



January 21, 2013

Subject: Powder Mountain Tank and Well Pump Station Concept Review
Project Location: Powder Mountain Ski Resort, Utah
Reeve Project #4971-05

To whom it may concern:

Reeve & Associates have been asked to review the conceptual plans for the above mentioned project. The preliminary design was prepared by Bowen Collins & Associates and was dated January 3, 2013. As a general statement, the concept appears to be acceptable based on the limited amount of information that was provided. The design is obviously still in the planning stages with completed plans, specifications and calculations not yet being provided. This information will be needed in order to really ascertain whether the design is acceptable or not. Following is a list of specific items of concern:

1. A draft copy of the Powder Mountain Resort Water Master Plan was provided. Please provide a final copy for review.
2. It is unclear whether the new system will stand alone or tie into the existing system. Please explain.
3. Please explain/clarify emergency water needs other than fire protection as well as back-up power requirements.
4. Structural calculations are needed along with final design.
5. More detail is needed showing how the column footings are poured monolithically with the floor slab of the tank as well as detailing requirements to avoid cracking of the slab. Provide calculations.
6. Explain where it is appropriate to use 2500 psf bearing pressure and where 4200 psf is justified.
7. We suggest that a geologist prepare a report on the stability of the site.
8. Explain the logic in selecting 2 feet of fill over the tank.
9. Will there be any protection of the site provided such as fencing?
10. How does the high water elevation of the new tank compare with the high water elevation of the existing tank at Hidden Lake?
11. Is 1% slope of the earth on top of the tank sufficient for drainage? Please explain.
12. Roof plan and foundation plan for the tank are mislabeled.
13. Provide calculations/justification for the superimposed loads on the top of the tank.
14. Ensure design meets DEQ requirements.
15. Provide details for drainage of overflow water.
16. How will the pump house be maintained and accessed in the winter.

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17. Provide details of landscape restoration plans.
18. Provide piping installation details.
19. How will the water level in the tank be managed?
20. IBC 2006 is referenced for design. Ensure that current IBC is used.

Signed,

A handwritten signature in blue ink, appearing to read 'John P. Reeve', with a long horizontal flourish extending to the right.

John P. Reeve, PE, PSE, PLS
Principal Engineer

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