APPENDIX B

Waste Management Plan and Nutrient Management Plan
for Martins View Jersey Dairy, Merced CA

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: Martins View Jersey Dairy

Physical address of dairy:

1369 S Hunt RD	Gustine	Merced	95322
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Date facility was originally placed in operation: 01/01/1941

Regional Water Quality Control Board Basin Plan designation: San Joaquin River Basin

County Assessor Parcel Number(s) for dairy facility:

0063-0050-0028-0000

B. OPERATOR NAME: Martins, Antonio L Telephone no.: Landline (209) 678-2208 Cellular

1000 Red Lion CT	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

Operator should receive Regional Board correspondence (check): [X] Yes [ ] No

C. LEGAL OWNER NAME: Martins, Antonio L Telephone no.: Landline (209) 678-2208 Cellular

1000 Red Lion CT	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

Owner should receive Regional Board correspondence (check): [X] Yes [ ] No

D. CONTACT NAME: Cordeiro, Kristy Rocha Telephone no.: Landline (707) 548-9214 Cellular

Title: Technical Service Provider

P.O. Box 116	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

AVAILABLE NUTRIENTS

A. HERD INFORMATION

The milk cow dairy is currently regulated under individual Waste Discharge Requirements.

Total number of milk and dry cows combined as a baseline value in response to the Report of Waste Discharge (ROWD) request of October, 2005:

1,775 *milk and dry cows combined (regulatory review is required for any expansion)*

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Present count	670	30	350	0	0	0
Maximum count	1,500	275	375	300	0	0
Avg live weight (lbs)	1,000	1,050	700	500		
Daily hours on flush	20	18	16	16	0	0

Predominant milk cow breed: Jersey

Average milk production: 60 *pounds per cow per day*

B. IRRIGATION SOURCES

Irrigation Source Name	Type	Nitrogen (mg/L)	Phosphorus (mg/L)	Potassium (mg/L)	Discharge Rate
CCID	Surface water (canal, river)	0.01			5 *cfs*
IW	Groundwater (well)	7.11			1,000 *gpm*

C. NUTRIENT IMPORTS

No nutrient imports entered.

D. NUTRIENT EXPORTS

Nutrient Type/Name	Quantity	Moisture	Nitrogen	Phosphorus (as P2O5)	Potassium (as K2O)
Wastewater	6,250,000.00 *gal*	0.0%	0.067%	0.016%	0.089%
Solid Manure	9,700.00 *ton*	53.9%	2.799%	1.620%	2.230%
Solid Manure	3,000.00 *ton*	53.9%	2.799%	1.620%	2.230%

Total nitrogen exported: 362,690.79 *lbs*

Total phosphorus exported: 86,542.29 *lbs*

Total potassium exported: 255,257.11 *lbs*

E. STORAGE PERIOD

Storage period is the maximum period of time anticipated between land application of process wastewater (from storage ponds/lagoons) to croplands. A qualified agronomist and civil engineer should collaborate and collectively consider predominant soil types, soil infiltration rates, maximum depth, available water, field capacity, permanent wilting point, allowable depletion, crop water use, evapotranspiration, precipitation, irrigation system capacity, water delivery constraints, crop nutrient requirements, soil nutrient adsorbtion/desorption, rooting depth, nutrient accumulation/availability for current and future crop needs, facility wide process wastewater storage capacity and other factors as deemed necessary across all croplands where process wastewater is applied in selecting a storage period. In many cases conflicts will arise between crop water demands, crop nutrient demands and insufficient process wastewater storage capacity. Process wastewater may not be the best choice as a source of either water and/or nutrients to meet crop demands throughout the year. Groundwater and surface water vulnerability has been considered.

The storage period selected in this Nutrient Management Plan is consistent with the storage period selected in the Waste Management Plan.

Storage period: 120 *days*

APPLICATION AREA

A. ASSESSOR PARCEL NUMBER: 0063-0040-0003-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0063-0050-0011-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0063-0050-0028-0000

Legal owner of parcel: Owned by Dairy

B. FIELD NAME: 1

Cropable acres: 37

Predominant soil type: Clay loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Returned to retention pond

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Early November	Early April	37
Corn, silage	Early May	Early September	37

FIELD NAME: 2

Cropable acres: 34

Predominant soil type: Clay loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Returned to retention pond

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Early November	Early April	34
Corn, silage	Early May	Early September	34

FIELD NAME: 3

Cropable acres: 6

Predominant soil type: Clay loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Berm

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Early November	Early April	6
Corn, silage	Early May	Early September	6

FIELD NAME: 4

Cropable acres: 22

Predominant soil type: Clay loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Berm

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Early November	Early April	22
Corn, silage	Early May	Early September	22

C. LAND APPLICATION AREA FIELDS AND PARCELS

Field name	Cropable acres	Total harvests	Parcel number
1	37	2	0063-0050-00110000
2	34	2	0063-0050-00280000
3	6	2	0063-0050-00280000
4	22	2	0063-0040-00030000
Land application area totals	99	8	

NUTRIENT BUDGET

A. NUTRIENT BUDGET FOR CROP: 1 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer)	2	75.0	10.9	99.6	150.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	40.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer)	1	65.0	9.5	86.3	65.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	40.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.0	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	215.0	31.3	285.5
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	222.0	31.3	285.5
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	62.0	5.7	152.7
Applied to removal ratio	1.39	1.22	2.15

Fresh water applied: 1.34 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 1 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)

NUTRIENT BUDGET FOR CROP (CONTINUED): 1 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Pre-irrigation prior to planting (with fertilizer)	1	125.0	18.2	166.0	125.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	42.0
	0.0	0.0	0.0	

In season irrigation (no fertilizer)	5	0.0	0.0	0.0	0.1
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	36.0
	0.0	0.0	0.0	

In season irrigation (with fertilizer)	2	100.0	14.6	132.8	200.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	36.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	325.0	47.4	431.6
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	332.1	47.4	431.6
Potential crop nutrient removal	244.0	45.8	201.3
Nutrient balance	88.1	1.7	230.3
Applied to removal ratio	1.36	1.04	2.14

Fresh water applied: 3.28 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 2 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)

NUTRIENT BUDGET FOR CROP (CONTINUED): 2 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer)	2	75.0	10.9	99.6	150.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	40.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer)	1	65.0	9.5	86.3	65.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	40.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.0	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	215.0	31.3	285.5
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	222.0	31.3	285.5
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	62.0	5.7	152.7
Applied to removal ratio	1.39	1.22	2.15

Fresh water applied: 1.46 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 2 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Pre-irrigation prior to planting (with fertilizer)	1	125.0	18.2	166.0	125.0
Nutrient source: Retention pond (lagoon)		50%	80%	80%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	40.0
	0.0	0.0	0.0	

NUTRIENT BUDGET FOR CROP (CONTINUED): 2 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	5	0.0 0%	0.0 0%	0.0 0%	0.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	34.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	100.0 50%	14.6 80%	133.8 80%	200.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	34.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	325.0	47.4	433.6
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	332.1	47.4	433.6
Potential crop nutrient removal	244.0	45.8	201.3
Nutrient balance	88.1	1.7	232.3
Applied to removal ratio	1.36	1.04	2.15

Fresh water applied: 3.38 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 3 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	1	0.0 0%	0.0 0%	0.0 0%	0.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	7.0
	0.0	0.0	0.0	

NUTRIENT BUDGET FOR CROP (CONTINUED): 3 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	100.0 50%	14.6 80%	133.8 80%	200.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	7.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.0	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	200.0	29.2	267.6
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	207.0	29.2	267.6
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	47.0	3.6	134.8
Applied to removal ratio	1.29	1.14	2.02

Fresh water applied: 1.45 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 3 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Pre-irrigation prior to planting (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	1	125.0 50%	18.2 80%	166.0 80%	125.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	7.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	5	0.0 0%	0.0 0%	0.0 0%	0.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	6.0
	0.0	0.0	0.0	

NUTRIENT BUDGET FOR CROP (CONTINUED): 3 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	100.0 50%	14.6 80%	133.8 80%	200.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	6.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	325.0	47.4	433.6
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	332.1	47.4	433.6
Potential crop nutrient removal	244.0	45.8	201.3
Nutrient balance	88.1	1.7	232.3
Applied to removal ratio	1.36	1.04	2.15

Fresh water applied: 3.37 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 4 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	1	0.0 0%	0.0 0%	0.0 0%	0.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	26.0
	0.0	0.0	0.0	

In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	100.0 50%	14.6 80%	133.8 80%	200.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	26.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.0	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	200.0	29.2	267.6
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	207.0	29.2	267.6
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	47.0	3.6	134.8
Applied to removal ratio	1.29	1.14	2.02

Fresh water applied: 1.47 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 4 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Pre-irrigation prior to planting (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	1	125.0 50%	18.2 80%	166.0 80%	125.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	26.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	5	0.0 0%	0.0 0%	0.0 0%	0.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	22.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	100.0 50%	14.6 80%	133.8 80%	200.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
CCID	0.0	0.0	0.0	22.0
	0.0	0.0	0.0	

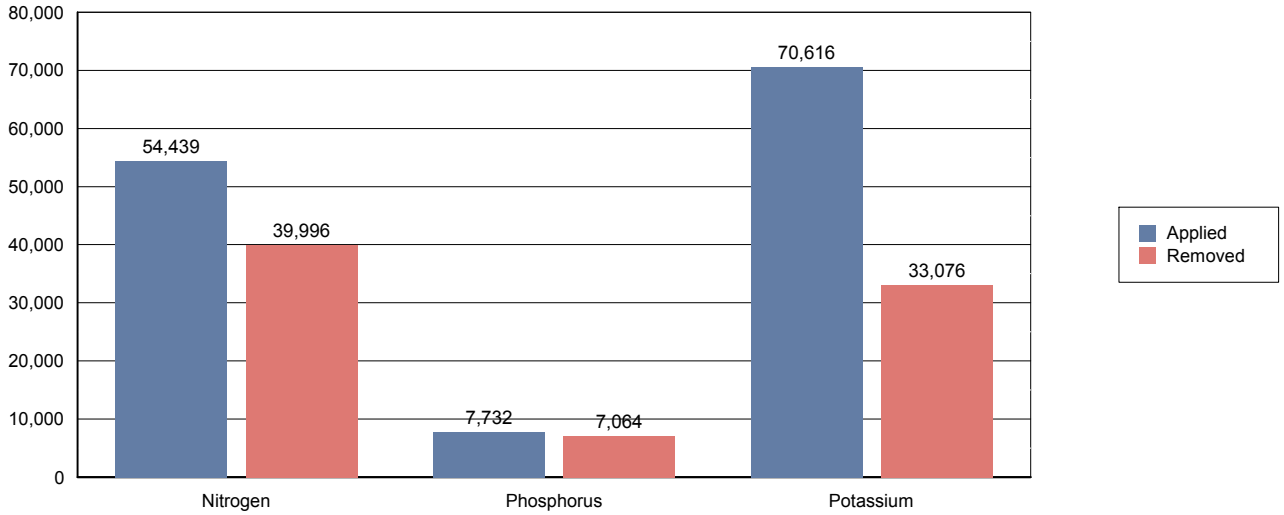
	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0

Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	325.0	47.4	433.6
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	332.1	47.4	433.6
Potential crop nutrient removal	244.0	45.8	201.3
Nutrient balance	88.1	1.7	232.3
Applied to removal ratio	1.36	1.04	2.15

Fresh water applied: 3.38 *feet* Total harvests: 1

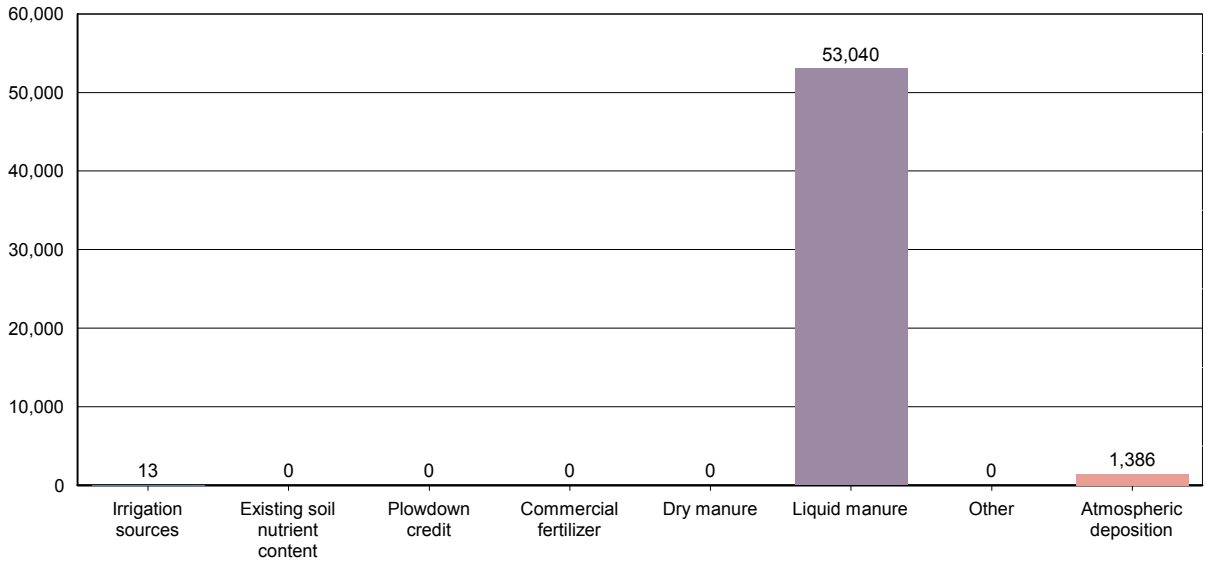
NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

A. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL POTENTIAL



	Total N (lbs)	Total P (lbs)	Total K (lbs)
Irrigation sources	12.8	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	53,040.0	7,732.5	70,615.7
Other	0.0	0.0	0.0
Atmospheric deposition	1,386.0		
Nutrients applied to all crops	54,438.8	7,732.5	70,615.7
Potential crop nutrient removal	39,996.0	7,063.7	33,075.9
Nutrient balance	14,442.8	668.9	37,539.8
Applied to removal ratio	1.36	1.09	2.13

B. POUNDS OF NITROGEN APPLIED BY NUTRIENT SOURCE



	Total N (lbs)	Total P (lbs)	Total K (lbs)
Irrigation sources	12.8	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	53,040.0	7,732.5	70,615.7
Other	0.0	0.0	0.0
Atmospheric deposition	1,386.0		
Nutrients applied to all crops	54,438.8	7,732.5	70,615.7
Potential crop nutrient removal	39,996.0	7,063.7	33,075.9
Nutrient balance	14,442.8	668.9	37,539.8
Applied to removal ratio	1.36	1.09	2.13

NUTRIENT BALANCE

A. WHOLE FARM BALANCE

	Total N (lbs)	Total P (lbs)	Total K (lbs)
Nutrients in storage from herd*			
Daily gross	1,628.2	269.6	760.0
Annual gross	594,298.2	98,399.8	277,408.8
Net to pond storage after ammonia losses (30% loss applied)	336,273.0	79,641.0	231,174.0
Net to drylot storage after ammonia losses (30% loss applied)	79,735.8	18,758.8	61,291.1
Net in storage (30% loss applied)	416,008.8	98,399.8	292,465.1
Irrigation sources	12.8	0.0	0.0
Atmospheric deposition	1,386.0		
Imports	0.0	0.0	0.0
Exports	362,690.8	86,542.3	255,257.1
Potential crop nutrient removal	39,996.0	7,063.7	33,075.9
Nutrient balance	14,720.8	4,793.9	4,132.1
Nutrient balance ratio	1.37	1.68	1.12

* Potassium excretion from milk cows and dry cows only.

