

**NPDES State of New Mexico General Permit Application
Concentrated Animal Feeding Operation (CAFO)**

For

Dominguez Dairy #1

NMG010054

Submitted to:

**US EPA Region 6
Water Quality Protection Division
Planning and Analysis Branch (6WQ-N)
1400 Ross Ave.
Dallas, TX 75202-2733**

Submitted by:

**Dominguez Dairy #1
PO Box 21
Mesquite, NM 88045**

November 2009

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Dominguez Dairy #1

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590 Nutrient Mgt. Jobsheet for Organic & Manure Land Application
USDA-NRCS PLANTS Crop Nutrient Tool
NRCS Phosphorus Index Worksheet for New Mexico
NRCS Irrigation Water Mgt. Conservation Practice Jobsheet 449
NRCS - WEQ Calculations
NRCS RUSLE2 Worksheet Erosion Calculation Record

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590 Nutrient Mgt. Jobsheet for Organic & Manure Land Application
USDA-NRCS PLANTS Crop Nutrient Tool
NRCS Phosphorus Index Worksheet for New Mexico
NRCS Irrigation Water Mgt. Conservation Practice Jobsheet 449
NRCS - WEQ Calculations
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590 Nutrient Mgt. Jobsheet for Organic & Manure Land Application
USDA-NRCS PLANTS Crop Nutrient Tool
NRCS Phosphorus Index Worksheet for New Mexico
NRCS Irrigation Water Mgt. Conservation Practice Jobsheet 449
NRCS - WEQ Calculations
NRCS RUSLE2 Worksheet Erosion Calculation Record
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590 Nutrient Mgt. Jobsheet for Organic & Manure Land Application
USDA-NRCS PLANTS Crop Nutrient Tool
NRCS Phosphorus Index Worksheet for New Mexico
NRCS Irrigation Water Mgt. Conservation Practice Jobsheet 449
NRCS - WEQ Calculations
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- Field D-5 NMSU Annual Nutrient Manager Calculation
590 Nutrient Mgt. Jobsheet for Organic & Manure Land Application
USDA-NRCS PLANTS Crop Nutrient Tool
NRCS Phosphorus Index Worksheet for New Mexico
NRCS Irrigation Water Mgt. Conservation Practice Jobsheet 449
NRCS - WEQ Calculations
NRCS RUSLE2 Worksheet Erosion Calculation Record
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- Field DM-6 NMSU Annual Nutrient Manager Calculation
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USDA-NRCS PLANTS Crop Nutrient Tool
NRCS Phosphorus Index Worksheet for New Mexico
NRCS Irrigation Water Mgt. Conservation Practice Jobsheet 449
NRCS - WEQ Calculations
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- Field DM-7 NMSU Annual Nutrient Manager Calculation
590 Nutrient Mgt. Jobsheet for Organic & Manure Land Application
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Tables and Calculations

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Figures

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Site Plan - With Field Map
Topographic Map
Topographic Map - Showing Water of the United States
NRCS Soil Map

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER NMG010054
LABEL ITEMS I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION		PLEASE PLACE LABEL IN THIS SPACE	

GENERAL INSTRUCTIONS
 If a preprinted label has been provided, affix it in the designated space. Review the information carefully, if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X"			SPECIFIC QUESTIONS	Mark "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)	X		X
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1	SKIP	Dominguez Dairy #1
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IV. FACILITY CONTACT

2	A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
	Dominguez, Isaac Owner	(575) 233-3409

V. FACILITY MAILING ADDRESS

3	A. STREET OR P.O. BOX		
	P. O. Box 21		
4	B. CITY OR TOWN	C. STATE	D. ZIP CODE
	Mesquite	NM	88048

VI. FACILITY LOCATION

5	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER				
	13950 Stern Drive				
6	B. COUNTY NAME	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
	Dona Ana	Mesquite	NM	88048	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)			
A. FIRST		B. SECOND	
C	E	C	E
7	0241	7	
(specify) Dairy Farm		(specify)	
15	16	15	16
C. THIRD		D. FOURTH	
G	I	G	I
7		7	
(specify)		(specify)	
15	16	15	16

