



State of Utah

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Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF DRINKING WATER
Kenneth H. Bousfield, P.E.
Director

July 19, 2013

Evan D. Miller
Powder Mountain Ski Resort
P.O. Box 270
Eden, UT 84310

Dear Mr. Miller:

Subject: Conditional Plan Approval, Hidden Lake 415K Gallon Tank (ST004), and Well Equipping of Hidden Lake PWS Well (ST008), System #29028, File #9319

On July 1, 2013, the Division of Drinking Water (the Division) received the final construction plans and specifications for the Hidden Lake 415K Gallon Tank (ST005), and Well Equipping of Hidden Lake PWS Well (ST008) from your consultant, Jeff Beckman, P.E., of Bowen Collins & Associates, Inc. The Summit Group's Master Plan shows the development of 2500 estate homes, condos, town houses, and cabins the Powder Mountain Resort. The Phase 1 of the Summit at Powder Mountain PRUD has plans for 154 lots. The water infrastructure being developed by the Summit Group would become part of the Powder Mountain Water and Sewer District. The development of Phase 1 has three projects being constructed simultaneously: (1) Drilling the production well known as Hidden Lake PWS Well (ST008), (2) Construction of the Hidden Lake 415K Gallon Tank (ST004) and well house with connecting waterlines, and (3) Construction of the distribution system to supply the 154 lots of Phase 1.

On March 18, 2013, the Division received the preliminary engineer design plans and specifications for a 400K gallon storage tank to be located on Earl's Peak, and the well equipping of the Summit Well (WS006) to be drilled near the tank. The Division provided review comments on the preliminary design in a meeting on May 9, 2013. An exploration well at the proposed Summit Well site did not show adequate water and a second exploration well was drilled at the Hidden Lake site. The Summit Group has proposed drilling a production well, named the Hidden Lake PWS Well (ST008) into an upper aquifer (approximately 1500 feet) at the Hidden Lake site, and drilling a second production well at this site into a deeper aquifer (approximately 2200 feet) if additional water source water is needed. With the change in the well site to Hidden Lake, the Summit group is proposing to move the storage tank to Hidden Lake and renamed it the Hidden Lake 415K Gallon Tank (ST004). Several minor issues of concern were discussed with Jeff Beckman in a phone call on July 15, 2015, and resolved.

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Our understanding of this project (File #9319) is construction of 415,000 gallon buried concrete tank, which will be known as the Hidden Lake 415K Gallon Tank (ST004). The proposed production well will have a pitless adaptor, and the water from the well will go to a building which will have a flow meter, sampling location, valves to enable the well to be pumped to waste, and associated instrumentation and controls.

We have completed our review of the plans and specifications, stamped and signed by Eric W. Neil, P.E., of Bowen Collins & Associates, Inc., and dated July 1, 2013, and find they basically comply with the applicable portions of Utah's Administrative Rules for Public Drinking Water Systems in R309. **We hereby approve the proposed plans to construct the Hidden Lake 415K Gallon Tank (ST004), and Well Equipping of Hidden Lake PWS Well (ST008) subject to the following conditions:**

1. Based on the minimum sizing requirements of the Division of Drinking Water of 800 gallons per day of source capacity for each residential connection for indoor use, Phase 1 would require a safe yield of 85.6 gpm from a well. The safe yield of a well is defined in the Division's rules as 2/3 of the 24-hour constant rate pump test. Therefore, a well to supply water for Phase 1 for indoor use only would be required to have a 24-hour constant rate pump test of 128.3 gpm. If any outdoor watering is allowed in Phase 1, additional source capacity based on safe field would be required at the rate of 3.39 gpm of source capacity per acre of outside irrigation. Once the drilling of the Hidden Lake PWS Well (WS008) is completed, a 24-hour constant rate pump test shall be conducted and the data submitted to the Division to establish the safe yield of this well. **If the Hidden Lake PWS Well (WS008) does not provide an adequate safe yield of water for Phase 1 of the Summit at Powder Mountain PRUD, the Summit Group is required to drill a second production well at the Hidden Lake site into the lower aquifer to provide the additional water to meet the safe yield requirement.**
2. Once the drilling of the Hidden Lake PWS Well (WS008) is completed, the GPS location of the well, the certification of well seal, well driller's report (well log), and initial new source chemical analyses for a community system of the well water shall be submitted to the Division. If the water from the well does not meet the quality standards found in R309-200, then it would be required to install the appropriate treatment for the well water.
3. Once the drilling of the Hidden Lake PWS Well (WS008) is completed and the 24-hour constant rate pump test has been conducted, the final sizing of the well pump and the depth of the submersible pump in the well can be determined. This information shall be submitted to the Division for review prior to installation of the pump.