SAMPLING AND ANALYSIS PLAN

A. MANURE SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Annually	Annual estimation for total manure dry weight applied to each field will be quantified using the following: Dry weight applied from a source to a crop per application event = weight applied * (1 - (percent moisture / 100)) Dry weight applied to crop per application event = sum of dry weights applied from each source Dry weight applied to a crop = sum of dry weights applied during each application Dry weight applied to a field = sum of dry weights applied to each crop Annual estimation for total manure dry weight exported will be quantified using the following: Dry weight exported from a source per event = weight exported * (1 - (percent moisture / 100)) Dry weight exported per event = sum of dry weights exported from each source Dry weight exported to any offsite destination = sum of dry weights exported per event	Corral solids Settling basin solids	Total dry weight (tons) manure applied annually to each land application area, and total dry weight (tons) manure exported offsite annually	None required

A. MANURE SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Twice per year	For each manure source, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Corral solids Settling basin solids	None required	Total nitrogen, total phosphorus, total potassium, and percent moisture
Once every two years (biennially)	For each manure source, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Corral solids Settling basin solids	None required	General minerals, including: calcium, magnesium, sodium, sulfate, chloride Fixed solids (ash)
Each application to each land application area	For each applied manure source, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For each applied manure source, a scaled weight by truckload will be recorded.	Corral solids Settling basin solids	Date applied and total weight (tons) applied	Percent moisture

A. MANURE SAMPLING AND ANALYSIS PLAN (CONTINUED)

Frequency	Sampling Methods	Source	Minimum data collection requirements	
			Field Analytes	Lab Analytes
Each offsite export of manure	For each manure source exported, a composite sample "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For each manure source exported, a scaled weight by truckload will be recorded.	Corral solids Settling basin solids	Date exported and total weight (tons) exported	Percent moisture

B. PROCESS WASTEWATER SAMPLING AND ANALYSIS PLAN

Frequency	Sampling Methods	Source	Minimum data collection requirements	
			Field Analytes	Lab Analytes
Anually	A composite or grab sample prior to blending with irrigation water per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	WWS	None required	pH, total dissolved solids, electrical conductivity, nitrate-nitrogen, ammonion-nitrogen, total Kjeldahl nitrogen, total phosphorus, and total potassium
Once every two years (biennially)	For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	WWS	None required	General minerals, including: calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride

B. PROCESS WASTEWATER SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Each application	For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	WWS	Date applied and volume (gallons or acre-inches) applied	None required
Quarterly during one application event	For field measurement: For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For laboratory analyses: For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	WWS	Date applied and electrical conductivity	Nitrate-nitrogen (only when pond is aerated), un-ionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, total potassium, and total dissolved solids

C. SOIL SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes

C. SOIL SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Once every five years for each land application area (may be distributed over a 5-year period by sampling 20% of the land application areas annually)	For each field, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected.	See LAA Table	None required	Soluble phosphorus
Fall pre-plant for each crop	For each field, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected.	See LAA Table	None required	0 to 1 foot: Electrical conductivity, nitrate-nitrogen, soluble phosphorus, potassium, and organic matter 1 to 2 feet: Nitrate-nitrogen
Spring pre-plant for each crop	For each field, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected.	See LAA Table	None required	0 to 1 foot: Nitrate-nitrogen and organic matter 1 to 2 foot: Nitrate-nitrogen

D. PLANT TISSUE SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Each crop harvest from each land application area	For each field and crop, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected. For each field and crop, a scaled weight by truckload will be recorded.	See LAA Table	Date harvested and total weight (tons) of harvested material removed from each land application area	Percent wet weight of harvested plant removed Laboratory analyses for total nitrogen, total phosphorus, total potassium (expressed on a dry weight basis), fixed solids (ash), and percent moisture

D. PLANT TISSUE SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Mid-season, as necessary to assess need for additional nitrogen fertilizer during the growing season (only required if Discharger wants to add fertilizer in excess of 1.4 times the nitrogen expected to be removed by the harvested portion of the crop)	For each field and crop, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	See LAA Table	None required	Total nitrogen, expressed on a dry weight basis

E. IRRIGATION WATER SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Each fresh water irrigation event for each land application area	CCID- flow rate multiplied by runtime Irrigation Well- flow rate multiplied by runtime	CCID Irrigation Well	Date applied and volume (gallons or acre-inches) applied	None required
One irrigation event during each irrigation season during actual irrigation events – for each irrigation water source (well and canal)	For each irrigation source, a grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. In lieu of sampling the irrigation water, the Discharger may provide equivalent data from the local irrigation district.	CCID Irrigation Well	None required	Electrical conductivity, total dissolved solids, and total nitrogen

F. GROUNDWATER MONITORING SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes

F. GROUNDWATER MONITORING SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Annually	For each subsurface (tile) drainage system discharge point, a grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Tile drain under Field 2 discharged into CCID Drain	Electrical condictivity and ammonium-nitrogen	Nitrate-nitrogen, total phosphorus, and total dissolved solids. If field measurement indicates the presence of ammonium-nitrogen, the Discharger shall collect a sample for laboratory analysis of ammonium-nitrogen.
Annually	For each domestic and agricultural supply well, a grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	DW 1 DW 2 DW 3 Irrigation Well	Electrical conductivity and ammonion-nitrogen	Nitrate-nitrogen. If field measurement indicates the presence of ammonium-nitrogen, the Discharger shall collect a sample for laboratory analysis of ammonium-nitrogen.
Every five years (may be distributed over a 5-year period by sampling 20% of the wells annually)	For each domestic and agricultural supply well, a grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	DW 1 DW 2 DW 3 Irrigation Well	None required	General minerals, including: calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, chloride Total dissolved solids

NUTRIENT MANAGEMENT PLAN REVIEW

A. NUTRIENT MANAGEMENT PLAN REVIEW

Person who created the NMP: Cordeiro, Kristy Rocha *See above for contact information.*
Date the NMP was drafted: 03/06/2020
Person who approved the final NMP: Cordeiro, Kristy Rocha *See above for contact information.*
Date of NMP implementation: 04/01/2020

ATTACHED MAP AND DOCUMENTATION REFERENCES

The following list, based upon user selections and data entries, describes the minimum required attachments that must be submitted with the Nutrient Management Plan for the reporting schedule of 'July 1, 2009'.

A. PRELIMINARY DAIRY FACILITY ASSESSMENT

The NMP will include the initial Preliminary Dairy Facility Assessment (Attachment A) and the annual updates as required by Monitoring and Reporting Program No. R5-2007-0035. Copies of these assessments shall be maintained for 10 years.

B. LAND AREA MAP(S)

Identify each land application area (under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) on a single published base map

1. A field identification system (Assessor's Parcel Number; land application area; crops grown); indication if each land application is owned, rented, or leased by the Discharger; indication of what type of waste is applied (solid manure only, wastewater only, or both solid manure and wastewater); drainage flow direction in each field, nearby surface waters, and storm water discharge points; tailwater and storm water drainage controls; subsurface (tile) drainage systems (including discharge points and lateral extent); irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water and tailwater to surface water from the field.

2. Process wastewater conveyance structures, discharge points and discharge mixing points with irrigation water supplies; pumping facilities; flow meter locations; drainage ditches and canals, culverts, draining controls (berms, levees, etc.), and drainage easements.

Application area map reference number: Fig 3

Identify each field under control of the Discharger and within five miles of the dairy where neither process wastewater nor manure is applied. Each field shall be identified on a single published base map at an appropriate scale by the following:

1. Assessor's Parcel Number.
2. Total acreage.
3. Information on who owns or leases the field

Non-application area map reference number: Not applicable

Setbacks, Buffers, and Other Alternatives to Protect Surface Water (see Technical Standard VII):

1. Identify all potential surface waters or conduits to surface water that are within 100 feet of any land application area.
2. For each land application area that is within 100 feet of a surface water or a conduit to surface water, identify the setback, vegetated buffer, or other alternative practice that will be implemented to protect surface water (Technical Standard VII).

Setbacks and buffers map reference number: Fig 2-3

C. PROCESS WASTEWATER WRITTEN AGREEMENTS

Provide copies of written agreements with third parties that receive process wastewater for their own use from the Discharger's dairy (Technical Standards V.A.1 and V.A.3).

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

SAMPLING AND ANALYSIS PLAN CERTIFICATION

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Martins View Jersey Dairy

Physical address of dairy:

1369 S Hunt RD	Gustine	Merced	95322
Physical Address Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

B. DOCUMENTATION OF QUALIFICATIONS AND PLAN DEVELOPMENT

I certify that I meet the requirements as a certified specialist in developing nutrient management plans as described in Attachment C of Waste Discharge Requirements General Order No. R5-2007-0035 and that I prepared the Sampling and Analysis plan.

Technical Service Provider
TITLE/QUALIFICATIONS OF CERTIFIED NUTRIENT MANAGEMENT SPECIALIST

SIGNATURE OF TRAINED PROFESSIONAL — DATE: 3/6/2020

Kristy Rocha Cordeiro
PRINT OR TYPE NAME

P.O. Box 116; Newman, CA 95360
MAILING ADDRESS

(707) 548-9214
PHONE NUMBER

C. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE OF OWNER OF FACILITY	SIGNATURE OF OPERATOR OF FACILITY
Antonio L Martins	
PRINT OR TYPE NAME	PRINT OR TYPE NAME
3-10-2020	3-10-2020
DATE	DATE

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

NUTRIENT BUDGET CERTIFICATION

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Martins View Jersey Dairy

Physical address of dairy:

1369 S Hunt RD	Gustine	Merced	95322
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

B. DOCUMENTATION OF QUALIFICATIONS AND PLAN DEVELOPMENT

I certify that I meet the requirements as a certified specialist in developing nutrient management plans as described in Attachment C of Waste Discharge Requirements General Order No. R5-2007-0035 and that I prepared the Nutrient Budget plan.

Technical Service Provider
TITLE/QUALIFICATIONS OF CERTIFIED NUTRIENT MANAGEMENT SPECIALIST

SIGNATURE OF TRAINED PROFESSIONAL

3/6/2020
DATE

Kristy Rocha Cordeiro
PRINT OR TYPE NAME

P.O. Box 116; Newman, CA 95360
MAILING ADDRESS

(707) 548-9214
PHONE NUMBER

C. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Antonio Martins
SIGNATURE OF OWNER OF FACILITY

Antonio Martins
SIGNATURE OF OPERATOR OF FACILITY

Antonio L Martins
PRINT OR TYPE NAME

PRINT OR TYPE NAME

3-10-2020
DATE

3-10-2020
DATE

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

STATEMENTS OF COMPLETION

Waste Discharge Requirements General Order No. R5-2007-0035 for Existing Milk Cow Dairies (General Order) requires owners and operators of existing milk cow dairies (Dischargers) to develop and implement a Nutrient Management Plan for their land application areas (land under control of the Discharger, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient cycling). The Discharger is required to maintain the NMP at the dairy, make the NMP available to Central Valley Water Board staff during their inspections, and submit the NMP to the Executive Officer upon request.

The General Order requires the Discharger to submit two Statements of Completion during development of the NMP. The Discharger may use this form to comply with the General Order requirement to submit one or both of these Statements of Completion. Parts A and E must be completed for each Statement of Completion. Parts B, C and D are to be completed for the Statements of Completion due by 1 July 2008, 31 December 2008 and 1 July 2009, respectively. Both the owner and the operator of the dairy must sign this form in Part E below.

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Martins View Jersey Dairy

1369 S Hunt RD	Gustine	Merced	95322
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Operator name: _____ Telephone no.: _____ (Landline) _____ (Cellular)

Mailing Address Number and Street	City	State	Zip Code

Legal owner name: Martins, Antonio L Telephone no.: _____ (Landline) (209) 678-2208 (Cellular)

1000 Red Lion CT	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

B. STATEMENT OF COMPLETION DUE 1 JULY 2008

I have completed the following items of the Nutrient Management Plan (check the boxes of completed sections), which are due 1 July 2008:

☒ **Item I.A.1 Land Application Information**
Identification of land used for manure application and needed information on a facility map.

☒ **Item I.B Land Application Information**
Information list for information provided on map above.

