Statement of Basis
Class V Area Permit Renewal and Modification
UIC Permit Number UTU500006

Brigham City Corporation
20 North Main
P.O. Box 1005
Brigham City, Utah 84302

Description of Permitted Facility

Brigham City Corporation operates an aquifer recharge and recovery system as an integral part of their public water supply system. The purpose of the recharge and recovery system is to inject an excess of 4 to 6 million gallons per day of high quality water from six (6) Mantua Valley springs during the winter months for subsequent withdrawal during the high use summer months. The springs from which excess water is taken are:

Olsen Spring
West Halling Spring
Peter Jensen Spring
East Halling Spring
Birch Spring
Rock Spring

The spring water is chlorinated and fluoridated prior to injection into the following three (3) production wells:

Cooley Well
Cemetery Well No. 2
Intermountain No. 2

Under the area permit, additional injection/recovery wells may be constructed within the area bounded by:

North Boundary: 1200 North Street
South Boundary: 1100 South Street
West Boundary: 800 West Street
East Boundary: 1200 East Street
Basis for Requiring Permit

Under UAC R317-7-5.1 and UAC R317-7-5.5 the Executive Secretary of the Utah Water Quality Board (Executive Secretary) is authorized to call for a permit for any Class V injection well that may endanger an underground source of drinking water (USDW). Inasmuch as the source waters have historically shown the presence of coliform bacteria, and the recharge area for the source waters may be subject to spills and to discharge of contaminants (e.g. pesticides, herbicides, fire retardants, etc.), it is the determination of the Executive Secretary that the Aquifer Storage and Recovery (ASR) project described above should be permitted.

The Utah Underground Injection Control (UIC) Class V permit is based on the following restrictions to ensure compliance with state and federal UIC Program rules and regulations and Utah Ground Water Quality Protection Program rules and regulations.

Injection Fluid Limitations

a. Fluid injected through all wells is expressly limited to water from:
   Olsen Spring, West Halling Spring, Peter Jensen Spring, East Halling Spring, Birch Spring, and Rock Spring.

b. Prior to injection the water shall be chlorinated and fluoridated.

c. Injected water shall meet all Federal and State Maximum Contaminant Levels for Drinking Water (MCLs), and State Ground Water Quality Standards. The maximum total dissolved solids (TDS) of injected water shall not exceed 500 milligrams per liter (mg/l).

d. The permittee shall not inject any hazardous waste as defined by UAC R315-2-3 or 40 CFR 261 at any time during operation of the facility.

e. All additives introduced into the injection stream must meet all Utah Rules for Public Drinking Water Systems found in UAC R309-525-11.5.

f. The permittee shall notify the Executive Secretary in writing within 10 days of any changes in the injection fluid or process additives that may alter the quality or chemical composition of the injection fluid.

g. Upon notification of a spill or dumping incident which may adversely affect the quality of the injectate or any finding by the permittee or the Executive Secretary that the injection fluid has exceeded Federal or State MCLs, State Ground Water Quality Standards, TDS of 500 mg/l, or may otherwise adversely affect the health of persons, the permittee shall stop injection immediately at all affected or potentially affected wells. Injection shall not recommence until approval has been received by the Executive Secretary.

Injection Pressure and Volume Limitations

Injection pressure shall be limited to prevent flowing artesian conditions in the extraction or monitoring wells. The injection volume is limited by the Ground Water Recharge Permit issued by the Utah Division of Water Rights. No additional restrictions on the injection volume are imposed by the Utah UIC Program.
Monitoring, Testing and Reporting

a. Injectate Characterization - Each source of injectate will be analyzed for a complete suite of parameters once during the permit cycle. Additionally, any new source for injection will be analyzed for a complete suite of parameters annually for the permit cycle. During each injection event, the source of the injectate will be analyzed for an abbreviated suite of parameters that include those constituents of concern and those constituents that have historically been detected. The monitoring parameter list and monitoring schedule are detailed in Attachment I of the permit.

b. Operating Parameters – Injection volume, pressure, and flow rate will be monitored and recorded on continuous recording devices. Hydrostatic head will be measured and recorded for each injection well immediately before the commencement of each injection event, immediately after each injection event, and monthly throughout the year even during periods of no injection. This will facilitate the understanding of the aquifer's capacity to store and transmit water.

c. Reporting – Results of the monitoring and testing will be submitted in an annual report.

Construction Requirements for New Wells

Before any new recharge/recovery wells are constructed under this UIC permit, the permittee must:

a. Submit to the Executive Secretary a copy of the Memorandum Decision issued by the Utah Division of Water Rights stating that the State Engineer has approved the Ground Water Recharge Permit Application and issued a Ground Water Recharge Permit.

b. Submit to the Executive Secretary a copy of a letter from the Utah Division of Drinking Water stating that all requirements regarding engineering design and construction of the wells, ground water source water protection issues, and water quality issues have been properly addressed.

Plugging and Abandonment of Recharge Well

After the recharge wells cease to be employed as Class V injection wells under the regulatory authority of the Utah Division of Water Quality or production wells under the regulatory authority of the Utah Division of Drinking Water, the permittee shall plug and abandon the wells according to an approved Plugging and Abandonment Plan that meets the requirements of the Utah Division of Water Rights and Utah Division of Drinking Water.

Financial Assurance for Plugging and Abandonment

The permittee is not required to maintain financial responsibility and resources to plug and abandon the permitted injection well facilities beyond that which is required by the Utah Division of Water Rights and the Utah Division of Drinking Water.

Permit Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) if new water quality standards are finalized during the life of the permit, if new regulations are adopted by the Utah Water Quality Board, if the Executive Secretary determines that the list of monitoring
parameters or the monitoring schedule should be revised, or if the Executive Secretary determines that the injection activity is having an adverse impact on public health.