

APPENDIX E: TERMS OF THE NUTRIENT MANAGEMENT PLAN INCORPORATED INTO THE PERMIT

I. PERMITTEE

In accordance with Parts III.2.b and f of NPDES Permit No. NMG010000, the following terms of the nutrient management plan (NMP) are hereby incorporated as site specific terms and conditions of the general permit for:

NMG010054
 Dominguez Dairy #1
 13950 Stern Drive
 Mesquite, NM 88048

For the purposes of this permit, “NMP” refers to the latest version of the NMP approved by EPA. Any changes to the NMP must be submitted to EPA in accordance with Part III.A.6 of the permit.

II. SITE SPECIFIC PERMIT TERMS

A. Adequate Storage

Table 1

STORAGE STRUCTURE	STORAGE PERIOD (days)	TOTAL CAPACITY (acre-feet)
PWRS (*1)	136.7	15.52
RCS-1 (*2)	14	12.39
RCS-2 (*2)	14	6.19
RCS-3 (*2)	14	1.69
RCS-4 (*2)	14	1.62

Footnotes

*1 Process Water Retention Structure

*2 Runoff Control Structure

Manure shall be stored in accordance with Section 3.3 (Dry Manure Storage) of the NMP.

B. Land Application

The permittee has selected the narrative rate approach to address rates of application. In accordance with Parts III.A.3.g.ii and III.A.7.f of NMG010000, the permittee shall calculate the amounts of manure and process wastewater to be land applied on land application areas specified below using the methodology described in Section 10 and Appendix D of the NMP, and the following site specific permit terms.

Table 2

Land Application Area (Acres)	Year	Outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport (*1)	Crop	Annual Yield Goal (tons/ac)	Recommendation		Maximum Amount of Nutrients Derived from all Sources (*2)	
					Nitrogen (lbs N/ac)	Phosphorus (lbs P ₂ O ₅ /ton)	Nitrogen (lbs N/ac)	Phosphorus (lbs P ₂ O ₅ /ac)
Field D-1	2010	N-Based	Pecan (15% moisture)	1240 (*3)	29.5	NA	29.5	NA
	2011	N-Based	Pecan (15% moisture)	1240 (*3)	29.5	NA	29.5	NA
	2012	N-Based	Pecan (15% moisture)	1400 (*3)	33.3	NA	33.3	NA
	2013	N-Based	Pecan (15% moisture)	1400 (*3)	33.3	NA	33.3	NA
	2014	N-Based	Pecan (15% moisture)	1600 (*3)	38.1	NA	38.1	NA
Field D-2	2010	N-Based	Alfalfa, for hay	10 (*4)	302.5	NA	302.5	NA
	2011	N-Based	Alfalfa, for hay	1 (*4)	30.2	NA	30.2	NA

		N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA	
		N-Based	Triticale (Wheat for green chop 70%)	20	280.3	NA	280.3	NA	
		N-Based	Cotton	1250 (*3, 5)	38.0	NA	38.0	NA	
	2012	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA	
		N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA	
		N-Based	Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA	
	2013	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA	
		N-Based	Barley-6 row, for green cut (boot 69%)	20	273.4	NA	273.4	NA	
		N-Based	Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA	
	2014	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA	
		N-Based	Sorghum/Sudangrass, for silage (70%)	21	206.4	NA	206.4	NA	
		N-Based	Wheat Silage (Wheat for green chop 70%)	20	280.3	NA	280.3	NA	
	Field D-3	2010	N-Based	Alfalfa, for hay	10 (*4)	302.5	NA	302.5	NA
		2011	N-Based	Alfalfa, for hay	1 (*4)	30.2	NA	30.2	NA
			N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA
N-Based			Triticale (Wheat for green chop 70%)	20	280.3	NA	280.3	NA	
N-Based			Cotton	1250 (*3)	38.0	NA	38.0	NA	
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	N-Based		Alfalfa, for hay	1 (*4)	30.2	NA	30.2	NA
Field D-5	2010	N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA
		N-Based	Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA
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	2014	N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA
		N-Based	Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA
		N-Based	Alfalfa, for hay	1 (*4)	30.2	NA	30.2	NA
	Field DM-1	2010	N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0
N-Based			Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA
2011		N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA
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N-Based		Wheat Silage (Wheat for green chop 70%)	20	280.3	NA	280.3	NA	
Field DM-4	2010	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
	2011	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
		N-Based	Triticale (Wheat for green chop 70%)	20	280.3	NA	280.3	NA
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		N-Based	Alfalfa, for hay	1 (*4)	30.2	NA	30.2	NA
		N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
Field DM-5	2011	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
		N-Based	Triticale (Wheat for green chop 70%)	20	280.3	NA	280.3	NA
		N-Based	Cotton	1250 (*3)	38.0	NA	38.0	NA
	2012	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
		N-Based	Oats for green chop (boot to early bloom 69%)	20	245.0	NA	245.0	NA
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	2011	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
		N-Based	Triticale (Wheat for green chop 70%)	20	280.3	NA	280.3	NA
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	2014	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
		N-Based	Sorghum/Sudangrass, for silage (70%)	21	206.4	NA	206.4	NA
		N-Based	Wheat Silage (Wheat for green chop 70%)	20	280.3	NA	280.3	NA
Field DM-7	2010	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
	2011	N-Based	Alfalfa, for hay	12 (*4)	362.8	NA	362.8	NA
		N-Based	Triticale (Wheat for green chop 70%)	20	280.3	NA	280.3	NA
		N-Based	Cotton	1250 (*3)	38.0	NA	38.0	NA
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		N-Based	Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA
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	2014	N-Based	Corn-Field for Silage (dough 68%)	22	174.0	NA	174.0	NA
		N-Based	Alfalfa, for hay	1 (*4)	30.2	NA	30.2	NA

