereafter if everything is working in accordance with the plan.
- **Section 2.8:** Ideally the initial 5-day uninterrupted pump test will include a recovery analysis prior to subsequent irrigation pumping. Permit holder should provide comment.
- **Section 2.9.c:** Revise to include ‘Digital records of raw and final water level and discharge data including all manual measurements taken by hand.’
- **Section 2.9.d:** Evaluation of downward return flow from irrigation should include discussion on consumptive loss vs. recharge to aquifer and the timing of recharge.
- **Section 2.9 general:** Report should include summary of subsurface geology as observed from well cores associated with observation and pumping wells.

The previous list of bulleted items encompasses all of my concerns and comments at this time. Prior to final approval I anticipate SPF Water Engineering submitting a revised monitoring plan addressing my review comments and providing discussion regarding specific items as needed. If you have any questions regarding this matter please contact me by telephone at (208) 287-4914 or by electronic mail at [mathew.weaver@idwr.idaho.gov](mailto:mathew.weaver@idwr.idaho.gov).

Respectfully,



Mathew Weaver, PE  
Water Allocations Bureau

Cc: Steve Lester Western Regional Office (electronic copy only), Nevid LLC c/o John Erickson