Weaver, Mathew

From: Christian Petrich [CPetrich@spfwater.com]
Sent: Wednesday, December 14, 2011 11:04 AM
To: Weaver, Mathew
Subject: RE: Monitoring plan for Nevid wells

Thanks, Mat. Changes made, sending on to client for signature.

Christian

From: Weaver, Mathew [mailto:Mathew.Weaver@idwr.idaho.gov]
Sent: Wednesday, December 14, 2011 8:04 AM
To: Christian Petrich
Subject: RE: Monitoring plan for Nevid wells

Christian,

Only one comment. Item 4.b should be plus or minus 5% to be consistent with our minimum acceptable standards for measurement and reporting (section B.3).

http://www.idwr.idaho.gov/WaterManagement/WaterMeasurement/PDFs/MinAccepStand.pdf

Other than that, the revisions all look fine. I'll be on the lookout for a final signed copy of the document, at which time we can give you some form of approval notification and make sure all the relevant documents get into the file.

Cheers,

mat

From: Christian Petrich [mailto:CPetrich@spfwater.com]
Sent: Thursday, December 08, 2011 12:08 PM
To: Weaver, Mathew
Subject: Monitoring plan for Nevid wells

Mat,

Please find attached a revised monitoring plan for the Nevid wells. I believe that we have addressed your comments. In addition, per our discussion, I changed the manual measurement frequency to bi-monthly instead of monthly for the first year. I also changed subsequent measurement frequency after the first year from "reevaluation" to quarterly measurements. And finally, I deleted Monitoring requirement #7 ("Monitoring with an increased datalogger reading frequency in the pumping well at the end of the irrigation season to facilitate water level recovery analysis"). Pumping toward the end of an irrigation season may decrease slowly (because of water) or partial harvest, and may not be as abrupt as a pumping test stop. I think that 6-hour transducer readings would be sufficient to capture recovery. What we would be most interested in is the recovered water levels and the general time that it takes to get there, which I think the six-hour readings would provide.

Please let me know if this meets with your approval, and I will forward it to the client for signature.

Thank you for your efforts.

Regards,
Christian

Christian R. Petrich, Ph.D., P.E., P.G.
SPF Water Engineering, LLC
300 East Mallard Drive, Suite 350
Boise, ID 83706
tel: 208-383-4140
fax: 208-383-4156
email: cpetrich@spfwater.com
web: spfwater.com

Weaver, Mathew

From: Christian Petrich [CPetrich@spfwater.com]
Sent: Thursday, December 08, 2011 12:08 PM
To: Weaver, Mathew
Subject: Monitoring plan for Nevid wells
Attachments: Weaver email re bi-monthly readings 12-8-11.pdf

Mat,

Please find attached a revised monitoring plan for the Nevid wells. I believe that we have addressed your comments. In addition, per our discussion, I changed the manual measurement frequency to bi-monthly instead of monthly for the first year. I also changed subsequent measurement frequency after the first year from "reevaluation" to quarterly measurements. And finally, I deleted Monitoring requirement #7 ("Monitoring with an increased datalogger reading frequency in the pumping well at the end of the irrigation season to facilitate water level recovery analysis"). Pumping toward the end of an irrigation season may decrease slowly (because of water) or partial harvest, and may not be as abrupt as a pumping test stop. I think that 6-hour transducer readings would be sufficient to capture recovery. What we would be most interested in is the recovered water levels and the general time that it takes to get there, which I think the six-hour readings would provide.

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Christian R. Petrich, Ph.D., P.E., P.G.
SPF Water Engineering, LLC
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Boise, ID 83706
tel: 208-383-4140
fax: 208-383-4156
email: cpetrich@spfwater.com
web: spfwater.com

Revised Ground Water Level Monitoring Plan
Permit 61-12090

Prepared for

Nevid LLC
c/o John Erickson
Woods Erickson Whitaker & Maurice LLP
1349 Galleria Drive, Suite 200
Henderson, Nevada 89014

Prepared by

SPF Water Engineering, LLC
300 East Mallard, Suite 350
Boise, Idaho 83706
(208) 383-4140

Submitted by

_____

John Erickson
Nevid LLC

December 8, 2011

SPF WATER ENGINEERING

1. INTRODUCTION

Permit 61-12090, held by Nevid LLC and approved on November 24, 2009, authorizes a maximum diversion of (1) 1.82 cubic feet per second (cfs) and 345 acre-feet per year (AFA) for municipal purposes and (2) 2.2 cfs for fire protection purposes. The permit requires that "the right holder shall provide the Department with a plan for monitoring ground water levels in the vicinity of the place of use for this water right" (Condition No. 6). This document provides such a plan.

