STATEMENT OF BASIS

Revolution Dairy Farm
Ground Water Discharge Permit Renewal
Permit No. UGW270006

March 11, 2009

INTRODUCTION

Revolution Dairy Farm has constructed 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

Revolution Dairy has developed a new dairy operation to replace their original dairy formerly located nearby in Millard County. The dairy is located in Millard County approximately six miles southeast of Delta and consists of barns, parlors and waste facilities to accommodate 3,000 milking head in confinement.

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

B. SUBSURFACE CONDITIONS

The dairy farm is located in Delta Valley, approximately 6 miles Southeast of Delta in Millard County. In this vicinity, ground water generally moves from the mountainous recharge areas on 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 ground water reservoir in the Delta Valley exceeds 500 feet in thickness through the center of the valley and may be several hundred feet thick under the proposed dairy site. Monitoring wells have been completed in the uppermost water table aquifer at the site.
C. GROUND WATER CLASSIFICATION AND PROTECTION LEVELS

Ground water quality data from monitoring wells installed at the site show that TDS values range from 2,300 mg/l to 3,300 mg/L. Based on these data, ground water in the vicinity of the dairy is Class II Drinking Water Quality. Protection levels have been established for nitrate + nitrite as N, chloride, and total dissolved solids (TDS) and are included in Table1 of the ground water discharge permit.

D. BEST AVAILABLE TREATMENT TECHNOLOGY

At full population the dairy will contain 3,000 milking cows in total confinement. The waste disposal lagoons for the farm are designed to hold approximately 61.6 acre feet, not including one (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 will be 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 upgradient and two downgradient monitoring wells located along the presumed direction of ground water flow and completed in the uppermost water-bearing zone under the lagoons. Ground water will be sampled and analyzed quarterly for nitrate + nitrite, ammonia, pH, chloride, bicarbonate, and total dissolved solids for the term of the permit. Background concentrations of major ions will also be determined.

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. Revolution 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.