☒ **Item I.C Land Application Information**
Copies of written third-party process wastewater agreements.

☒ **Item I.D Land Application Information**
Identification of fields under control of the discharger within five miles of the dairy where neither process wastewater nor manure is applied.

☒ **Item II Sampling and Analysis Plan**

☒ **Item IV Setbacks, Buffers, and Other Alternatives to Protect Surface Water**
Identification of all potential surface waters or conduits to surface waters within 100 feet of land application areas and appropriate protection.

☒ **Item VI Record-Keeping Requirements**
Identification of monitoring records that will be maintained as required in the production and land application areas.

Has Item II (Sampling and Analysis Plan) of the Nutrient Management Plan been certified by a Certified Nutrient Management Specialist as required in the General Order?

☒ Yes ☐ No

C. STATEMENT OF COMPLETION DUE 31 DECEMBER 2008

I have completed the following items of the Nutrient Management Plan (check the boxes of completed sections), which are due 31 December 2008:

☒ **Item V Field Risk Assessment**
Evaluation of the effectiveness of management practices used to control the discharge of waste constituents from land application areas by assessing the water quality monitoring results of discharges of manure, process wastewater, tailwater, subsurface (tile) drainage, or storm water from the land application areas.

D. STATEMENT OF COMPLETION DUE 1 JULY 2009

I have completed the following items of the Nutrient Management Plan (check the boxes of completed sections), which are due 1 July 2009:

☒ **Item I.A.2 Land Application Area Information**
Identification of process wastewater conveyance, mixing and drainage information for each land application area on a facility map.

☒ **Item III Nutrient Budget**
Established planned rates of nutrient applications by crop based on nutrient monitoring results for each land application area.

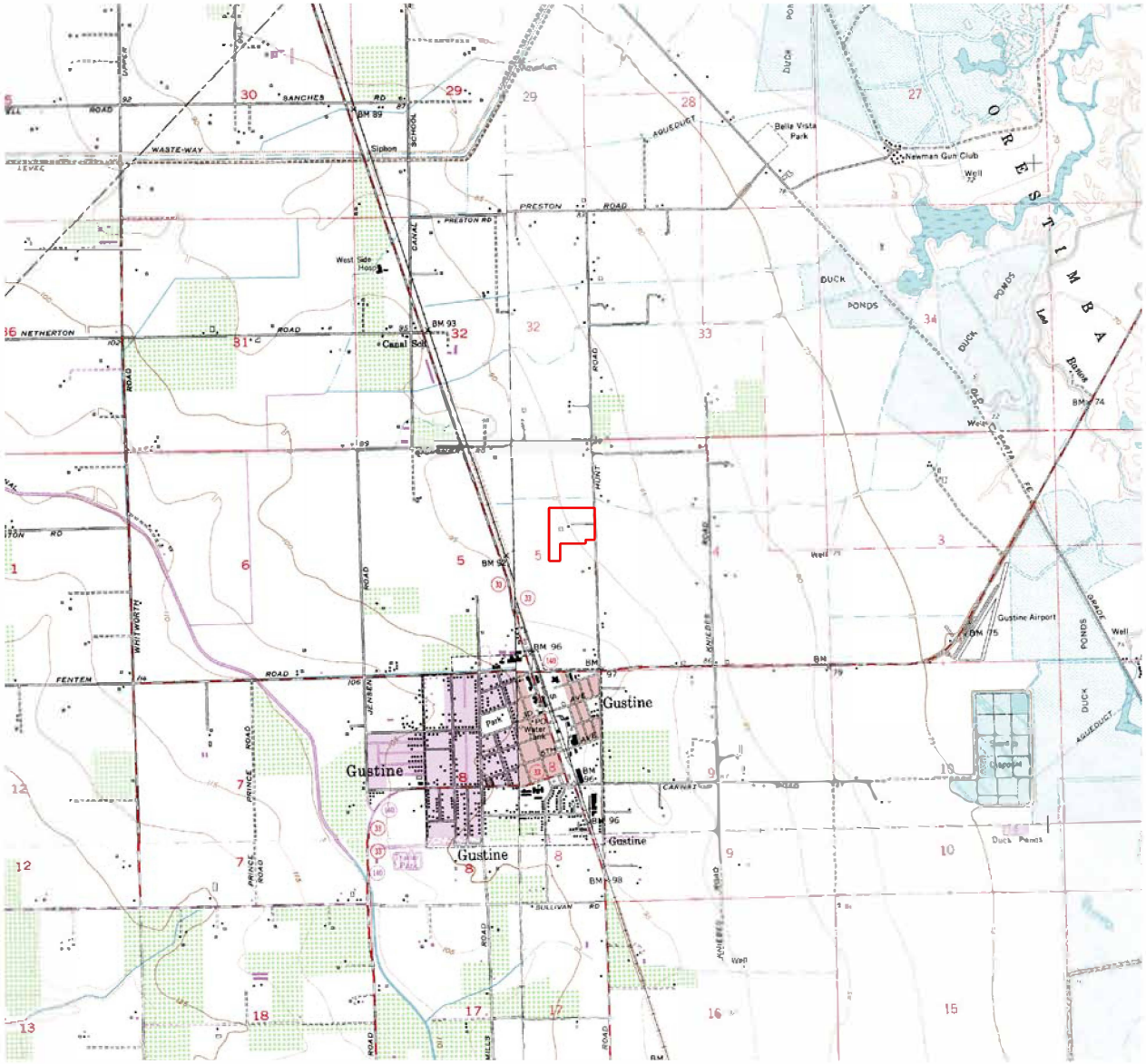
Has Item III (Nutrient Budget) of the Nutrient Management Plan been certified by a Certified Nutrient Management Specialist as required in the General Order?

☒ Yes ☐ No

E. CERTIFICATION STATEMENT

I certify under penalty of law that I have completed the items of the Nutrient Management Plan that are checked in Parts B, C and/or D above for the dairy identified in Part A above and that the appropriate certified nutrient management specialist has certified the items requiring such certification as noted in part B and/or D above and that I have personally examined and am familiar with the information submitted in Parts A, B, C and D of this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Antonio Martins	Antonio Martins
SIGNATURE OF OWNER OF FACILITY	SIGNATURE OF OPERATOR OF FACILITY
Antonio L Martins	
PRINT OR TYPE NAME	PRINT OR TYPE NAME
3-10-2020	3-10-2020
DATE	DATE



LEGEND

Facility Boundary

KR CORDEIRO

PO Box 116
Newman, CA 95360

SCALE:

0 4,000 8,000

APPROXIMATE SCALE IN FEET

MARTINS VIEW JERSEY DAIRY
MERCED COUNTY, CA

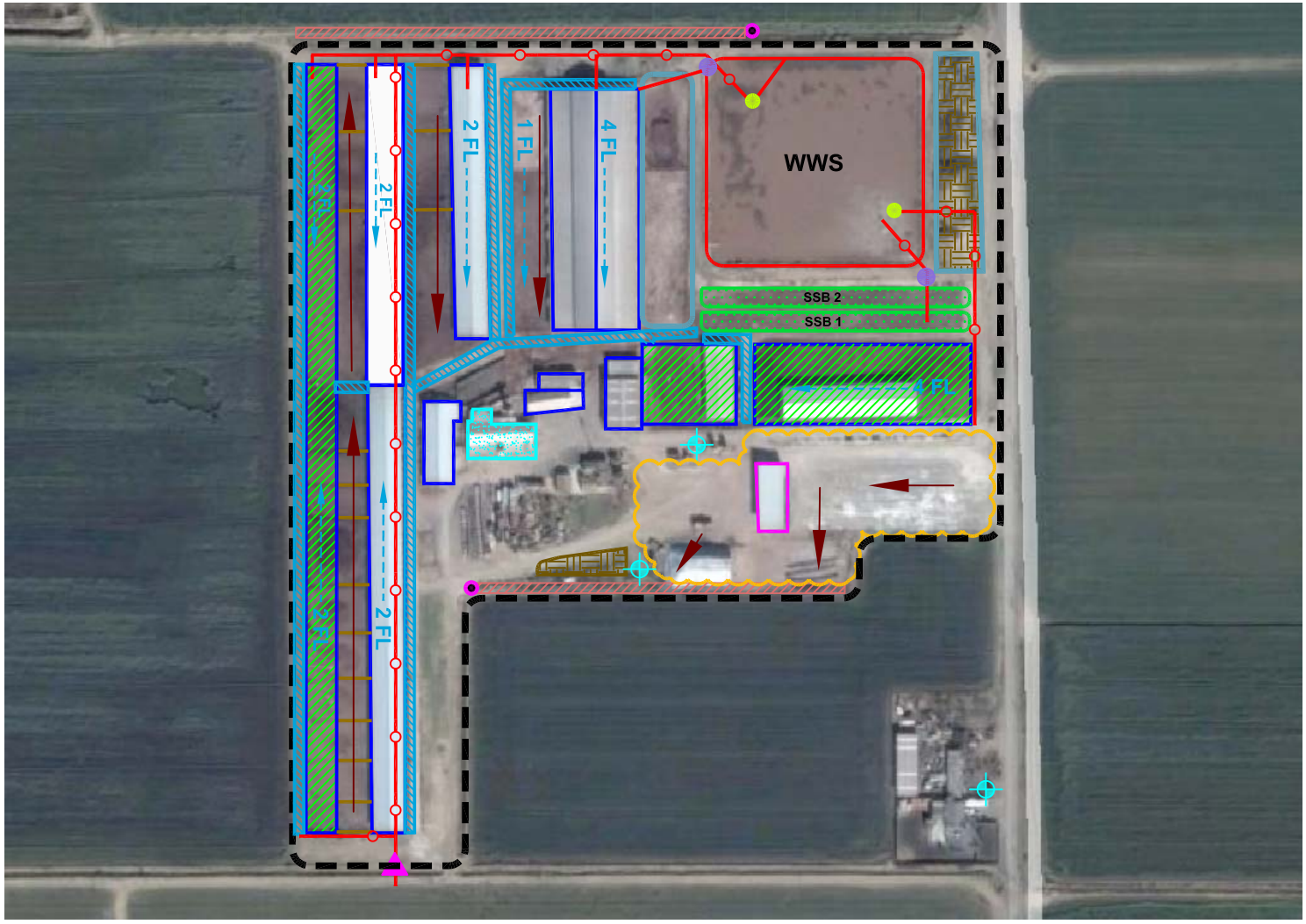
FIGURE 1
TOPOGRAPHIC MAP

PROJECT NO.	DATE:	DRAWN BY:	APP. BY:
FRA-00	5/12/17	SB	KR

Martin Brothers Dairy 2

LEGEND

- Milk Barn
- Waste Water Storage
- Animal Housing/Shade
- Proposed Animal Housing
- Commodity Barn
- Corral
- Solids Settling Basin
- Soild Manure Stacking
- Proposed Manure Stacking Pad
- Flush Lane
- Earthen Ditch (TW)
- Wastewater/Flush Pipeline
- 3 Flush Lane
- Facility Boundary
- Stormwater Flow
- Drain
- Domestic Well
- Mobile Pump
- Valve
- Floating Pump
- Stationary Pump
- Feed Storage



KR CORDEIRO
PO Box 116
Newman, CA 95360

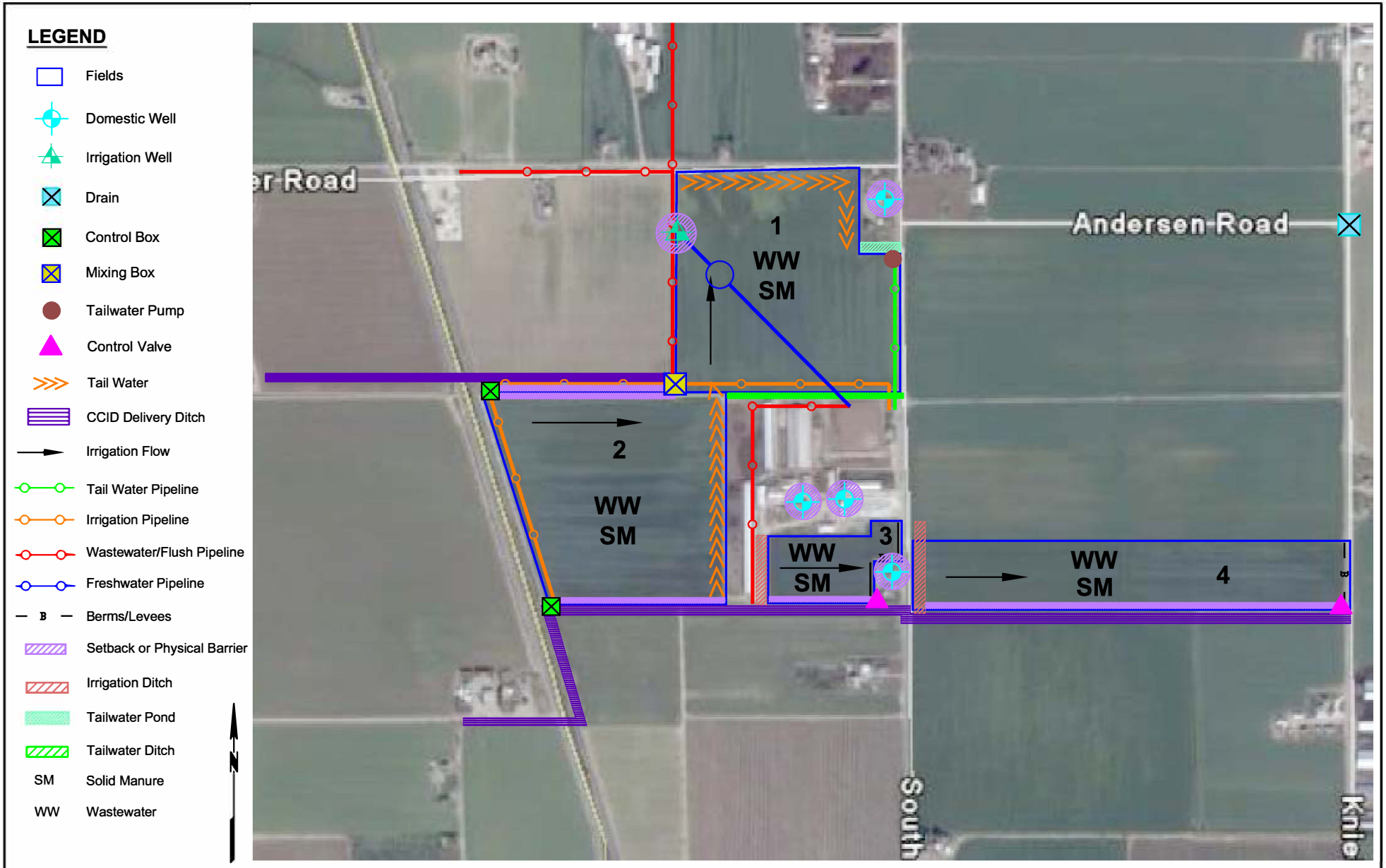
SCALE:
0 250 500
APPROXIMATE SCALE IN FEET