VIII. OPERATOR INFORMATION			
A. NAME			B. Is the name listed in Item VIII-A also the owner?
C	8 Isaac Dominguez		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
15	16	55	56

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)			D. PHONE (area code & no.)	
F = FEDERAL	M = PUBLIC (other than federal or state)	P	C	A
S = STATE	O = OTHER (specify)	(specify)	(575)	378-4431
P = PRIVATE			15	16
		56	19	21

E. STREET OR P.O. BOX			
P. O. Box 21			
26	55		

F. CITY OR TOWN		G. STATE	H. ZIP CODE	IX. INDIAN LAND
B Mesquite		NM	88048	Is the facility located on Indian lands?
15	16	40	41	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		42	47	51

X. EXISTING ENVIRONMENTAL PERMITS			
A. NPDES (Discharges to Surface Water)		D. PSD (Air Emissions from Proposed Sources)	
C	T	I	C
9	N		9
NMG010054		DP-624	
15	16	17	18
B. UIC (Underground Injection of Fluids)		E. OTHER (specify)	
C	T	I	(specify) NMED Ground Water Permit
9	U		
15	16	17	18
C. RCRA (Hazardous Wastes)		E. OTHER (specify)	
C	T	I	(specify)
9	R		
15	16	17	18

XI. MAP			
Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.			

XII. NATURE OF BUSINESS (provide a brief description)			
Milk Production			

XIII. CERTIFICATION (see instructions)			
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, 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.			

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Isaac Dominguez, Owner	Isaac Dominguez	11-23-2004

COMMENTS FOR OFFICIAL USE ONLY			
C			
15	16	55	56

EPA I.D. NUMBER (copy from Item 1 of Form 1)
 NMG0100054

FORM 2B NPDES	EPA	U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATIONS FOR PERMIT TO DISCHARGE WASTEWATER CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES
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I. GENERAL INFORMATION Applying for: Individual Permit Coverage Under General Permit

A. TYPE OF BUSINESS	B. CONTACT INFORMATION	C. FACILITY OPERATION STATUS
<input checked="" type="checkbox"/> 1. Concentrated Animal Feeding Operation (complete items B, C, D, and Section II) <input type="checkbox"/> 2. Concentrated Aquatic Animal Production Facility (complete items B, C, and section III)	Owner/or Operator Name: <u>Dominguez Dairy #1</u> Telephone: (<u>575</u>) <u>233-3409</u> Address: <u>P. O. Box 21</u> Facsimile: (<u>575</u>) <u>233-3453</u> City: <u>Mesquite</u> State: <u>NM</u> Zip Code: <u>88048</u>	<input checked="" type="checkbox"/> 1. Existing Facility <input type="checkbox"/> 2. Proposed Facility

D. FACILITY INFORMATION

Name: Dominguez Dairy #1 Telephone: (575) 233-3409
 Address: PO Box 21 Facsimile: (575) 233-3453
 City: Mesquite State: NM Zip Code: 88048
 County: Dona Ana Latitude: 32 09'07.00"N Longitude: 106 39'34.00"W

If contract operation: Name of Integrator: na
 Address of Integrator: na

II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS

A. TYPE AND NUMBER OF ANIMALS			B. Manure, Litter and/or Wastewater Production and Use
	2. ANIMALS		1) How much manure, litter and wastewater is generated annually by the facility? <u>18565</u> tons <u>41.45</u> acft gallons 2) If land applied how many acres of land under the control of the applicant are available for applying the CAFOs manure/litter/wastewater? <u>698.2</u> acres 3) How many tons of manure or litter, or gallons of wastewater produced by the CAFO will be transferred annually to other persons? tons/gallons (circle one) 0-18565 tons
1. TYPE	NO. IN OPEN CONFINEMENT	NO. HOUSED UNDER ROOF	
<input checked="" type="checkbox"/> Mature Dairy Cows	2600		
<input checked="" type="checkbox"/> Dairy Heifers	3000		
<input type="checkbox"/> Veal Calves			
<input type="checkbox"/> Cattle (not dairy or veal)			
<input type="checkbox"/> Swine (55 lbs. or over)			
<input type="checkbox"/> Swine (under 55 lbs.)			
<input type="checkbox"/> Horses			
<input type="checkbox"/> Sheep or Lambs			
<input type="checkbox"/> Turkeys			