2. MONITORING PLAN

The proposed monitoring plan consists of the following:

1. Install pressure transducers and dataloggers in two on-site wells:
    a. A dedicated water-level monitoring well (shallow observation well) has been drilled in the NWSE of Section 11, T1S R4E (Figure 1). This well was completed in October 2010 with a screened interval extending from 418 to 538 feet below ground surface
    b. A 1,120-foot deep production well (Elk Creek Village production well), located in the NWSE Section 11, T1S R4E, was completed in April 2011.
2. Record water level readings every six hours for the first year, with re-evaluation of measurement frequency thereafter.
3. Install a barometric pressure recorder in the shallow observation well. Record pressure readings every six hours for the first year, with reevaluation of measurement frequency thereafter.
4. Install a flowmeter on the production well (e.g., magmeter) to record discharge over the first year, with bi-monthly (every other month) readings for the first year of production, and quarterly thereafter. The flowmeter will meet IDWR's minimum acceptable standards for measurement and reporting of surface and groundwater diversions:
    a. Minimum manufacturers' design accuracy of ± 2% of reading;
    b. Installed accuracy of at least ± 10% of reading;
    c. Meter must be calibrated with an independent, secondary measuring device when installed, and at least once every four years thereafter;
    d. Must read instantaneous flow or be capable of flow rate calculation;
    e. Must record total volume;
    f. Non-volatile memory (power outage does not zero volume reading);

g. Sufficient digits to assure "roll-over" does not occur within two years;

h. Volume reading cannot be reset; and

i. Installed to manufacturers' specifications (meter manufacturers typically specify that a meter must be located in a section of straight pipe at least 10 pipe diameters downstream and 5 pipe diameters upstream of any valves, bends, contractions, or other interferences that will distort the flow pattern).

5. Bi-monthly (i.e., every other month) hand measurement of water levels for the first year, with quarterly measurements thereafter.

6. Water levels in the production and shallow observation wells were collected prior to the commencement of test pumping.

   a. A static water level of 370 feet below ground surface was recorded in the shallow observation well on November 2, 2010.

   b. The static water level in the production well is approximately 344 feet below ground surface.

7. Initiation of pumping using an uninterrupted, constant withdrawal rate over an extended period of time

   a. A 4-day constant-rate pumping test of the production well was conducted from May 3 through May 7, 2011.

8. Submission of an annual report to IDWR that includes:

   a. Analysis of water level trends in the production well, shallow observation well, and nearby wells (e.g., based on available data from 01S04E-10DAD1, 01S04E-03ADB1, and/or 01S04E-03ADD1);

   b. Reporting of discharge rates over time and analysis in relation to water levels;

   c. Electronic records of water level and discharge data;

   d. Evaluation of downward return flow from irrigation discharge water in relation to water levels; and

   e. Reporting of any temporary agricultural use, including crops grown and acres irrigated during the year.

9. Monitoring of groundwater levels will continue through the permit development period, or until the permittee requests and receives written notification from the Department to discontinue monitoring, whichever comes first.