MARTINS VIEW JERSEY DAIRY
MERCED COUNTY, CA

PROJECT NO.	DATE:	DRAWN BY:	APP. BY:
FRA-00	3/12/20	SB	KR

FIGURE 2
DAIRY FACILITY

Martins View Jersey



KR CORDEIRO
PO Box 116
Newman, CA 95360

SCALE:
0 800 1600
APPROXIMATE SCALE IN FEET

MARTINS VIEW JERSEY DAIRY
MERCED COUNTY, CA

FIGURE 3
DAIRY FIELDS

PROJECT NO.	DATE:	DRAWN BY:	APP. BY:
FRA-00	5/16/17	SB	KR

Martin Brothers Dairy 2

KR CORDEIRO

LAND APPLICATION AREA FIELD INFORMATION ATTACHMENT

DAIRY NAME: MARTINS VIEW JERSEY DAIRY
DAIRY ADDRESS: 1369 S HUNT ROAD, GUSTINE, CA 95322

APN	FIELD ID	ACRES	CROPS GROWN	OWNED BY DAIRY OWNER	LEASED BY DAIRY OPERATOR	LEASED BY OTHERS	NUTRIENTS APPLIED
0063-0050-0011-0000	1	36.9	Oats/Corn	X			WW
0063-0050-0028-0000	2	34	Oats/Corn	X			WW
0063-0050-0028-0000	3	6.4	Oats/Corn	X			WW
0063-0040-0003-0000	4	22.2	Oats/Corn	X			WW

Waste Management Plan Report
General Order No. R5-2007-0035, Attachment B
July 1, 2010 deadline

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: Martins View Jersey Dairy

Physical address of dairy:

1369 S Hunt RD	Gustine	Merced	95322
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

TRS Data and Coordinates:

8S	9E	4	Mt. Diablo	37° 16' 10.38" N	120° 59' 49.24" W
Township (T_)	Range (R_)	Section (S_)	Baseline meridian	Latitude (N)	Longitude (W)

Date facility was originally placed in operation: 01/01/1941

Regional Water Quality Control Board Basin Plan designation: San Joaquin River Basin

County Assessor Parcel Number(s) for dairy facility:

0063-0050-0028-0000

B. OPERATOR NAME: Martins, Antonio L Telephone no.: Landline (209) 678-2208 Cellular

1000 Red Lion CT	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

Operator should receive Regional Board correspondence (check): [X] Yes [ ] No

C. LEGAL OWNER NAME: Martins, Antonio L Telephone no.: Landline (209) 678-2208 Cellular

1000 Red Lion CT	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

Owner should receive Regional Board correspondence (check): [X] Yes [ ] No

D. CONTACT NAME: Sousa, Manny Telephone no.: Landline (209) 238-3151 Cellular

Title: Professional Engineer

P.O. Box 1613	Oakdale	CA	95361
Mailing Address Number and Street	City	State	Zip Code

CONTACT NAME: Cordeiro, Kristy Rocha Telephone no.: Landline (707) 548-9214 Cellular

Title: Technical Service Provider

P.O. Box 116	Newman	CA	95360
Mailing Address Number and Street	City	State	Zip Code

Waste Management Plan Report
General Order No. R5-2007-0035, Attachment B
July 1, 2010 deadline

HERD AND MILKING EQUIPMENT

A. HERD AND MILKING

The milk cow dairy is currently regulated under individual Waste Discharge Requirements.

Total number of milk and dry cows combined as a baseline value in response to the Report of Waste Discharge (ROWD) request of October, 2005:

1,775 milk and dry cows combined (regulatory review is required for any expansion)

Type of Animal	Present Count	Maximum Count	Daily Flush Hours	Avg Live Weight (lbs)
Milk Cows	660	1,500	22	1,000
Dry Cows	30	275	18	1,050
Bred Heifers (15-24 mo.)	350	375	18	750
Heifers (7-14 mo.)	0	300	18	500
Calves (4-6 mo.)	0	0	0	
Calves (0-3 mo.)	0	0	0	

Predominant milk cow breed: Jersey

Average milk production: 60 pounds per cow per day

Average number of milk cows per string sent to the milkbarn: 214 milk cows per string

Number of milkings per day: 2.0 milkings per day

Number of times milk tank is emptied/filled each day: 2.0 per day

Number of hours spent milking each day: 20.0 hours per day

B. MILKBARN EQUIPMENT AND FLOOR WASH

Bulk tank wash and sanitizing: 3.0 run cycles/wash

Bulk tank wash vat volume: 50 gallons/cycle

Bulk tank wash wastewater: 300.0 gallons/day

Pipeline wash and sanitizing: 3.0 run cycles/wash

Pipeline wash vat volume: 150 gallons/cycle

Pipeline wash wastewater: 900.0 gallons/day

Reused / recycled water is the source of parlor floor wash water: [X] Yes [ ] No

Milkbarn / parlor floor wash volume: 7,000 gallons/day

Plate coolers type: Mechanically/Air Cooled

Plate coolers volume: 0 gallons/day

Vacuum pumps / air compressors / chillers type: Mechanically/Air Cooled

Vacuum pumps / air compressors / chillers volume: 0 gallons/day

Milkbarn and equipment wastewater volume generated daily: 8,200 gallons/day

C. OTHER WATER USES

Reused/recycled water is the source of herd drinking water: [ ] Yes [X] No

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Bred Heifers (7-14 mo.)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number of cows drinking from reusable water:	0 *of 660*	0 *of 30*	0 *of 350*	0 *of 0*	0 *of 0*	0 *of 0*
Gallons per head per day:	0	0	0	0	0	0

Total reusable water consumed by herd: 0 gallons/day

Reused/recycled water is the source of sprinkler pen water: [X] Yes [ ] No

Number of sprinklers in the holding pen: 69 sprinklers

Duration of each sprinkler cycle: 0.1 minutes

Number of sprinkler pen runs/milking: 0 cycles/milking

Flow rate for each sprinkler head: 0.1 gallons/minute

Total sprinkler pen wastewater volume: 0 gallons/day

Total fresh water used in manure flush lane system(s): 0 gallons/day

D. MISCELLANEOUS EQUIPMENT

No miscellaneous equipment entered.

E. MILKBARN AND EQUIPMENT SUMMARY

Number of days in storage period: 120 days

Water available for reuse/recycle: 0 gallons/day

Recycled water reused: 7,000 gallons/day

Recycled water leaving system: 0 gallons/day

Reusable water balance: 0 gallons/day

Volume of milkbarn and equipment wastewater generated for storage period: 984,000 gallons/storage period

MANURE AND BEDDING SOLIDS

A. IMPORTED AND FACILITY GENERATED BEDDING

Bedding Type	Imported or Generated (tons)	Density (lbs/cu. ft.)	Applied Separation Efficiency (default)	Solids to Pond (cu. ft./period)
Almond shells	69	20.0	85%	1,032
Facility generated bedding	116	40.0	50%	2,903
			Total:	3,935

B. SOLIDS SEPARATION PROCESS

Combined manure solids separation efficiency (weight basis): 40 %

Description of all solids separation equipment used in flushed lane manure management systems:

Solids Settling Basins

C. MANURE AND BEDDING SOLIDS SUMMARY

	cubic feet		gallons	
	day	storage period	day	storage period
Manure generated by the herd (pre-separation):	4,082.55	489,906	30,539.61	3,664,753
Manure generated by the herd sent to pond(s):	3,116.33	373,959	23,311.74	2,797,409
Manure generated by the herd sent to dry lot(s):	484.29	58,115	3,622.77	434,732
Manure solids (herd) removed by separation:	233.30	27,996	1,745.22	209,426
Liquid component in separated solids not send to pond(s):	248.63	29,836	1,859.89	223,186
Imported and facility generated bedding sent to pond(s):	32.79	3,935	245.27	29,432
Total manure and bedding sent to pond(s):	3,149.11	377,894	23,557.01	2,826,841
Residual manure solids and bedding sent to pond(s) w/factor:	191.37	22,964	1,431.55	171,785
	cubic feet per year		gallons per year	
Residual manure solids and bedding sent to pond(s) w/factor:	69,850		522,514	

RAINFALL AND RUNOFF

A. RAINFALL ESTIMATES

Rainfall station nearest the facility: Newman

25 year/24 hour storm event (default NOAA Atlas 2, 1973): 2.50 inches/storage period

25 year/24 hour storm event (user-override): _____ inches/storage period

Storage period rainfall (default DWR climate data): 7.58 inches/storage period

Storage period rainfall (user-override): _____ inches/storage period

Flood zone: Zone X

B. IMPERVIOUS AREAS

Name	Surface Area (sq. ft.)	Quantity	25yr/24hr Storm Runoff Coefficient	Storage Period Runoff Coefficient	Runoff Destination
Barn 1 lane	17,600	1	0.97	0.50	Drains into pond(s).
Barn 3 feed lane	10,650	1	0.97	0.50	Drains into pond(s).
Barn 3 lane	6,650	1	0.97	0.50	Drains into pond(s).
Barn 4 lane	1,220	1	0.97	0.50	Drains into pond(s).
Between 1 & 2	2,196	1	0.97	0.50	Drains into pond(s).
CB Slab	1,900	1	0.97	0.50	Drains into pond(s).
Corral lane	3,520	1	0.97	0.50	Drains into pond(s).

Feed lane	10,300	1	0.97	0.50	Drains into pond(s).
MB Parking Area	5,029	1	0.97	0.50	Yard
MB slab	4,880	1	0.97	0.50	Drains into pond(s).
New Feed Pad Area	103,965	1	0.97	0.50	Drains into pond(s).
New MSA	28,000	1	0.97	0.50	Drains into pond(s).
New MSA	18,000	1	0.97	0.50	Drains into pond(s).
New transfer lane	900	1	0.97	0.50	Drains into pond(s).
Paved area	37,500	1	0.97	0.50	Drains into pond(s).
Paved feed area	14,625	1	0.97	0.50	Drains into pond(s).
Paved lane	1,792	1	0.97	0.50	Drains into pond(s).
Processing Pit	1,600	1	1.00	1.00	Drains into pond(s).
Transfer lane	6,301	1	0.97	0.50	Drains into pond(s).

Surface area that does not run off into pond(s): 5,029 sq. ft.

Surface area that runs off into pond(s): 271,599 sq. ft.

Total surface area: 276,628 sq. ft.

Runoff from normal storage period rainfall: 645,459 gallons/storage period

Runoff from normal storage period rainfall with 1.5 factor: 968,189 gallons/storage period

25 year/24 hour storm event runoff: 410,648 gallons/storage period

Total surface area runoff: 1,056,107 gallons/storage period

Total surface area runoff with 1.5 factor: 1,378,837 gallons/storage period

C. ROOF AREAS

Name	Surface Area (sq. ft.)	Quantity	Runoff Destination
Barn #1- FSB diverted	45,250	1	Field
Barn #2 FSB diverted	20,000	2	Field
Barn #3- FSB diverted	33,250	1	Field
Barn #4- Special Needs	5,732	1	Wastewater pond
Barn #5- FSB diverted	26,125	1	Field
Barn #6- FSB diverted	40,000	1	Field
Barn #7- FSB diverted	62,700	1	Field
Barn #8- Loafing Barn	18,900	1	Wastewater pond
Commodity Barn	3,800	1	Wastewater pond
Milkbarn	7,500	1	Yard
Milkbarn ext	150	1	Yard
Shop	1,260	1	Wastewater pond
Shop	3,750	1	Wastewater pond

Shop	1,100	1	Wastewater pond

Surface area that does not run off into pond(s): 254,975 sq. ft.

Surface area that runs off into pond(s): 34,542 sq. ft.

Total surface area: 289,517 sq. ft.

Runoff from normal storage period rainfall: 163,218 gallons/storage period

Runoff from normal storage period rainfall with 1.5 factor: 244,827 gallons/storage period

25 year/24 hour storm event runoff: 53,832 gallons/storage period

Total surface area runoff: 217,049 gallons/storage period

Total surface area runoff with 1.5 factor: 298,658 gallons/storage period

D. EARTHEN AREAS

Name	Surface Area (sq. ft.)	Quantity	25yr/24 Storm Coefficient	Storage Period Coefficient	Runoff Destination
Dairy Facility with Proposed Changes	254,024	1	0.35	0.20	Drains into pond(s).

Surface area that does not run off into pond(s): 0 sq. ft.

Surface area that runs off into pond(s): 254,024 sq. ft.

Total surface area: 254,024 sq. ft.

Runoff from normal storage period rainfall: 240,063 gallons/storage period

Runoff from normal storage period rainfall with 1.5 factor: 360,094 gallons/storage period

25 year/24 hour storm event runoff: 138,559 gallons/storage period

Total surface area runoff: 378,621 gallons/storage period

Total surface area runoff with 1.5 factor: 498,652 gallons/storage period

E. TAILWATER MANAGEMENT

No fields with tailwater entered.