<input type="checkbox"/> Chickens (Broilers)		
<input type="checkbox"/> Chickens (Layers)		
<input type="checkbox"/> Ducks		
<input checked="" type="checkbox"/> Other Specify <u>Baby Calves</u>	2000	
3. TOTAL ANIMALS	5600 mature & heif	

C. TOPOGRAPHIC MAP

D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

1. Type of Containment	Total Capacity (in gallons)
<input type="checkbox"/> Lagoon	
<input type="checkbox"/> Holding Pond	
<input type="checkbox"/> Evaporation Pond	
<input checked="" type="checkbox"/> Other: Specify <u>Runoff Control Ponds</u>	7,132,856.5

2. Report the total number of acres contributing drainage: 117.5 acres

3. Type of Storage	Total Number of Days	Total Capacity (gallons/tons)
<input type="checkbox"/> Anaerobic Lagoon		
<input checked="" type="checkbox"/> Storage Lagoon	136.7	15.52 acft net 2' Freeboard
<input type="checkbox"/> Evaporation Pond		
<input type="checkbox"/> Aboveground Storage Tanks		
<input type="checkbox"/> Belowground Storage Tanks		
<input type="checkbox"/> Roofed Storage Shed		
<input type="checkbox"/> Concrete Pad		
<input type="checkbox"/> Impervious Soil Pad		
<input type="checkbox"/> Other: Specify _____		

E. NUTRIENT MANAGEMENT PLAN

Note: Effective February 27, 2009, a permit application is not complete until a nutrient management plan is submitted to the Permitting Authority.

1. Please indicate whether a nutrient management plan has been included with this permit application. Yes No

2. If no, please explain:

3. Is a nutrient management plan being implemented for the facility? Yes No

4. The date of the last review or revision of the nutrient management plan. Date: 11/23/09

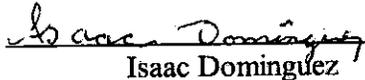
5. If not land applying, describe alternative use(s) of manure, litter, and or wastewater:
 0 to 18,565 tons of manure may be transferred to other persons.

F. LAND APPLICATION BEST MANAGEMENT PRACTICES Please check any of the following best management practices that are being implemented at the facility to control runoff and protect water quality: <input checked="" type="checkbox"/> Buffers <input checked="" type="checkbox"/> Setbacks <input type="checkbox"/> Conservation tillage <input type="checkbox"/> Constructed wetlands <input type="checkbox"/> Infiltration field <input checked="" type="checkbox"/> Grass filter <input checked="" type="checkbox"/> Terrace					
III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS					
A. For each outfall give the maximum daily flow, maximum 30-day flow, and the long-term average flow.			B. Indicate the total number of ponds, raceways, and similar structures in your facility.		
1. Outfall No.	2. Flow (<i>gallons per day</i>)			1. Ponds	2. Raceways
	a. Maximum Daily	b. Maximum 30 Day	c. Long Term Average	C. Provide the name of the receiving water and the source of water used by your facility.	
				1. Receiving Water	2. Water Source
D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.					
1. Cold Water Species			2. Warm Water Species		
a. Species		b. Harvestable Weight (<i>pounds</i>)		a. Species	
		(1) Total Yearly	(2) Maximum	b. Harvestable Weight (<i>pounds</i>)	
				(1) Total Yearly	(2) Maximum
E. Report the total pounds of food during the calendar month of maximum feeding.			1. Month	2. Pounds of Food	
IV. CERTIFICATION					
<i>I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application 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.</i>					
A. Name and Official Title (<i>print or type</i>) Isaac Dominguez,				B. Phone No. (575) 233-3409	
C. Signature <i>Isaac Dominguez</i>				D. Date Signed 11-23-2004	

