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GROUND WATER DISCHARGE PERMIT UGW010013
STATEMENT OF BASIS

Phibro Biodigester, LLC
Blue Mountain Biogas Facility

December 2025

Introduction

The Division of Water Quality ("Division") under the authority of the Utah Ground Water Quality Protection Rules[1] (Ground Water Rules) issues ground water discharge permits to facilities that have a potential to discharge contaminants to ground water[2]. As defined by the Ground Water Rules[3], such facilities include agricultural operations. The Ground Water Rules are based on an anti-degradation strategy for ground water protection as opposed to non-degradation; therefore, discharge of contaminants to ground water may be allowed provided that current and future beneficial uses of the ground water are not impaired and the other requirements of Rule 317-6-6.4.A are met.[4] Following this strategy, ground water is divided into classes based on its quality[5], and higher-quality ground water is given greater protection[6] due to the greater potential for beneficial uses. The Division has developed permit conditions consistent with R317-6 and appropriate to the nature of the facility operations, maintenance, best available technology[7] (BAT) and the hydrogeologic and climatic conditions of the site, to ensure that the operation will not contaminate ground water.

Basis for Permit Renewal

This Permit is being renewed in accordance with R317-6-6.7. However, a permit may be terminated or a renewal denied if any one of the four items in R317-6-6.8 applies:

1) Noncompliance by the permittee with any condition of the Permit where the permittee has failed to take appropriate action in a timely manner to remedy the Permit violation;
2) The permittee's failure in the application or during the Permit approval process to disclose fully all significant relevant facts at any time;
3) A determination that the permitted facility endangers human health or the environment and can only be regulated to acceptable levels by plan modification or termination; or
4) The permittee requests termination of the Permit.

[1] Utah Admin. Code Rule R317-6
[2] https://deq.utah.gov/ProgramsServices/programs/water/groundwater/docs/2008/08Aug/GWQP_PermitInfo.pdf
[3] Utah Admin Code Rule R317-6-6.1A
[4] Preamble to the Ground Water Quality Protection Regulations of the State of Utah, sec. 2.1, August 1989
[5] Utah Admin. Code Rule R317-6-3
[6] Utah Admin. Code Rule R317-6-4
[7] Utah Admin. Code Rule R317-6-1(1.3)

Purpose

This Statement of Basis describes the facilities, hydrogeology, ground water quality, basis of permit renewal and specific conditions for Ground Water Discharge Permit UGW010013 for the Blue Mountain Biogas Facility. UGW010013 was issued to Blue Mountain Biogas LLC in 2011 in accordance with Utah Admin. Code R317-6-6.4. Ownership of UGW010013 was transferred to Phibro Biodigester, LLC ("Phibro") in November of 2018. This will be the second renewal of Ground Water Discharge Permit UGW010013 and the first renewal under Phibro.

The Blue Mountain Biogas Facility has not been operational since 2023, however, Phibro is seeking a permit renewal in case operations at the Blue Mountain Biogas Facility resume. There are no existing site conditions that would require termination of this Ground Water Discharge Permit by the Director under Utah Admin. Code R317-6-6.8. There are no major changes to the permit. The conditions of this permit apply upon issuance of this permit.

Facility Description

Phibro owns a biogas plant near Thermo in Beaver County, Utah. Currently, the Blue Mountain Biogas Facility receives no manure for bio digestion and is not operating. The Blue Mountain Biogas Facility has not been operational since 2023 and is expected to remain inactive in the near future. This Ground Water Discharge Permit requires best available technology (BAT) and ground water compliance monitoring for two anaerobic digesters, equalization basins, lift stations at 8 hog farm manure lagoons, and associated pressurized piping. Semi-annual compliance monitoring is still required while the site is idled.

Basis of Permit Issuance

The determination of impacts from present-day releases to ground water is a major concern in ground water management. Phibro utilizes a zero-discharge approach at the Blue Mountain Biogas Facility, using containment technology with a monitoring component to assess potential impacts to ground water quality. This permit incorporates lined basins, ground water monitoring wells, and Best Management Practices as the compliance mechanisms.

The administration of the permit, to ensure compliance with ground water protection regulations, is based on periodic monitoring of ground water in wells to assess potential impacts to ground water quality. The Blue Mountain Biogas Facility has four compliance monitoring wells located adjacent to the basins. Compliance limits for the wells were established from background data collected and analyzed by Phibro over the previous permit term. The Division has collected ground water samples that confirm the historical data.

Ground water monitoring is the primary compliance monitoring method for the anaerobic digesters and equalization basins. Compliance monitoring is performed at select wells surrounding the anaerobic digester. The compliance monitoring parameters are listed in Permit Part I.C.

Hydrogeology

Regional. The Milford Valley lies within the Basin and Range physiographic province. The area is dominated by normal block fault structures common to the Basin and Range Province; however, there are areas where thrust faults are present in the valley. The Mineral Range east of the site is a large Tertiary intrusion that caused mineralization in Paleozoic limestone and dolomite.

Local. The stratigraphy at the site consists of Quaternary-age alluvium. These sediments are poorly sorted stream, alluvial fan, slope-wash, and talus deposits. Sediment thickness is estimated to be in excess of 420 feet based on water supply wells drilled in the area.

The shallowest ground water underlying the site is an unconfined water-table aquifer composed of gravel, sand, silt, and clay in unconsolidated and semi-consolidated alluvial deposits. Ephemeral streams, subsurface inflow from bedrock in the mountains, and precipitation on the valley floor recharge ground water aquifers in the southern portion of the Milford Valley. The depth to ground water under the site is approximately 70 feet below ground surface, and it flows from west to east toward the valley center.

Ground Water Quality

Ground Water Class. Based on the ground water classification criteria listed in Utah Admin. Code R317-6-3 and data from facility monitoring wells, the uppermost shallow ground water aquifer at the site is classified as Class IA Pristine Ground Water. A transition zone to Class II Drinking Water Quality occurs south and east of the facility.

Best Available Technology

The administration of this permit is founded on the use of BAT, in accordance with the requirements of Utah Admin. Code R317-6-1.3. The Blue Mountain Biogas Facility is a no-discharge facility with an approximate capacity of 19.1 million gallons. The digesters, equalization basins, and piping are a closed system. The facility generates no waste of its own.

BAT design for the digesters and equalization basins includes an 80-millimeter synthetic high-density polyethylene (HDPE) flexible membrane liner. The equalization basins are designed to contain sufficient fluid so that a stabilized volume of material can be pumped into the digesters on a daily basis. Digesters and equalization basins are designed with a total freeboard of 3 feet above the design fluid level. Both of the digesters are covered.

Liner integrity was evaluated prior to operation with the approved construction quality assurance/quality control (CQA/QC) plan and the associated Construction Certification As-Built Report as required by the Construction Permit.

Compliance Schedule

Part I.H.1 of the permit specifies deadlines and requirements for preparation of the following documents once the permit has been issued:

1. A *Spill Prevention and Remediation Plan* must be submitted to the Division for Director approval within sixty (60) days of the resumption of facility operations. Upon approval by the Director, the *Spill Prevention and Remediation Plan* will be included as an appendix to this permit.

2. A *Closure Plan* must be submitted to the Division for Director approval at least 180 days prior to closure of any digester or basin system, specifying the closure plan for the disposition of the liquids, solids, and liner material. The liner material must be disposed of

in a manner that will not lead to ground water contamination. The Permittee may be required to sample monitoring wells during a post-closure monitoring period as determined by the Director.

3. An updated *Sampling and Analysis Plan* must be submitted to the Division for Director approval within sixty (60) days of the resumption of operations.