LIQUID STORAGE

A. POND OR BASIN DESCRIPTION: SSB 1

Pond is rectangular in shape: [X] Yes [ ] No

Dimensions			
Earthen Length (EL):	405 ft.	Earthen Depth (ED):	4 ft.
Earthen Width (EW):	30 ft.	Side Slope (S):	0.0 ft. (h:1v)
Free Board (FB):	1 ft.	Dead Storage Loss (DS):	2.9 ft.

Calculations			
Liquid Length (LL):	405 ft.	Storage Volume Adjusted for Dead Storage Loss:	1,215 cu. ft.
Liquid Width (LW):	30 ft.		
Pond Surface Area:	12,150 sq. ft.	Pond Marker Elevation:	2.1 ft.
Storage Volume:	36,450 cu. ft.	Evaporation Volume:	76,233 gals/period
		Adjusted Surface Area:	12,150 sq. ft.

POND OR BASIN DESCRIPTION: SSB 2

Pond is rectangular in shape: [X] Yes [ ] No

Dimensions			
Earthen Length (EL):	405 ft.	Earthen Depth (ED):	4 ft.
Earthen Width (EW):	30 ft.	Side Slope (S):	0.0 ft. (h:1v)
Free Board (FB):	1 ft.	Dead Storage Loss (DS):	2.9 ft.

Calculations			
Liquid Length (LL):	405 ft.	Storage Volume Adjusted for Dead Storage Loss:	1,215 cu. ft.
Liquid Width (LW):	30 ft.		
Pond Surface Area:	12,150 sq. ft.	Pond Marker Elevation:	2.1 ft.
Storage Volume:	36,450 cu. ft.	Evaporation Volume:	76,233 gals/period
		Adjusted Surface Area:	12,150 sq. ft.

POND OR BASIN DESCRIPTION: WWS

Pond is rectangular in shape: [X] Yes [ ] No

Dimensions			
Earthen Length (EL):	315 ft.	Earthen Depth (ED):	15 ft.
Earthen Width (EW):	306 ft.	Side Slope (S):	1.8 ft. (h:1v)
Free Board (FB):	2 ft.	Dead Storage Loss (DS):	2.0 ft.

Calculations			
Liquid Length (LL):	308 ft.	Storage Volume Adjusted for Dead Storage Loss:	885,309 cu. ft.
Liquid Width (LW):	299 ft.		
Pond Surface Area:	96,390 sq. ft.	Pond Marker Elevation:	12.1 ft.
Storage Volume:	1,020,582 cu. ft.	Evaporation Volume:	570,776 gals/period
		Adjusted Surface Area:	90,971 sq. ft.

Potential storage losses (due to dead storage): 205,743.0 cubic feet - or - 1,539,064.5 gallons

Liquid storage surface area: 116,271 sq. ft.

Rainfall onto retention pond(s): 570,284 gallons/storage period

Rainfall runoff into retention pond(s): 1,048,739 gallons/storage period

Normal rainfall onto retention pond(s) with 1.5 factor: 855,426 gallons/storage period

Normal rainfall runoff into retention pond(s) with 1.5 factor: 1,573,109 gallons/storage period

Storage period evaporation (default): 13.42 inches/storage period

Storage period evaporation (user-override): _____ inches/storage period

Storage period evaporation volume: 723,242 gallons/storage period

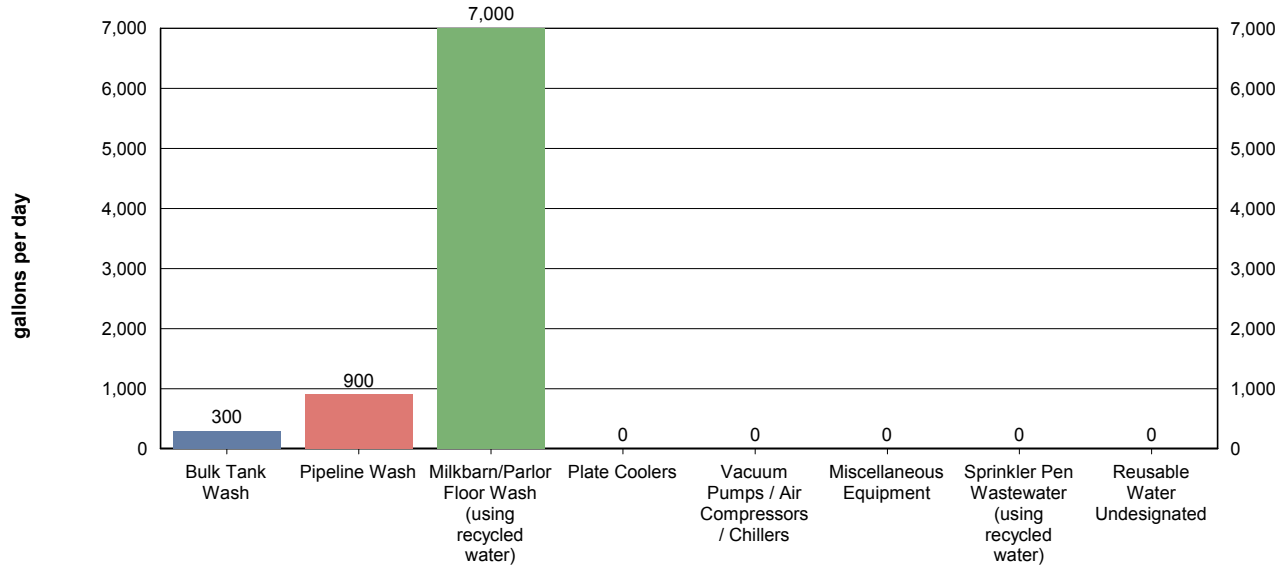
Manure and bedding sent to pond(s): 2,826,841 gallons/storage period

Milkbarn water sent to pond(s): 984,000 gallons/storage period

Fresh flush water for storage period: 0 gallons/storage period

CHARTS

A. MILKBARN WASTEWATER SENT TO POND(S)

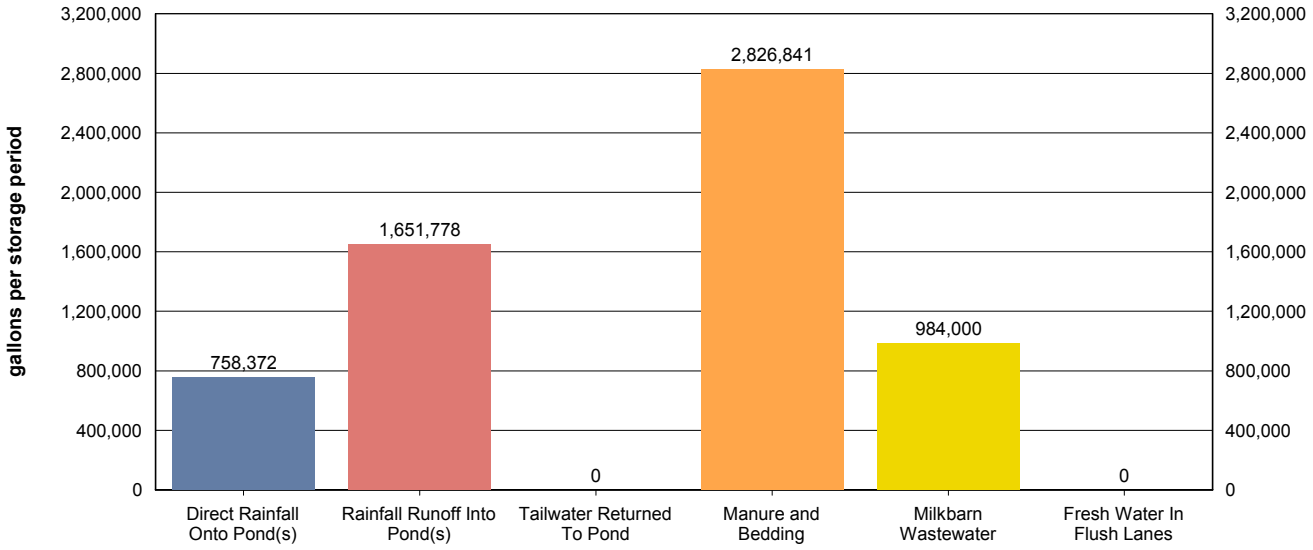


Values shown in chart are approximate values per day.

Total milkbarn wastewater generated daily: 8,200 gallons/day

Total milkbarn wastewater generated per period: 984,000 gallons/storage period

B. PROCESS WASTEWATER (NORMAL PRECIPITATION)

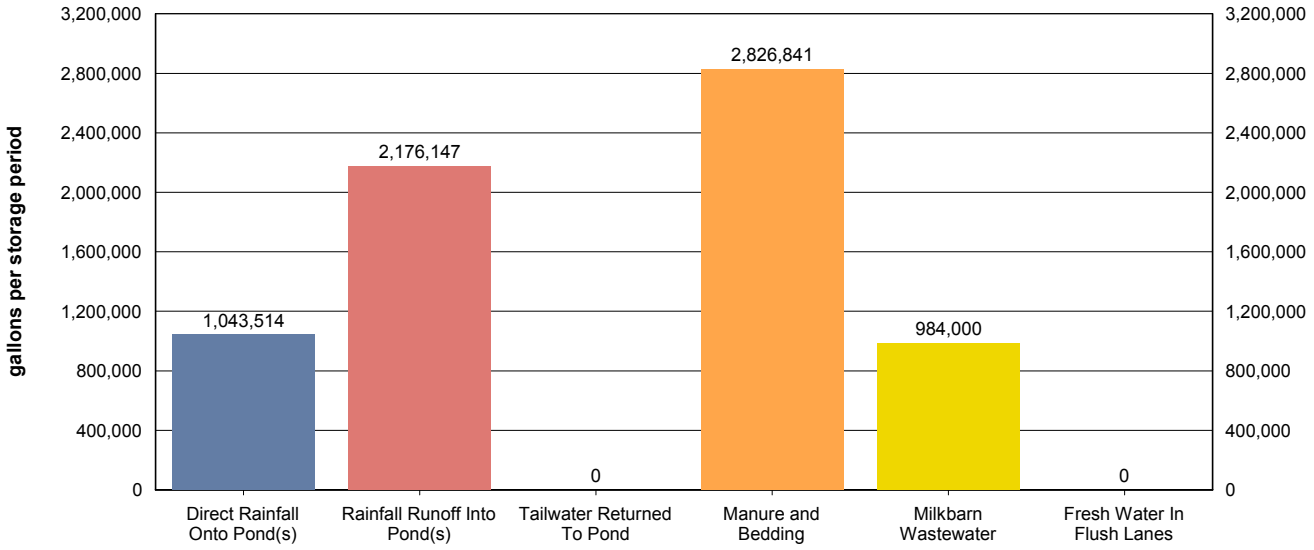


Values shown in chart are approximate values for storage period.

Storage period:	120	days
Total process wastewater generated daily:	51,842	gallons/day
Total process wastewater generated per period:	6,220,991	gallons/storage period
Total process wastewater removed due to evaporation:	723,242	gallons/storage period
Total storage capacity required:	5,497,749	gallons
	734,942	cu. ft.
Existing storage capacity (adjusted for dead storage loss):	6,640,749	gallons
	887,739	cu. ft.

Considering normal precipitation, existing capacity meets estimated storage needs: [X] Yes [ ] No

C. PROCESS WASTEWATER (NORMAL PRECIPITATION WITH 1.5 FACTOR)

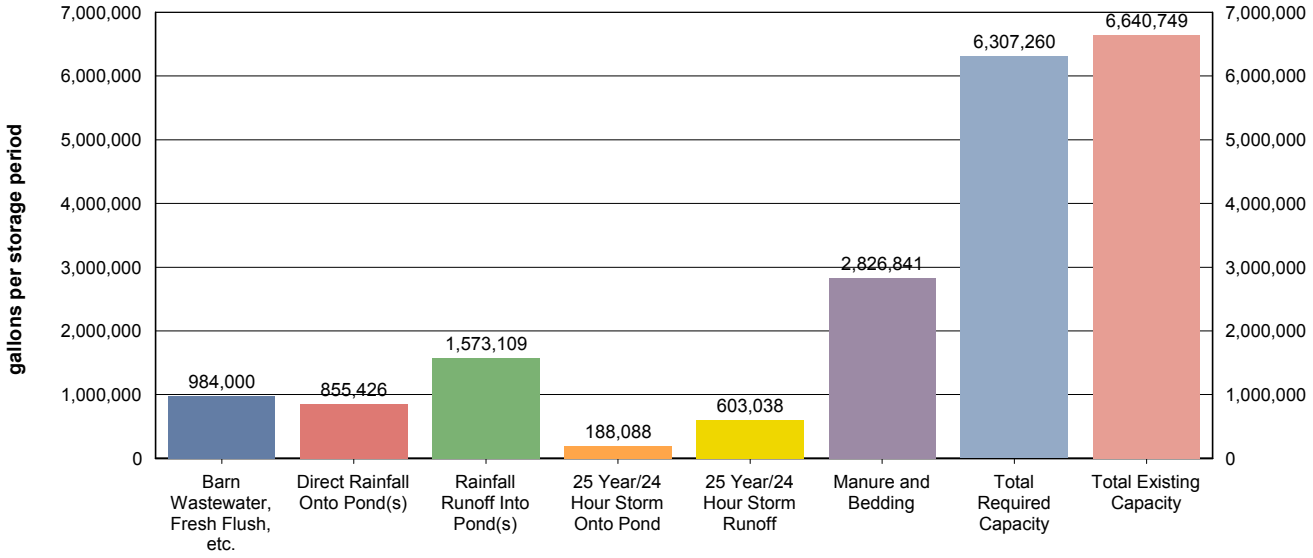


Values shown in chart are approximate values for storage period.

Storage period:	120	days
Total process wastewater generated daily:	58,588	gallons/day
Total process wastewater generated per period:	7,030,502	gallons/storage period
Total process wastewater removed due to evaporation:	723,242	gallons/storage period
Total storage capacity required:	6,307,260	gallons
	843,158	cu. ft.
Existing storage capacity (adjusted for dead storage loss):	6,640,749	gallons
	887,739	cu. ft.