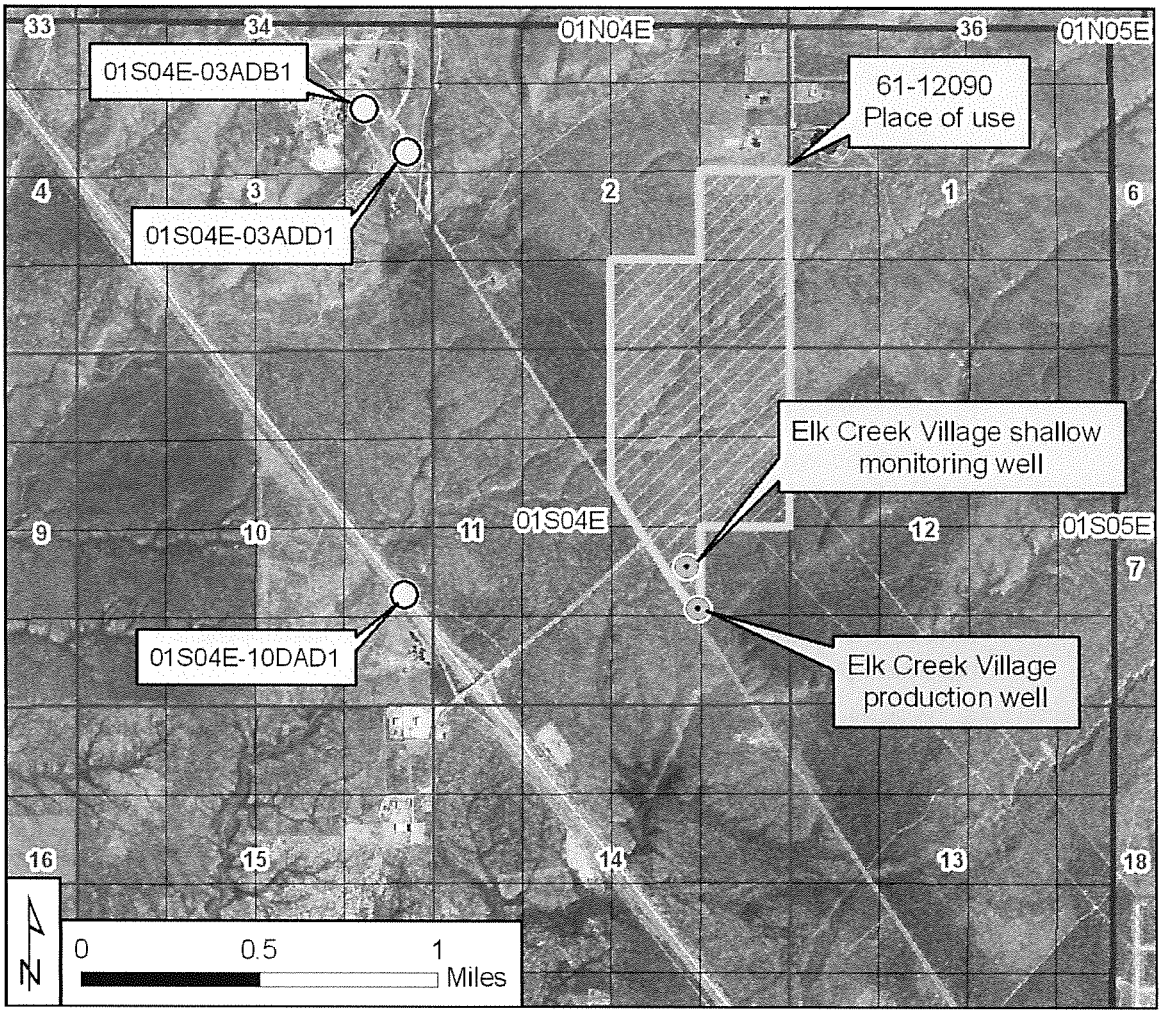

Figure 1: Elk Creek Village monitoring well locations.

Weaver, Mathew

From: Weaver, Mathew
Sent: Thursday, December 01, 2011 8:33 AM
To: 'Christian Petrich'
Cc: Vincent, Sean; Lester, Steve; Roxanne Brown
Subject: RE: Telephone Call

Christian,

I got your voicemail, and left another with you this morning. Let's plan on touching base next week as you suggest. However, in light of our delay in discussing this matter I thought I might convey a few thoughts.

Since I was unaware of the previous review and correspondence by our Technical Services group I would defer technical based comments regarding the monitoring plan to their expertise. There are however, a few remaining non-technical issues in my review that I feel still need to be addressed. If you could submit a revised monitoring plan that includes a timeline (retroactive description for those activities that have already occurred) describing pumping and monitoring activity, acknowledges that as long as diversion occurs monitoring will not cease without prior notification from the Department, and a discussion or comment regarding how the monitoring and pumping fits within the context of the permit development period, then myself or Steve Lester will get you notification of the approved monitoring plan.

If you can copy me on the revised monitoring plan I will make sure that the latest plan, our approval, and the previous correspondence from Technical Services makes it into the water right file.

Thank you for your consideration. Travel safely.

Mat

From: Christian Petrich [mailto:CPetrich@spfwater.com]
Sent: Wednesday, November 30, 2011 5:43 PM
To: Weaver, Mathew
Subject: RE: Telephone Call

Sorry I missed your call. I will be out of the office tomorrow and Friday (in and out of cell coverage); if I don't hear from you I will call you on Monday morning. Thanks for your persistence in following up.

Christian

From: Weaver, Mathew [mailto:Mathew.Weaver@idwr.idaho.gov]
Sent: Wednesday, November 30, 2011 5:34 PM
To: Christian Petrich
Subject: Telephone Call

Christian,

Sorry I missed your calls today. I was in the field all day. Back at my desk now, and will be here all day tomorrow. If you're in now you could give me a quick call, otherwise I've got it in my calendar to call you tomorrow morning around 9 AM.

Cheers,

Mat Weaver, P.E.
Engineer, Technical 2
Idaho Department of Water Resources
(208) 287-4914

Weaver, Mathew

From: Christian Petrich [CPetrich@spfwater.com]
Sent: Tuesday, November 22, 2011 3:53 PM
To: Weaver, Mathew
Cc: John Erickson; Roxanne Brown
Subject: IDWR response to Elk Creek Monitoring Review
Attachments: IDWR response re Elk Creek Monitoring Review 3-24-11.pdf

Matt,

Thank you for your time on the phone. Please find attached Craig Tesch's earlier "Technical Review of Groundwater Monitoring Plan for Permit 61-12090" dated March 24, 2011. We met with Steve Lester, Monica van Bussum, Sean Vincent, and Craig Tesch on March 30, 2011 to discuss a water-bank application and IDWR's monitoring plan comments. We then incorporated IDWR comments into a revised monitoring plan. Let's talk by phone after you have had a chance to review these earlier comments. Thanks.

Regards,
Christian

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