

STATEMENT OF BASIS

HIGH LINE DAIRY FARM PERMIT NO. UGW270007

April 2015

INTRODUCTION

The High Line Dairy Farm consists of a dairy operation with associated manure waste handling facilities. This Statement of Basis covers the renewal of the ground water discharge permit.

A. DESCRIPTION OF FACILITY

In 2008 High Line Dairy constructed a dairy operation in Millard County approximately 10 miles southeast of Delta. The Dairy consists of barns, parlors and waste facilities to accommodate 4,500 head in total confinement with 3,150 milking in the first phase and 5,000 head with 3,500 milking in the second phase.

Manure from the dairy operations is flushed from the barns using recycled plate cooler water. The liquid fraction is stored in a waste retention pond. Both the liquid and solid fraction are applied to fields at the appropriate agronomic rate according to the Comprehensive Nutrient Management Plan. Liquid and some solids are applied on the adjacent 252 acres owned by Bliss. The rest of the solids are sold as compost.

B. SUBSURFACE CONDITIONS

The Dairy Farm 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 proposed 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 dairy 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 dairy is to contain 5,000 animals 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. Wastewater and composted manure are planned to be applied to adjacent farmland by the irrigation system on approximately 252 acres. The solids are used as an organic fertilizer or sold as compost.

Dry, scraped manure will be composted. Solids will 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 Dairy 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. 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.

Regulatory decisions made as a result of ground water monitoring must take into account the background variability of ground water quality at the dairy site. The High Line Dairy Farm 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.

DWQ-2015-005022