Considering factored precipitation, existing capacity meets estimated storage needs: [X] Yes [ ] No

D. STORAGE VOLUME ASSESSMENT (NORMAL PRECIPITATION WITH 1.5 FACTOR)



Values shown in chart are approximate values for storage period.

Storage period:	120	days
Barn wastewater, fresh flush water, and tailwater:	984,000	gallons/storage period
Manure and bedding sent to pond:	2,826,841	gallons/storage period
Precipitation onto pond:	855,426	gallons/storage period
Precipitation runoff:	1,573,109	gallons/storage period
25 year/24 hour storm onto pond:	188,088	gallons/storage period
25 year/24 hour storm runoff:	603,038	gallons/storage period
Residual solids after liquids have been removed (liquid equivalent):	171,785	gallons/storage period
Total process wastewater removed due to evaporation:	723,242	gallons/storage period
Total required capacity:	6,307,260	gallons/storage period
Total existing capacity:	6,640,749	gallons/storage period
Existing capacity meets estimated storage needs:	[X] Yes [ ] No	

OPERATION AND MAINTENANCE PLAN

The goal of the Operation and Maintenance Plan is to eliminate discharges of waste or storm water to surface waters from the production area and the protection of underlying soils and ground water.

A. POND MAINTENANCE

i. FREEBOARD MONITORING

1. Freeboard will be monitored monthly from June 1 through September 1 (dry season) and weekly from October 1 through May 31 (wet season). The results will be recorded on a Dairy Production Area Visual Inspection Form.
2. Freeboard will be monitored during and after each significant storm event and the results recorded on a Production Area Significant Storm Event Inspection Form.
3. Ponds will be photographed on the first day of each month. Pond photos will be labeled and maintained with the dairy's monitoring records.

ii. PREPARATION FOR MAINTAINING WINTER STORAGE CAPACITY

1. The retention pond(s) will begin to be lowered to the minimum operating level on or before a designated date each year.
2. The minimum operating level will include the necessary storage volume as identified in Section II.A in Attachment B of the General Order.

iii. OTHER POND MONITORING

1. At the time of each monitoring for freeboard, the pond(s) will be inspected for evidence of excessive odors, mosquito breeding, algae, or equipment damage; and issues with berm integrity, including cracking, slumping, erosion, excess vegetation, animal burrows, and seepage. Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Other Pond Monitoring.
2. At the time of each monitoring during and after each significant storm event, the ponds will be inspected for evidence of any discharge and issues with berm integrity, including cracking, slumping, erosion, excess vegetation, animal burrows, and seepage. Any issues identified and corrective actions performed will be recorded on a Production Area Significant Storm Event Inspection Form.

iv. SOLIDS REMOVAL PROCEDURES

1. The average thickness of the solids accumulated on the bottom of the pond(s) will be measured on the designated interval using the owner, operator, and/or designer specified procedure.
2. Once solids/sludge on the bottom of the pond(s) reach the owner, operator, and/or designer specified critical thickness, solids/sludge will be removed so that adequate capacity is maintained.
3. When necessary, solids/sludge will be removed using the owner, operator, and/or designer specified methods for protecting any pond liner.

OPERATIONS AND MAINTENANCE PLAN FOR POND: WWS

Dry season freeboard monitoring will occur on the 5th of each month.

Wet season freeboard monitoring will occur every Monday of each week.

Process wastewater pond contents will be lowered to the minimum operating level (elevation) of 2.0 feet above the pond invert beginning in April of each year.

Sludge accumulation will be measured annually.

The following method will be used to measure solids/sludge accumulation:

Storages are visually monitored or professionally measured to evaluate solid accumulation.
Storage is cleaned annually using slurry pumping or an excavator.

When solids/sludge accumulate to a thickness of 2.0 feet, the following method will be used to maintain adequate storage capacity while protecting any pond liner:

Fresh water is added throughout the irrigation seasons to remove solids.
Solids are pumped out during irrigations.
Solids are removed by pumping into slurry trucks or using an excavator.

OPERATIONS AND MAINTENANCE PLAN FOR POND: SSB 1

Dry season freeboard monitoring will occur on the 5th of each month.

Wet season freeboard monitoring will occur every Monday of each week.

Process wastewater pond contents will be lowered to the minimum operating level (elevation) of 0.0 feet above the pond invert beginning in April of each year.

Sludge accumulation will be measured annually.

The following method will be used to measure solids/sludge accumulation:

Storages are visually monitored to evaluate solid accumulation.
Storage is cleaned regularly using a loader.

When solids/sludge accumulate to a thickness of 3.8 feet, the following method will be used to maintain adequate storage capacity while protecting any pond liner:

SSB will be dried and solids removed using a loader.

OPERATIONS AND MAINTENANCE PLAN FOR POND: SSB 2

Dry season freeboard monitoring will occur on the 5th of each month.

Wet season freeboard monitoring will occur every Monday of each week.

Process wastewater pond contents will be lowered to the minimum operating level (elevation) of 0.0 feet above the pond invert beginning in April of each year.

Sludge accumulation will be measured annually.

The following method will be used to measure solids/sludge accumulation:

Storages are visually monitored to evaluate solid accumulation.
Storage is cleaned regularly using a loader.

When solids/sludge accumulate to a thickness of 3.8 feet, the following method will be used to maintain adequate storage capacity while protecting any pond liner:

SSB will be dried and solids removed using a loader.

B. RAINFALL COLLECTION SYSTEM MAINTENANCE

i. Annually, rainfall collection systems will be assessed to ensure:

1. Conveyances are free of debris and operating within designer/manufacturer specifications.
2. Components are properly fastened according to designer/manufacturer specifications.
3. All downspouts and related infrastructure are connected to conveyances that divert water away from manured areas.
4. Water from the rainfall collection system(s) is diverted to an appropriate destination.

Buildings with rooftop rainfall collection systems	Quantity	Surface Area (sq. ft.)
Barn #1- FSB diverted	1	45,250
Barn #2 FSB diverted	2	40,000

Barn #3- FSB diverted	1	33,250
Barn #4- Special Needs	1	5,732
Barn #5- FSB diverted	1	26,125
Barn #6- FSB diverted	1	40,000
Barn #7- FSB diverted	1	62,700
Barn #8- Loafing Barn	1	18,900
Commodity Barn	1	3,800
Milkbarn	1	7,500
Shop	1	1,260
Shop	1	3,750
Shop	1	1,100
Buildings without rooftop rainfall collection systems	Quantity	Surface Area (sq. ft.)
Milkbarn ext	1	150

Assessment for buildings with rooftop rainfall collection systems will occur on or before: 1st of October

Assessment for other rainfall collections systems will occur on or before: 1st of November

Description of how rainfall collection systems will be assessed:

Gutters and downspouts are cleaned and inspected prior to wet season and repaired as needed.

C. CORRAL MAINTENANCE

i. Monthly from June 1st through September 30th (dry season) and weekly from October 1st through May 31st (wet season), the perimeter of the corrals and pens will be assessed to ensure that runon and runoff controls such as berms are functioning correctly, and that all water that contacts waste is collected and diverted into the wastewater retention pond (s). Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Corrals.

ii. The corrals will be assessed by the designated date to determine:

1. Whether manure needs to be removed from the corrals based on the owner, operator, and/or designer specified conditions.

2. Whether there are depressions within the corrals that should be filled/groomed to prevent ponding.

iii. Removal of manure and/or regrading, when necessary, will be completed on or before the designated month/day of each year.

Day of the month dry season assessment will occur: 5th of each month

Day of the week wet season assessment will occur: Monday

Solid manure removal and regrading assessment will occur on or before: 1st of October

Conditions requiring manure removal and/or regrading:

Solids are removed twice a year to prevent excessive buildup.
Corrals are graded prior to wet season to prevent ponding.

Solid manure removal and/or regrading will occur on or before: 1st of November

D. FEED STORAGE AREA MAINTENANCE

i. During the dry season and prior to the wet season, the perimeter of storage areas will be assessed to ensure all runon and runoff controls such as berms are functioning correctly and runoff and leachate from the areas are collected and diverted into the wastewater pond(s). Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Manure and Feed Storage Areas.

ii. During the wet season, feed storage area(s) will be assessed to determine if there are depressions within any feed storage area that should be filled or repaired to prevent ponding.

iii. Any necessary regrading/resurfacing and berm/conveyance maintenance will be completed on an annual basis.

Day of the month dry season assessment will occur: 5th of each month

Day of the week wet season assessment will occur: Monday

Regrading/resurfacing and berm maintenance assessment will occur on or before: 1st of October

Regrading/resurfacing and berm maintenance completion will occur on or before: 1st of November

E. SOLID MANURE STORAGE AREA MAINTENANCE

i. During the dry season and prior to the wet season, the perimeter of manure storage areas will be assessed to ensure all runon and runoff controls such as berms are functioning correctly and runoff and leachate from the areas are collected and diverted into the wastewater pond(s). Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Manure and Feed Storage Areas.

ii. During the wet season, manure storage area(s) will be assessed to determine if there are depressions within any manure storage area that should be filled to prevent ponding.

iii. Any necessary regrading/resurfacing and berm/conveyance maintenance will be completed on an annual basis.

Day of the month dry season assessment will occur: 5th of each month

Day of the month wet season assessment will occur: Monday

Regrading/resurfacing and berm maintenance assessment will occur on or before: 1st of October

Regrading/resurfacing and berm maintenance completion will occur on or before: 1st of November

F. ANIMAL HOUSING AND FLUSH WATER CONVEYANCE SYSTEM MAINTENANCE

i. A map will be attached that identifies critical points for monitoring the animal housing and flush water conveyance system to verify that water is being managed as identified in this Waste Management Plan. These points will be maintained at owner, operator, and/or designer specified intervals.

Animal housing area assessment will occur on or before: 1st of October

Animal housing drainage system maintenance will occur on or before: 1st of November

Animal housing area drainage system assessment and maintenance methods:

Debris is removed from flush lanes, drains, and corral drains as needed. Valves and pumps are monitored daily and repaired as needed.

G. MORTALITY MANAGEMENT

i. Dead animals will be stored, removed, and disposed of properly.

Rendering company or landfill name: Joseph Branco

Rendering company or landfill telephone number: (209) 777-4695

H. ANIMALS AND SURFACE WATER MANAGEMENT

i. A system will be in place, monitored, and maintained to prevent animals from entering any surface waters when a stream or other surface water crosses or adjoins the corral(s).

Does a stream or any other surface water cross or adjoin the corrals? [ ] Yes [X] No

I. MONITORING SALT IN ANIMAL RATIONS

i. The combined quantity of minerals as salt in animal drinking water and feed rations will be reviewed by a qualified nutritionist on a routine basis to verify that minerals are limited to the amount required to maintain animal health and optimum production . As feed rations change, mineral content may change.

Assessment interval: Annually

J. CHEMICAL MANAGEMENT

i. Chemicals and other contaminants handled at the facility will not be disposed of in any manure or process wastewater, storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.

Chemical Name	Quantity	Units	Frequency	Usage Area	Destination (Used Chemical / Container)	Disposal Company		Collection Frequency
						Name	Phone	
Chlorine	420	gallons	year	Milkbarn	Picked up by distributor			
Acid	960	gallons	year	Milkbarn	Picked up by distributor			
Iodine	1,320	gallons	year	Milkbarn	Picked up by distributor			
Liquid Soap	660	gallons	year	Milkbarn	Picked up by distributor			
Roundup	60	gallons	year	Roads, pond banks	Triple rinsed prior to disposal	Gilton Solid Waste	(209) 527-3781	routine

REQUIRED ATTACHMENTS

The following list, based upon user selections and data entries, describes the minimum required attachments that must be submitted with the Waste Management Plan for the reporting schedule of 'July 1, 2010'.

A. SITE MAP(S)

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of the production area including the following in sufficient detail: structures used for animal housing, milk parlor, and other buildings; corrals and ponds; solids separation facilities (settling basins or mechanical separators); other areas where animal wastes are deposited or stored; feed storage areas; drainage flow directions and nearby surface waters; all water supply wells (domestic, irrigation, and barn wells) and groundwater monitoring wells.

Production area map reference number: Figures 2 and 3

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of all land application areas (land under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) including the following in sufficient detail: a field identification system (Assessor's Parcel Number; field by name or number; total acreage of each field; crops grown; indication if each field is owned, leased, or used pursuant to a formal agreement); indication of what type of waste is applied (solid manure only, wastewater only, or both solid manure and wastewater); drainage flow direction in each field, nearby surface waters, and storm water discharge points; tailwater and storm water drainage controls; subsurface (tile) drainage systems (including discharge points and lateral extent); irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water and tailwater to surface water from the field.

Application area map reference number: Figure 3

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of all cropland (land that is part of the dairy but not used for dairy waste application) including the following in sufficient detail: Assessor's Parcel Number, total acreage, crops grown, and information on who owns or leases the field. The Waste Management Plan shall indicate if such cropland is covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R5-2006-0053 for Coalition Group or Order No. R5-2006-0054 for Individual Discharger, or updates thereto).

Non-application area map reference number: Not applicable

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of all off-property domestic wells within 600 feet of the production area or land application area(s) associated with the dairy and the location of all municipal supply wells within 1,500 feet of the production area or land application area(s) associated with the dairy.

Well area map reference number: Figures 2&3

Provide a site map (or maps) of appropriate scale to show property boundaries and a vicinity map, north arrow and the date the map was prepared. The map shall be drawn on a published base map (e.g., a topographic map or aerial photo) using an appropriate scale that shows sufficient details of all facilities.

Vicinity map reference number: Figure 1

B. PROCESS WASTEWATER MAP(S)

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of the production area including the following in sufficient detail: process wastewater conveyance structures, discharge points, and discharge /mixing points with irrigation water supplies; pumping facilities and flow meter locations; upstream diversion structures, drainage ditches and canals, culverts, drainage controls (berms/levees, etc.), and drainage easements; and any additional components of the waste handling and storage system.

