

Saxton, Craig

From: Saxton, Craig
Sent: Friday, February 03, 2012 2:28 PM
To: lgraves@spfwater.com
Subject: Beneficial use Field Exam for 63-12593
Attachments: 63-12593 exam review memo.docx

Lori,

Here is the memo regarding Michele's initial review of the field exam I spoke with you about. I think one of the main points is that she doesn't have what she needs to confirm beneficial use of water for heating and cooling. This was written to give me an idea of what she was thinking was needed to do a complete heating and cooling analysis.

Take a look at let me know how you want to move forward. I see a couple of paths:

- 1) If you think you can get what is needed in a manner that would supplement the report, then let's set a 30 day deadline to get us that information (per beneficial field exam rules), and we will hold onto the packet.
- 2) We can send the whole packet back (including transfer) and refund transfer money. Then we don't have a deadline to work around.
- 3) We could go with what we have and find no beneficial use (which no one wants), then petition the decision and go that route.

I appreciate your input on the best way to move forward.

So let's say if I don't hear back from you by February 17, 2012, then I will send the whole packet back.

Thanks,
Craig

MEMORANDUM

Date: February 3, 2012
To: Craig Saxton
From: Michele Edl
Re: 63-12593 exam review

I have been asked to assist in the review of the Beneficial Use Field Report recently submitted for Permit 63-12593. The permit is held by Parklane Co and authorizes heating and cooling use in the Idanha Hotel. I have familiarized myself with the permit backfile and I have completed an initial review of the report. The Beneficial Use Field exam was conducted on November 16, 2011 by SPF Water Engineering personnel.

The majority of the file content is relevant to the point-of-diversion and to point-of-discharge and this is important information in the iterative process for obtaining a water right license. The Beneficial Use Field Report should have provided detailed, date-relevant information confirming the beneficial use of water. I found that this report is still largely focused on the point-of-diversion. It provides limited evidence that a system with the potential for utilizing ground water for heating and cooling is in place. It provides no evidence that the contemporary system has been in place since the development period of the permit.

I found that little or no beneficial use of water has been confirmed by the exam report. And I recommend that the report be returned to the examiner rather than held in reserve in Department files.

The exam report is deficient in the following areas:

- Part C Item 3 Delivery System Diagram
This section of the report is empty.
The system description provided in the narrative is both lacking in detail and outside the most relevant timeframe.
A detailed schematic and/or as-built drawings of the system are needed.
- Part C Item 4
Only the pump nameplate information has been provided. The pump moves water it does not transfer heat. Although the well and the pumping capacity can set limits for the rest of the system, the beneficial use authorized by permit 63-12593 occurs downstream of the pump. An inventory of heating and cooling units along with their specs or nameplate data is needed. That equipment catalog should confirm that units were in place at the time that the proof statement was submitted.
- Part D Flow Measurement Item 1 Measuring Equipment and 2 Measurement
No records related to the beneficial use of water for heating/cooling have been provided. I believe that there are inline flow balancers which could be put to service to measure the flow in the distribution pipeline.
There may be flow and pressure records from a testing period coincident with the heat exchanger installation or there may be power records from any of the heating or cooling seasons within the development period.

The exam report is flawed in the following areas:

- Rate
The field exam report recommends a rate based on capacity of the water pumping system rather than on the hydraulic capacity of the heat exchanger or of the heat pumps. The rate must be based on the heating/cooling system equipment.

Because the cooling system components appear to be notably different from the heating system components, the cooling rate may be differ significantly from the heating rate. It may clarify the exam report and simplify the licensing review to isolate and itemize the cooling and the heating uses separately.

- Volume

I am not familiar with the processing circumstances or the file contents of water rights held by Parklane Co for use in the Union Block building.

The simple calculation method outlined by Administrator's Memorandum, Application Processing No. 23 was intended for use by Department staff to estimate heat use at the initial, application stage of a water right process. Although a rough calculation could be allowed at licensing if there were no other options, (if for example, the system no longer existed at the time of the exam), it is not acceptable for a system that was carefully designed, and built and is apparently well maintained and operated. I believe that the Idanha Hotel heating and cooling system had been in place and in use at least one full year before the exam was conducted. The design heating and cooling loads should have been available to the examiner. If not, then actual records related to those loads and the system performance should have been requested. System specific, as-built and/or as-operated information is expected for a volume recommendation at this stage in the water rights process.

The Department's current expectations for space heating/cooling use calculations may be best illustrated in the engineering report provided by Musgrove Engineering on behalf of SPF Water Engineering for Permit 65-13912 and 65-13913. Equivalent information may be available to the examiner from the firm responsible for the design of the Idanha Hotel system.

The incongruent pumping plant and heating exchanger capacities cited in the report narrative suggests that the Idanha may not have reached full occupancy in 2001 and may not have been full at the time of the exam. However, the development period of the permit ended in October 18, 2001 when the proof statement was received. The permit holder may need to apply for an additional permit to cover the development since 2001.

In conclusion, I recommend that the Beneficial Use Field Report be returned to SPF Engineering. The report is missing required items and the information provided is insufficient to confirm a beneficial use of water for heating and cooling purposes had occurred within the development period.