



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

September 11, 2013

George R. Mason
Bumblebee Water System
352 East Riverside Drive, Suite A3
St. George, UT 84790

Dear Mr. Mason:

Subject: **After-the-Fact Plan Approval and Operating Permit**, Water System #11089
File #7372 – Bumblebee Well #1 (WS001)
File #7428 – Bumblebee Storage Tank (ST001)
File #7429 – Bumblebee Booster Station (PF001)

On August 7, 2013, the Division of Drinking Water (the Division) received your request for the operating permit for the Bumblebee Water System (Water System #11089) from your consultant, Bulloch Brothers Engineering. This project includes all of the facilities for a drinking water system including Bumblebee Well #1 (identified as WS001 in the Division's database), the Bumblebee Storage Tank (ST001), the Bumblebee Booster Station (PF001), and the Bumblebee distribution system (DS001) for the entire Sunset Subdivision located in Iron County, Utah.

This project (File #7372) was initiated when plans and specifications were received in April 2006 for drilling the well. A Project Notification Form was later received by the Division on August 15, 2006, for drilling the well. It appears that drilling had commenced as a grout seal procedure was witnessed on December 13, 2006, despite the fact that plan approval had not yet been issued nor had the source protection Preliminary Evaluation Report (PER) been approved. The PER concurrence was issued for the well on November 28, 2007.

Project Notification Forms were received by the Division on October 20, 2007, for a Public Water System Capacity Assessment (File #7427), a 280,000-gallon bolted steel tank (File #7428), and the water distribution system including a booster pump station (File #7429). There is no record of the Division issuing plan approval for any of these project file numbers.

On March 10, 2011, Paul Wright, P.E., District Engineer, met with the new project owners about starting this project back up. It was discovered that all of the facilities for this water system had been built but the project was stopped due to lack of funding back in 2007. The new project owners were meeting to find out what was required to get this system approved. On March 18, 2013, Paul Wright, P.E., District Engineer, conducted a site visit to determine the current status of all of the facilities with

regards to meeting Division of Drinking Water rules for construction of new facilities. A punch list of items needing to be addressed was prepared, and sent to you on March 18, 2013. A follow-up site visit was performed on May 20, 2013 to verify that the facilities met the current Drinking Water Rules. Hydraulic water modeling results were received by the Division on May 6, 2013. They were reviewed and found to meet the hydraulic modeling requirements set forth in the Drinking Water Rules for meeting minimum pressure requirements. A capacity assessment form was filled out by you, and sent to the Division on August 1, 2013. An approval letter for the capacity assessment (File #7427) was sent to you on August 22, 2013.

Our understanding of the project is as follows:

File #7372 – Bumblebee Well #1 (WS001)

The well was drilled to a total depth of 480 feet. The borehole is 15 inches in diameter extending the length of the hole with an 8 5/8 inch diameter permanent casing. Approximately 200 feet of screen is placed at varying depths starting at 160 feet below the ground surface down to 480 feet. The well has a grout seal from the ground surface to 100 feet deep. The well is equipped with a submersible pump that is capable of pumping 100 gallons per minute to the tank. The well is also equipped with a pitless adapter and secure well enclosure.

File #7428 – Bumblebee Storage Tank (ST001)

The storage tank is a 280,000-gallon bolted steel tank with proper coatings. The tank has all necessary appurtenances including safely located ladders and railings, a shoebox style access hatch with gasket, an air vent, and overflow.

File #7429 – Bumblebee Distribution System (DS001)

The distribution system includes approximately 27,000 linear feet of 8-inch PVC C900 Class 150 pipe including air-vac valves, fire hydrants, and other appurtenances. The system also includes a booster station (**referenced as PF001 in our inventory**). The booster station provides all pressure in the water system and is therefore also provided with a transfer switch for a backup generator in the event of a power outage. The booster station is equipped with a 3 hp jockey pump, 2-25 hp operating pumps, and a 75 hp high capacity fire flow pump. These pumps all operate on a variable frequency drive. The booster station includes all other required valving and appurtenances.

We have received the following information for the Bumblebee water system and all of the facilities described above:

1. Documentation of valid water right(s).
2. Design engineer's statement of conformance with approval conditions.
3. Design engineer's statement of conformance with the Rule for any deviation from the plan approval.
4. Evidence of O&M manual delivery.
5. As-built drawings.
6. Recorded land use agreements
7. Satisfactory bacteriological results.