1. Signatures; Nutrient Management Plan (NMP)

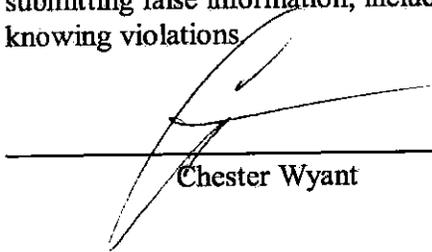
Signature for Dominguez Dairy #1

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


Isaac Dominguez _____ 11-23-2009
Date

Signature for the Nutrient Management Planner

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


_____ 11-23-2009
Chester Wyant Date

CNMP Planners in New Mexico
(current as of November 2009)

AREA	NRCS Planner	TSP Planner (potentially statewide)	Planner and New Mexico Professional Engineer
East	Rachel Armstrong- m,l,n,c	Mary Barron- m,l,n	
	Matt Wiseman-m,l,n	Mike Smith	Brad Wieck-m,l,n
	Mark Lewis-l,n	Kyle Keim-l,n,c	
	Johnna Wier-l,n	Chet Wyant -l	
	Sean Lewis - l,n		
	Dean Bruce - l, n	Jay Lazarus	
NW	Mark McKinley - m	John McCatharn- m,l,n	John McCatharn-m,l,n
	Hope Tran - m	Reddy Ganta -l	Mark McKinley-m
		Jordan Vaughn	
SE	Tom Marshall-l,n,c	Joy Wagner	
	Raquel Montoya - l, n	Loney Ashcraft- m,l,n	
	Louis King-m,l,n	Carroll French -c	
	Tim Henry-l,n	Brad Wieck-m,l,n	
	Dean Pritchett-m,l,n	Linda Armstrong	
SW	Santiago Misquez-l,n	Gill Sorg -m,l,n	
	Mary Sanchez - l, n	Darrel Reasner-l,n	
	Luis Garcia - l,n		
SO	Linda Scheffe-m,l,n		
	Rudy Garcia - l, n		

M= Manure Handling and Storage Specialist
L = Land Treatment Specialist
N = Nutrient Management Specialist
C = New Mexico Certified Crop Adviser

2. Facility Information

2.1 Identification & Location Information

Facility Name: Dominguez Dairy #1
Contact Person: Isaac Dominguez
Phone No. (575) 233-3409 Fax No. (575) 233-3453
Mailing Address: PO Box 21, Mesquite, NM 88048
Physical Address: 13950 Stern Drive, Mesquite, NM 88048
County: Dona Ana
GPS Location: 32° 09'07.00"N 106° 39'34.00"W

2.2 Animal Inventory

This facility is operated as a dairy farm. The facility operates a milking center for milking cows, cooling, storage and shipping milk. There is also a baby calf starting and a replacement heifer growing program at this facility.

Based on an annual average inventory, this facility will have approximately:

<u>Type of Animal</u>	<u>Number</u>	<u>Avg. Weight</u>	<u>Days Confined</u>
Mature Cows	2,600	1625	365
Heifers	3,000	700	365
Baby Calves	2,000	350	365

Based on maximum animal inventory, this facility will have approximately:

<u>Type of Animal</u>	<u>Number</u>	<u>Avg. Weight</u>	<u>Days Confined</u>
Mature Cows	3,100	1625	365
Heifers	3,200	700	365
Baby Calves	2,400	350	365

2.3 Crop Land Inventory

There is 698.2 acres of crop land used at this facility. Refer to Table 2.3 in the Tables and Calculations section of this NMP.

2.4 Waters of the United States

Watershed Basin: Rio Grande-Caballo
Hydrologic Unit Code #: 13030102

The closest Water of the United States is the Rio Grande River, which is approximately 3,400' away.

2.5 Surface Water Quality

This facility is located such that if a discharge ever does occur no Tier II or Tier III water will be affected. No nearby Tier II or Tier III water was listed at <http://www.epa.gov/npdes/stormwater/msgp>.

2.6 Historic Preservation

This facility was constructed prior to April 14, 2003. There was no historic features or structures on the property.

Discharges from this facility do not have the potential to have an effect on historic properties and this facility is not constructing or installing new control measures on the site that will cause subsurface disturbance.