Production infrastructure system area map reference number: Figures 2 and 3

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of all land application areas (land under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) including the following in sufficient detail: process wastewater conveyance structures, discharge points and discharge mixing points with irrigation water supplies; pumping facilities ; flow meter locations; drainage ditches and canals, culverts, drainage controls (berms, levees, etc.), and drainage easements.

Land application infrastructure system area map reference number: Figure 3

C. EXCESS PRECIPITATION CONTINGENCY REPORT

There were no attachment references entered or required for this attachment section.

D. OPERATION AND MAINTENANCE PLAN

Attach a map that identifies critical points for monitoring the system to verify that water is being managed as identified in this Waste Management Plan (see Attachment B, Pg B-7 V.F, V.G, and V.H for additional requirements).

Animal housing assessment map reference number: Fig 2

E. FLOOD PROTECTION / INUNDATION REPORT

Provide a published flood zone map that shows the facility is outside the relevant flood zones.

Flood zone map and/or document reference number: Panel 06047C0350G

F. BACKFLOW PROTECTION

Attach documentation from a trained professional (i.e. a person certified by the American Backflow Prevention Association, an inspector from a state or local governmental agency who has experience and/or training in backflow prevention, or a consultant with such experience and/or training), as specified in Required Reports and Notices H.1 of Waste Discharge Requirements General Order No. R5-2007-0035, that there are no cross-connections that would allow the backflow of wastewater into a water supply well, irrigation well, or surface water as identified on the Site Map.

Backflow documentation reference number: Backflow Form

Waste Management Plan Report
General Order No. R5-2007-0035, Attachment B
July 1, 2010 deadline

CERTIFICATION

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Martins View Jersey Dairy

Physical address of dairy:

1369 S Hunt RD	Gustine	Merced	95322
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address): _____

B. DOCUMENTATION OF QUALIFICATIONS AND PLAN DEVELOPMENT

I have reviewed the portion of the waste management plan that is related to storage capacity facility and design specifications in accordance with Item II, Attachment B of the Waste Discharge Requirements General Order for Existing Milk Cow Dairies - Order No. R5-2007-0035 and certify that this plan was prepared by, or under the responsible charge of, and certified by a civil engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work.

Storage capacity is:

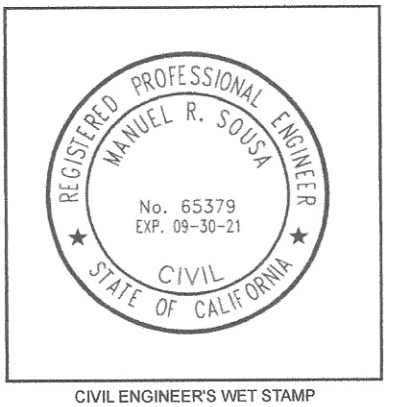
Insufficient

☐ Retrofitting Plan/Schedule/Design Criteria attached in accordance with Attachment B, II.B. 1-5 and Attachment B, II. C.

Sufficient

☒ Certification 1 - Certified in accordance with Attachment B, II. A. 1-8. (no contingency plan)

☐ Certification 2 - Certified in accordance with Attachment B, II. A. 1-8, II. C. (with contingency plan attached)



CIVIL ENGINEER'S WET STAMP

Manuel R. Sousa — 3/10/2020

SIGNATURE OF CIVIL ENGINEER — DATE

Manny Sousa
PRINT OR TYPE NAME

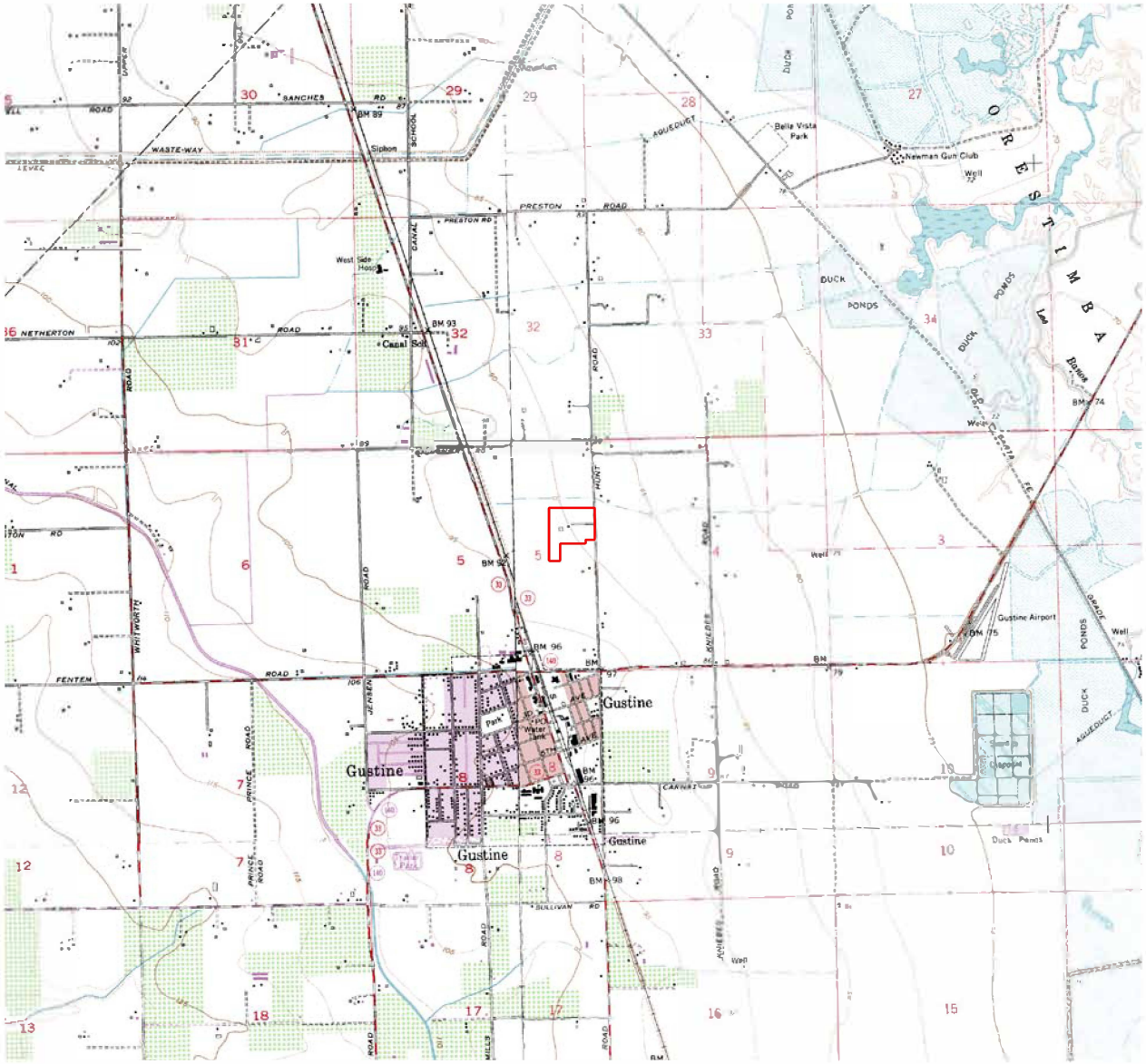
P.O. Box 1613; Oakdale, CA 95361
MAILING ADDRESS

(209) 238-3151
PHONE NUMBER

C. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Antonio Martins	Antonio Martins
SIGNATURE OF OWNER	SIGNATURE OF OPERATOR
Antonio L Martins	
PRINT OR TYPE NAME	PRINT OR TYPE NAME
3-10-2020	3-10-2020
DATE	DATE



LEGEND

Facility Boundary

KR CORDEIRO

PO Box 116
Newman, CA 95360

SCALE:

0 4,000 8,000

APPROXIMATE SCALE IN FEET

MARTINS VIEW JERSEY DAIRY
MERCED COUNTY, CA

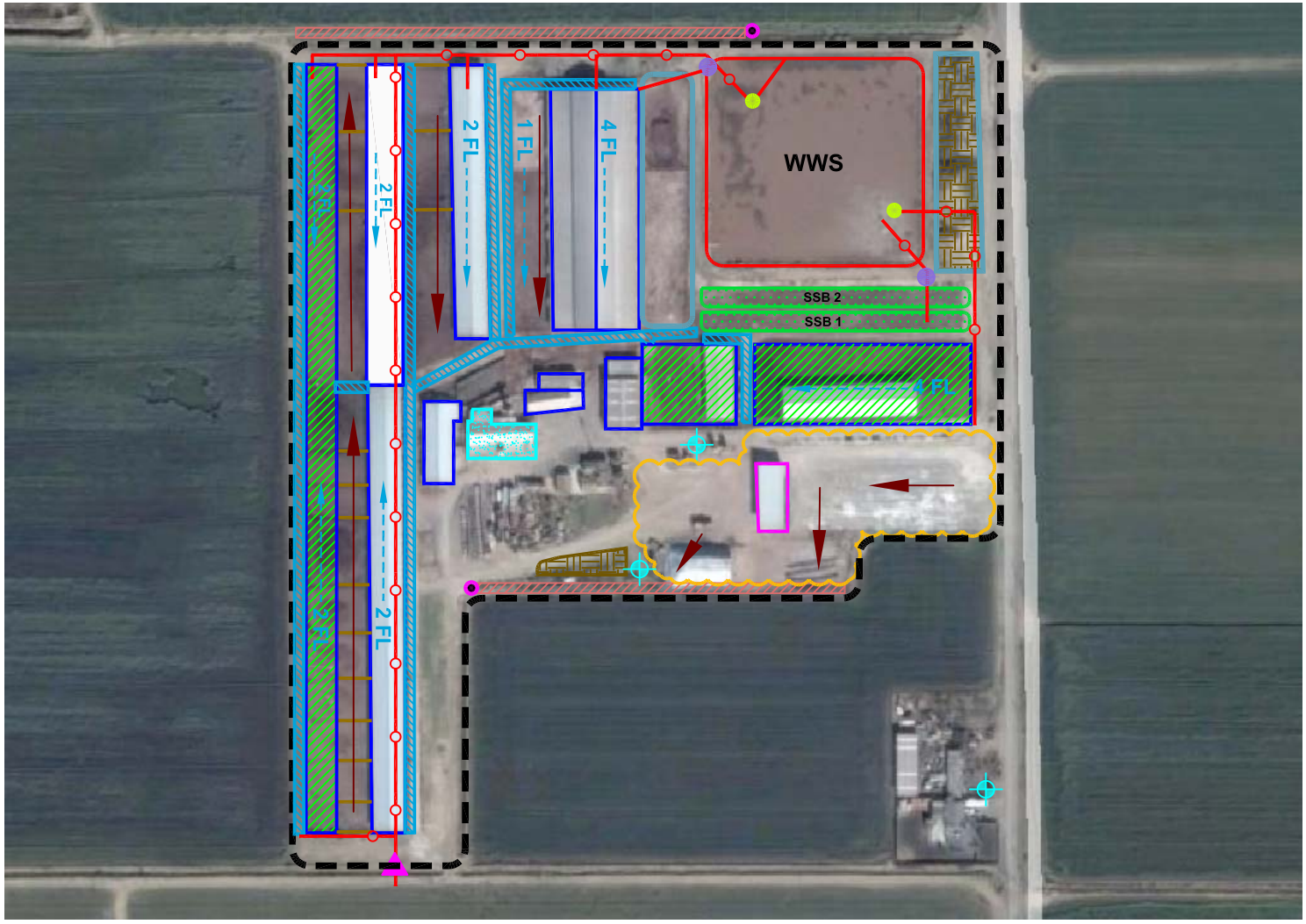
FIGURE 1
TOPOGRAPHIC MAP

PROJECT NO.	DATE:	DRAWN BY:	APP. BY:
FRA-00	5/12/17	SB	KR

Martin Brothers Dairy 2

LEGEND

- Milk Barn
- Waste Water Storage
- Animal Housing/Shade
- Proposed Animal Housing
- Commodity Barn
- Corral
- Solids Settling Basin
- Soild Manure Stacking
- Proposed Manure Stacking Pad
- Flush Lane
- Earthen Ditch (TW)
- Wastewater/Flush Pipeline
- 3 Flush Lane
- Facility Boundary
- Stormwater Flow
- Drain
- Domestic Well
- Mobile Pump
- Valve
- Floating Pump
- Stationary Pump
- Feed Storage