Footnotes

*1 Outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport must be recalculated at least annually using the most recent soil test results.

*2 Nutrient recommendation equals the maximum amount of nutrients derived from all sources for nitrogen. Nutrient recommendations and maximum amount of nutrients derived from all sources for nitrogen are dependent on the outcome of annual soil test results when determined by the above methodology. Determination of these values shall be reported to EPA and NMED in the annual report required by Part V of NMG010000.

*3 pounds per acre

*4 Nitrogen application to legumes equal to 60% of the estimated removal of nitrogen in harvested plant biomass. See New Mexico NRCS Conservation Practice Standard 590 (Nutrient Management).

*5 The seed and lint yield level was listed as 2500 lbs in the USDA-NRCS NPK Nutrient Management Tool in the Field D-2, Year 2 Alternative Crops Section of Appendix A of the NMP. However, the Dairy Annual Nutrient Manger of the aforementioned NMP section and Table 10-2 of the NMP list the yield goal as 1250 lbs. Site specific terms of the NMP have been established based on a yield goal of 1250 lbs.

*6 The yield level was listed as 22 tons in the USDA-NRCS NPK Nutrient Management Tool in the Field DM-2, Year 4 Alternative Crops Section of Appendix A of the NMP. However, the Dairy Annual Nutrient Manger of the aforementioned NMP section and Table 10-2 of the NMP list the yield goal as 21 tons. Site specific terms of the NMP have been established based on a yield goal of 21.

Table 3

Land Application Area	Acres
Field D-1	14.7
Field D-2	85.2
Field D-3	48.3
Field D-4	49.8
Field D-5	81.2
Field DM-1	84.0
Field DM-2	66.0
Field DM-3	48.0
Field DM-4	48.0
Field DM-5	52.0
Field DM-6	30.0
Field DM-7	91.0

C. Site Specific Conservation Practices

Table 4

Agricultural Well Head, Surface Water, or Conduit to Surface Water	Setback Requirement

Mesquite Drain	Compliance alternative: The drain has excavation spoil berms on both sides of the drain channel. The top of the spoil berms are about 35-60 feet wide and are significantly elevated above the adjacent field elevation. The berms provide a physical barrier to cross-gradient and down-gradient irrigation flow, which prevents agricultural runoff from entering the drain.
East Side Canal	Compliance alternative: The canal lip is elevated above the adjacent field elevation. The canal berms provide a physical barrier to cross-gradient irrigation flow, which prevents agricultural runoff from entering the drain.
Del Rio Drain	100-ft. setback

D. Protocols for appropriate testing of manure, litter, and process wastewater

Manure and process wastewater shall be sampled in accordance with Section 9 (Nutrient Sampling Protocols) of the NMP.

E. Mortality Management

All mortalities shall be disposed of in accordance with Section 4.1 of the NMP. Composting of mortalities shall be done in accordance with the attached New Mexico State University Cooperative Extension Service Guide D-108 (Whole Animal Composting of Dairy Cattle).

F. Clean Water Diversion

Clean water diversion shall be achieved in accordance with Section 5 of the NMP.

G. Discharges to Water Quality Impaired Waters

The permittee discharges or proposes to discharge to the Rio Grande in segment number 20.6.4.101 of the Rio Grande Basin. A Total Maximum Daily Load (TMDL) for the main stem of the Lower Rio Grande for *E. coli* was approved by EPA on June 11, 2007. Compliance with the NMP is consistent with the assumptions of the TMDL.