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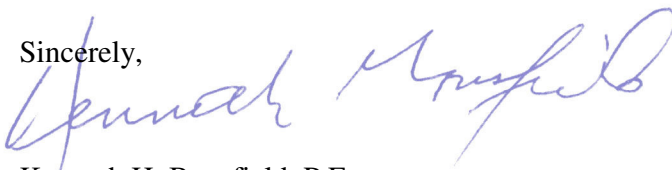
We have determined that all conditions of operating permit issuance have been met. On this basis, an **Operating Permit for the Bumblebee Water System (System #11089) and each of the facilities described above including the Bumblebee Well #1 (WS001), the Bumblebee Storage Tank (ST001), the Bumblebee Booster Station (PF001) and the Bumblebee Distribution System (DS001) is hereby issued as constituted by this letter.** You may now place these facilities in service in your water system.

The equipped well pump capacity of Bumblebee Well #1 is 100 gallons per minute (gpm). The safe yield of Bumblebee Well #1 is rated at 133 gpm, which is calculated based on two-thirds of the constant-rate well pump test results at 200 gpm. The safe yield of 133 gpm typically would be the basis for determining the maximum number of connections that the Bumblebee Well #1 can serve. In this case, even though the safe yield is rated at 133 gpm, the equipped pump capacity of 100 gpm is the physical limiting factor of well capacity.

This water system is currently listed as an active non-public water system. When this system serves at least 8 connections or 25 or more people year round, it will become a public community system and its drinking water facilities will be changed to "active" status. At that time, this water system must comply with the monitoring, sampling, and reporting requirements. The distribution system samples will include lead and copper, and total coliform. The source samples will include volatile organics, pesticides, radionuclides, inorganics and metals, sodium, sulfate, total dissolved solids (TDS), and nitrate. The sampling frequencies are different for each and will be specified at the time the system becomes public. If you have questions about sampling requirements please contact Rachael Cassady, at (801) 536-4467 or rcassady@utah.gov.

Please maintain a copy of this letter with your permanent records for future reference. If you have any questions regarding this operating permit, please contact J. Paul Wright, P.E., Southwest District Engineer, at (435) 986-2590 or Ying-Ying Macauley, Engineering Section Manager, of this office, at (801) 536-4188.

Sincerely,



Kenneth H. Bousfield, P.E.
Director

JPW

Enclosures — Inventory Report

cc: Robert Beers, Env. Director, Southwest Utah Public Health Dept., rbeers@swuhealth.org
George Mason, Bumblebee Water System operator, georm@aol.com
Daniel R. Bulloch, P.E., Bulloch Brothers Engineering, PO Box 3174, Cedar City, UT 84721
J. Paul Wright, P.E., DEQ Southwest District Office, pwright@utah.gov
Shauna Benvegna-Springer, Division of Public Utilities, sbenvegn@utah.gov
Kate Johnson, Division of Drinking Water, katej@utah.gov
Rachael Cassady, Division of Drinking Water, rcassady@utah.gov

Utah Department of Environmental Quality

Division of Drinking Water

Public Water System Inventory Report

Run Date:
09/10/2013 02:12 pm

PWS ID: UTAH11089 **Name:** BUMBLEBEE WATER SYSTEM

Legal Contact: BUMBLEBEE WATER SYSTEM **Rating:**
BRYCE ROWLEY **Rating Date:**

Address: 329 Damascus Drive **Activity Status:** A
ST GEORGE, UT 84790

Phone Number:

City Served (Area):

County: IRON COUNTY

System Type: Non-public **Last Inv Update:** 09/10/2013

Population: 25 **Last Snty Srv Dt:**
Surveyor:
Oper Period: 1/1 to 12/31

Contacts

Contact Type	Name	Title	Phone Numbers		Email Address
			Office	Emergency	
AC	ROWLEY, BRYCE		435-701-9022		

Service Connections

Connection Type	Meter Type Code	Meter Size	Number Connections
Combined	Unknown	0	1
			1 Total Svc Connections

Storage

Total Storage: 0 GAL **Number of Units:** 1

No.	Name	Type	Effective Volume	Constr Matrl	Activity Status	Press'd
ST001	BUMBLEBEE STORAGE TANK	Ground	282,000 GAL	Steel	I	NO

Pumping Stations

Facility No	Facility Name	Activity Status	Capacity	Avail
PF001	BUMBLEBEE BOOSTER STATION	I		P

Sources

No.	Source Name	Activity Status	Source Type	Safe Yield *	Pump Capacity	Location Data On File	Water Type	Availability	Period of Operation
WS001	BUMBLEBEE WELL # 1	Inactive	WL	133 GPM	100 GPM	Yes	GW	Permanent	1/1 to 12/31

*Reports measured flow for wells, approved design capacity for all other sources.