This approval pertains to construction only. **An operating permit must be obtained from the Director before the Hidden Lake 415K Gallon Tank (ST004) and the Hidden Lake PWS Well (ST008) may be put into service.** A checklist outlining the items required for operating permit issuance is enclosed for your information.

Evan D. Miller
Page 3
July 19, 2013

Approvals or permits by local authority or county may be necessary before beginning construction of this project. As the project proceeds, notice of any changes in the approved design, as well as any change affecting the quantity or quality of the delivered water, must be submitted to the Division. We may also conduct interim and final inspections of this project. Please notify us when actual construction begins so that these inspections can be scheduled.

This approval must be renewed if construction has not begun or if substantial equipment has not been ordered within one year of the date of this letter.

If you have any questions regarding this letter, please contact Bob Hart, of this office, at (801) 536-0054, or Ying-Ying Macauley, Engineering Section Manager, of this office, at (801) 536-4188.

Sincerely,



Kenneth H. Bousfield, P.E.
Director

REH

Enclosure — Operating Permit Checklist

cc: Louis Cooper, Env. Director, Weber-Morgan Health Department, lcooper@co.weber.ut.us
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Russ Watts, Summit Group, 5200 South Highland Drive, Salt Lake City, UT 84117
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DIVISION OF DRINKING WATER

Checklist for Operating Permit (per Utah Administrative Code R309-500-9)

The following items must be submitted and found to be acceptable for all projects for operating permit issuance with the exception of distribution lines and distribution lines with booster pumps and pressure-reducing valves. *[Distribution system projects may be placed into service prior to submittal of all items or issuance of operating permit if a water system has officially designated a professional engineer responsible for the entire water system and if this designated engineer has received a Certification of Rule Conformance by a P.E. and proof of satisfactory bacteriological result. In this case, a public water system will submit all items needed for obtaining an operating permit for specific distribution system project even after the new waterlines has been placed into service as determined by the water system's designated professional engineer.]*

- Utah Registered Engineer's Certification of Rule Conformance that all conditions of plan approval (including conditions set forth by the Executive Secretary in any conditional approval letter) have been accomplished.
- Utah Registered Engineer's statement of what plan changes, if any, were necessary during construction and a Certification of Rule Conformance that all of these changes were in accordance with applicable Utah Administrative Code, *R309-500 through R309-550, Drinking Water Facility, Construction, Design, and Operation Rules.*
- As-built drawings have been received at the Division (unless no changes were made to the previously submitted and approved pre-construction drawings).
- Confirmation that as-built drawings have been received by the water system (unless no changes were made to the previously submitted and approved pre-construction drawings).
- Evidence of proper flushing and disinfection in accordance with the appropriate ANSI/AWWA Standards.
 - ANSI/AWWA C651-05 AWWA Standard for Disinfecting Water Mains
 - Two consecutive sample sets (each 1200 feet, end-of-line, each branch, etc.), none positive, at least 24 hours apart.
 - ANSI/AWWA C652-02 AWWA Standard for Disinfection of Water-Storage Facilities
 - One or more samples, none positive.
 - ANSI/AWWA C653-03 AWWA Standard for Disinfection of Water Treatment Plants
 - Two consecutive samples per unit, none positive, no less than 30 minutes apart.
 - ANSI/AWWA C654-03 AWWA Standard for Disinfection of Wells
 - Two consecutive samples, none positive, no less than 30 minutes apart.
- Water quality data, where appropriate. *[Guidance: Include appropriate raw and finished water data that demonstrate the performance of treatment facility. Storage tank water should be analyzed for residual volatile organic compounds after tank interior painting or coating.]*
- Confirmation that water system owner has been provided with O&M manuals for any new facilities.
- Location data of new storage tank, treatment facility, or source, if applicable.