KR CORDEIRO
PO Box 116
Newman, CA 95360

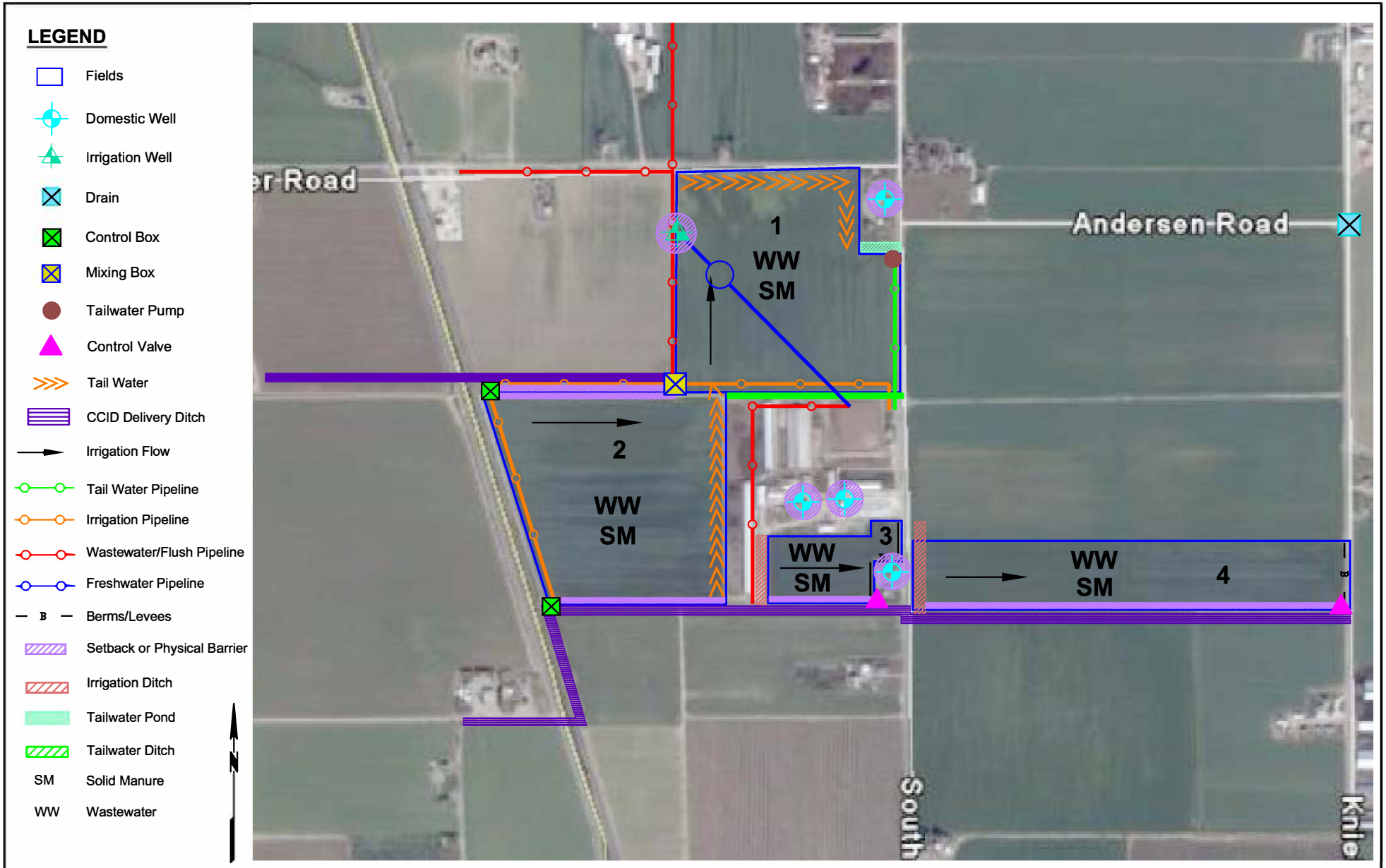
SCALE:
0 250 500
APPROXIMATE SCALE IN FEET

MARTINS VIEW JERSEY DAIRY
MERCED COUNTY, CA

PROJECT NO.	DATE:	DRAWN BY:	APP. BY:
FRA-00	3/12/20	SB	KR

FIGURE 2
DAIRY FACILITY

Martins View Jersey



KR CORDEIRO
PO Box 116
Newman, CA 95360

SCALE:
0 800 1600
APPROXIMATE SCALE IN FEET

MARTINS VIEW JERSEY DAIRY
MERCED COUNTY, CA

FIGURE 3
DAIRY FIELDS

PROJECT NO.	DATE:	DRAWN BY:	APP. BY:
FRA-00	5/16/17	SB	KR

Martin Brothers Dairy 2

KR CORDEIRO

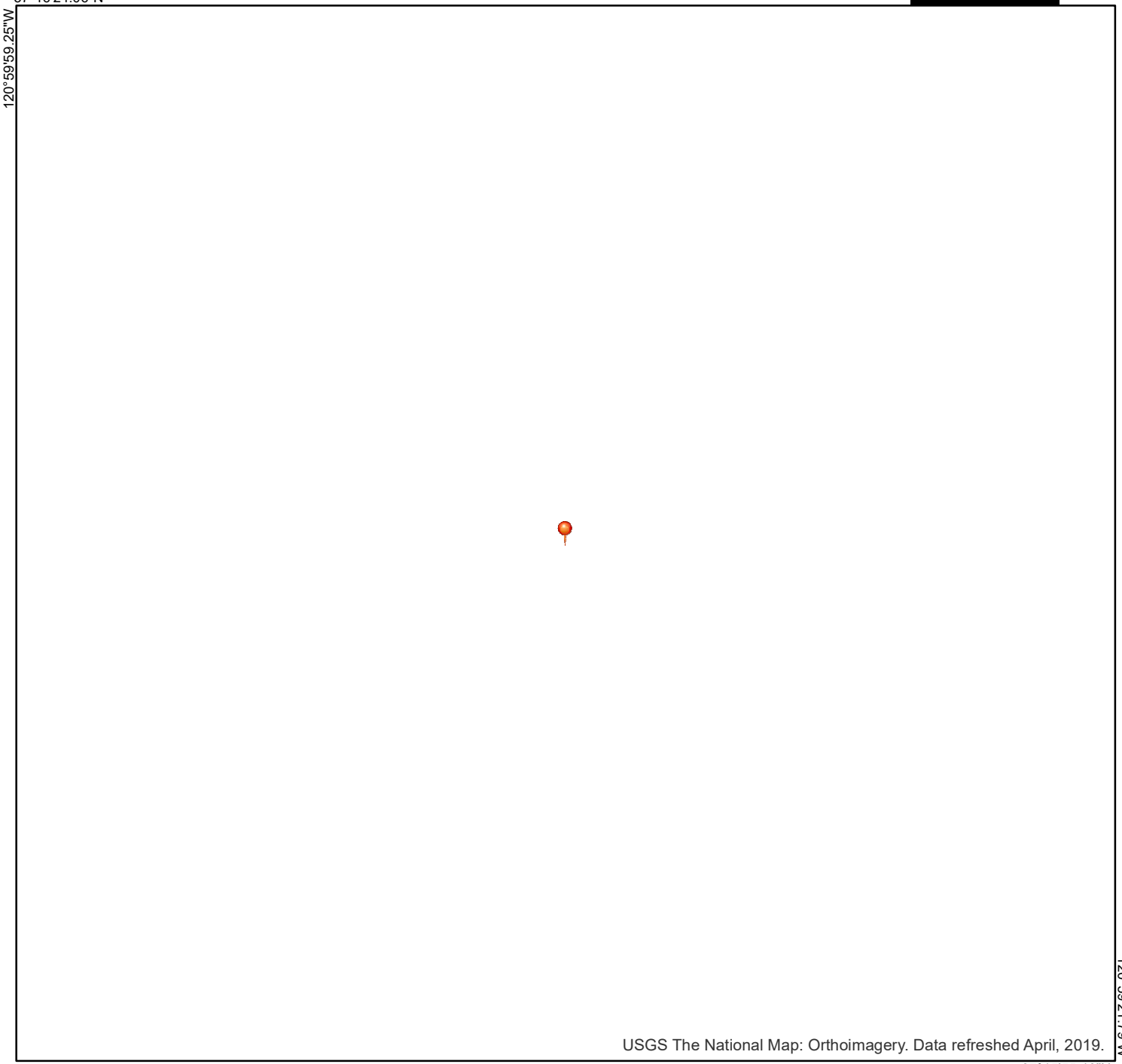
LAND APPLICATION AREA FIELD INFORMATION ATTACHMENT

DAIRY NAME: MARTINS VIEW JERSEY DAIRY
DAIRY ADDRESS: 1369 S HUNT ROAD, GUSTINE, CA 95322

APN	FIELD ID	ACRES	CROPS GROWN	OWNED BY DAIRY OWNER	LEASED BY DAIRY OPERATOR	LEASED BY OTHERS	NUTRIENTS APPLIED
0063-0050-0011-0000	1	36.9	Oats/Corn	X			WW
0063-0050-0028-0000	2	34	Oats/Corn	X			WW
0063-0050-0028-0000	3	6.4	Oats/Corn	X			WW
0063-0040-0003-0000	4	22.2	Oats/Corn	X			WW

National Flood Hazard Layer FIRMette

[redacted]



Feet 1:6,000

0 250 500 1,000 1,500 2,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/12/2020 at 1:08:57 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FORM FOR DOCUMENTING BACKFLOW PREVENTION
UNDER
WASTE DISCHARGE REQUIREMENTS GENERAL ORDER NO. R5-2007-0035
FOR
EXISTING MILK COW DAIRIES

This form consists of six parts and can be used to document compliance with the requirements in Waste Discharge Requirements General Order No. R5-2007-0035 for owners/operators of existing milk cow dairies (Dischargers) to:

1. Identify cross-connections that would allow the backflow of wastewater into a water supply well, irrigation well, or surface water as identified on the dairy's Site Map;

2. Propose and schedule corrective action to prevent backflow of wastewater into a water supply well, irrigation well, or surface water as identified on the dairy's Site Map; and/or

3. Document there are no cross-connections that would allow the backflow of wastewater into a water supply well, irrigation well, or surface water as identified on the dairy's Site Map.

The Discharger must complete this form except for Parts IV and V, which are to be completed by a trained professional[1]. Both the owner and the operator of the dairy must sign the certification statement in Part VI. Additional sheets may be attached as necessary to complete Parts I, II, and III.

A Site Map must be attached to this form that shows all water supply wells, irrigation wells, and surface water bodies in the dairy's Production Area and all Land Application Areas that are under the Discharger's control. The Site Map must also show all wastewater conveyance structures, wastewater discharge points to surface water, and where wastewater is mixed/blended with fresh irrigation water in these areas. Each of these locations must be identified by a name or number and listed in Part II below. Completion of Part II will identify how backflow can or does occur at each location and any current backflow preventive measures.

PART I: DAIRY FACILITY INFORMATION

A. Name of Dairy or Business Operating the Dairy: _____

Physical address of Dairy:

_____
Number and Street City County Zip Code

B. Operator Name: _____ Telephone No: _____

Operator mailing address:

_____
Number and Street City County Zip Code

C. Owner Name: _____ Telephone No: _____

Owner Mailing Address:

_____
Number and Street City County Zip Code

[1] A trained professional could be a person certified by the American Backflow Prevention Association, an inspector for a state or local governmental agency who has experience and/or training in backflow prevention, or a consultant with such experience and/or training.

FORM FOR DOCUMENTING BACKFLOW PREVENTION
UNDER
WASTE DISCHARGE REQUIREMENTS GENERAL ORDER NO. R5-2007-0035
FOR
EXISTING MILK COW DAIRIES

PART II: IDENTIFICATION OF EXISTING BACKFLOW CONDITIONS (due by 1 July 2008)
The attached Site Map identifies all of the locations in the Production Area and all Land Application Areas under the control of the Discharger at the dairy identified in Part I above where there are cross-connections that could, or do, allow the backflow of wastewater into a water supply well, irrigation well, or surface water. For each location shown on the map, the table below describes:

a. How and where wastewater can potentially, or does, backflow to a groundwater supply and/or surface water supply (if there are no current or potential backflow problems, indicate so with "none"), and

b. How backflow of process wastewater into the groundwater or surface water supply is currently prevented (if there is no current prevention method, indicate so with "none").

Location Where Backflow can Occur	How Backflow Can or Does Occur	Current Backflow Preventive Measure

FORM FOR DOCUMENTING BACKFLOW PREVENTION
UNDER
WASTE DISCHARGE REQUIREMENTS GENERAL ORDER NO. R5-2007-0035
FOR
EXISTING MILK COW DAIRIES

PART III: PROPOSED BACKFLOW CORRECTIVE ACTIONS AND SCHEDULE (due by 1 July 2008)

For each location identified in Part II above where there is currently no backflow prevention, the table below identifies:

a. The method proposed to be implemented that will prevent backflow, and

b. A schedule to install the preventive measure.

If there are no current or potential backflow problems identified in Part II above, this Part does not need to be completed.

Location With No Current Backflow Prevention	Proposed Backflow Prevention Method	Schedule to Install Proposed Backflow Prevention Method
	N/A	

PART IV: DOCUMENTATION OF EXISTING BACKFLOW CONDITIONS AND PROPOSED BACKFLOW PREVENTION METHODS (due by 1 July 2008)

As a trained professional in backflow prevention, I certify that, based on the information provided to me by the Discharger named above and my personal examination of the wastewater system, the above information in Part II above is true, accurate, and complete and the proposed backflow prevention method in Part III above will be effective to prevent the backflow of wastewater into a water supply well, irrigation well, or surface water at the dairy named in Part I above.

CDQAP Backflow Training Course

QUALIFICATIONS OF TRAINED PROFESSIONAL (EDUCATION AND/OR EXPERIENCE)

SIGNATURE OF TRAINED PROFESSIONAL

3/6/2020

DATE

Kristy Rocha Cordeiro

PRINT OR TYPE NAME

FORM FOR DOCUMENTING BACKFLOW PREVENTION
UNDER
WASTE DISCHARGE REQUIREMENTS GENERAL ORDER NO. R5-2007-0035
FOR
EXISTING MILK COW DAIRIES

PART V: DOCUMENTATION THAT THERE ARE NO CROSS-CONNENCTIONS THAT WOULD ALLOW THE BACKFLOW OF WASTEWATER INTO A WATER SUPPLY WELL, IRRIGATION WELL, OR SURFACE WATER (due by 1 July 2009)

As a trained professional in backflow prevention, I certify that, based on the information provided to me by the Discharger named in Part I above and my personal examination of the wastewater system, that the backflow prevention methods proposed in Part III above (if any) have been completed, and/or there are currently no cross-connections that would allow the backflow of wastewater into a water supply well, irrigation well, or surface water at the dairy named in Part I above.

CDQAP Backflow Training Course

QUALIFICATIONS OF TRAINED PROFESSIONAL (EDUCATION AND/OR EXPERIENCE)

SIGNATURE OF TRAINED PROFESSIONAL — DATE: 3/6/2020

Kristy Rocha Cordeiro

PRINT OR TYPE NAME

PART VI: OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Antonio Mart	Antonio Mart
SIGNATURE OF OWNER	SIGNATURE OF OPERATOR
PRINT OR TYPE NAME	PRINT OR TYPE NAME
3-10-2020	3-10-2020
DATE	DATE