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STATEMENT OF BASIS

COREY CATTLE COMPANY
PERMIT NO. UGW270007

September 2020

A. DESCRIPTION OF FACILITY AND SITE HISTORY

Facilities to accommodate a dairy operation were constructed in 2008 in Millard County approximately 10 miles southeast of Delta, Utah. A facility consisting of barns, parlors and waste facilities to accommodate 4,500 head of dairy cows was built.

The facility was designed so manure from the dairy operations can be flushed from the barns using recycled plate cooler water. The liquid fraction drains into a waste retention lagoon. Both the liquid and solid fraction may be applied to fields at the appropriate agronomic rate according to an approved Comprehensive Nutrient Management Plan. Solids may also be sold as compost.

A ground water discharge permit was first issued for the dairy operations in December 2008. The permit was renewed in May 2015. The dairy went out of business and the Corey Cattle Company began operating a feedlot on the property during 2018. Because the feedlot operation is not utilizing the lagoon designed to collect liquid waste water from dairy operations, routine ground water monitoring requirements described in the ground water discharge permit have been temporarily suspended. This Statement of Basis covers renewal of the ground water discharge permit, preserving the ability to resume dairy operations in the future. An annual sample from the lagoon is required to document it contains freshwater overflow from the feedlot watering troughs and not liquid waste resulting from dairy operations.

B. SUBSURFACE CONDITIONS

The facility is located in Delta Valley, approximately 10 miles Southeast of Delta in Millard County. In this vicinity, ground water generally moves from the mountainous recharge areas to the east in a west-southwesterly direction toward the Sevier Lake. The aquifer beneath the existing grade at the site consists of unconsolidated and semi-consolidated, poorly sorted alluvial materials; primarily clay, sand and gravel, inter-bedded with silt and clay. The alluvial aquifer in the Delta Valley exceeds 500 feet in thickness through the center of the valley and may be several hundred feet thick under the dairy site. Monitoring wells have been completed in the uppermost water table aquifer at the site.

C. GROUND WATER CLASSIFICATION AND PROTECTION LEVELS

Analysis from monitoring wells at the site indicates that TDS values range from 4,850 mg/l to 7,160 mg/L. Based on these concentrations ground water in the vicinity of the operation is Class III - Limited Use Ground Water. Protection levels have been established for nitrate, chloride and TDS and included in Table 1 of the ground water discharge permit based on prior monitoring.

D. BEST AVAILABLE TREATMENT TECHNOLOGY

At full population the facility can accommodate 5,000 dairy cows in total confinement. The waste disposal lagoons for the farm are designed to hold approximately 61.6 acre feet, not including 1 foot of freeboard. When operating, wastewater and composted manure can be applied to cropland owned by the facility under an approved Comprehensive Nutrient Management Plan. Solids can be used as an organic fertilizer or sold as compost.

Dry, scraped manure can be composted. Solids can be deposited on a graded and bermed area for composting. Runoff from the compost area will drain into the settling pond.

The design, operational, and contingency requirements detailed above represent Best Available Technology since the implementation of these requirements will be protective of ground water resources in the area surrounding the facility.

E. GROUND WATER MONITORING

The facility has installed one up-gradient and two down-gradient monitoring wells located along the direction of ground water flow and completed in the uppermost water-bearing zone under the lagoons. When being operated as a dairy, ground water will be sampled and analyzed semi-annually for nitrate + nitrite, ammonia, pH, chloride, bicarbonate, and total dissolved solids for the term of the permit. While the dairy facilities are idle, an annual sample from the wastewater lagoon will be collected in lieu of ground water sampling to verify only fresh water is being stored in the lagoon.

Regulatory decisions made as a result of ground water monitoring must take into account the background variability of ground water quality at the site. The facility will not be required to take corrective action if it can be verified that changes in ground water quality are a result of other factors not related to their operations.