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ENGINEERING
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Hydraulics

Hydrology

Water Resources

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Jeff Peppersack
Plz respond
on my behalf.
Thank you.

RECEIVED

JUN 10 2009

DEPARTMENT OF
WATER RESOURCES

June 8, 2009

David Tuthill, Director
Idaho Department of Water Resources
322 East Front Street
PO Box 83720
Boise, Idaho 83720-0098

Re: Sun Valley Land & Minerals – proposed plan for development under
water right 37-8205

Dear Mr. Tuthill:

The above-referenced water right permit allows development of geothermal water from several wells for heating and recreational purposes. The deadline to submit Proof of Beneficial Use is October 17, 2009. The owner has, over the past 12 months, been actively developing the water so that it can be put to beneficial use by the deadline.

To date, the following steps have been completed:

- Hydrogeologic studies to determine optimal well field configuration and potential maximum yield.
- Enlargement and deepening of one existing well and modification of the well to meet current state standards for geothermal wells
- Replacement of one existing geothermal well with a larger and deeper well
- Construction of a new geothermal well
- 8-hour pump testing of the above three wells
- Engineering studies and preparation of a detailed plan to utilize the heat content of the geothermal resource developed under the above steps

With the three wells described above, the total developed water is approximately 765 gpm at a weighted-average temperature of 121F. Now, the question of precisely how the water is to be utilized must be addressed.

Several communications with Department staff have been made, including at least one telephonic meeting with you and the state office staff. The guidance provided during these meetings is very helpful and appreciated. However, there still appears to be considerable ambiguity as to 1) the specific types of uses which the Department would deem to be a beneficial use, and 2) the design conditions regarding heat load requirements which are reasonable to justify a particular geothermal flow rate. I understand that some degree of

ambiguity is inherent to geothermal water rights due to the variety of potential uses for the heat content and the many design assumptions that could be made. As I understand the Department's position, "traditional" uses of hot water such as residential heating, swimming pools, etc. are obviously acceptable and could be licensed, but other "non-traditional" uses might not be acceptable.

At this time, it is critically important to ascertain the extent to which the Department will recognize the actual contemplated uses for licensing purposes before the owner expends the large sums required to implement them. In an attempt to achieve this end, we have prepared a specific water usage plan and engineering report for the Department's review. The plan is illustrated on the drawings included in the engineering report. The report outlines the calculation methodology and assumptions for each water usage.

With respect to the proposed plan, I would request that the Department provide written guidance on the following questions:

1. Is the proposed usage of the geothermal water considered a beneficial use and can it be licensed?
2. Regarding the instantaneous flow demand, is the calculation methodology appropriate and are the assumptions regarding climatic conditions reasonable to allow a flow of 765 gpm to be licensed?
3. Prior to the Proof date, it is anticipated that the entire system will be in place with a diversion and distribution capacity of 765 gpm. However, the snowmelting system obviously cannot be used unless snow is actually falling. Furthermore, the calculated peak demands for all three uses will not actually be required until the design climatic conditions occur. How will the Department handle this?

Thank you for your review of this matter. Since time is of the essence, I would request that the Department provide guidance prior to the end of this month, or sooner if possible. Please do not hesitate to contact me if any questions arise.

Cordially,


Charles G. Brockway, P.E.

Enc. Engineering Report (Rev. B) and drawing sheets (3)
Cc: Donna Kelsey