2.7 Endangered Species

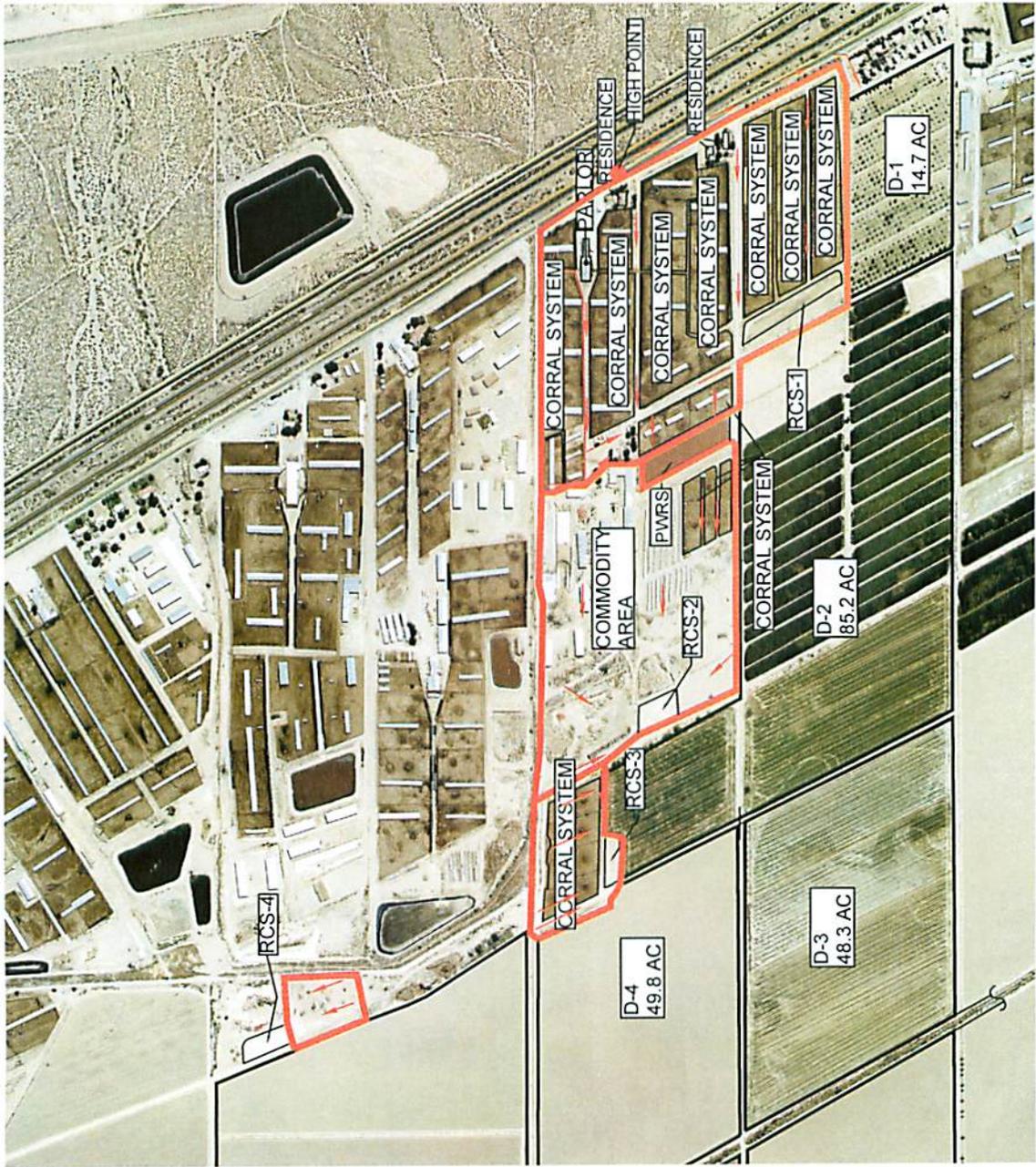
All CAFO operations in the counties of Bernalillo, Chavez, Eddy, Sandoval, San Juan and Valencia must develop and implement an Emergency Action Plan (EAP), to minimize the likelihood of a discharge entering Water of the United States occupied by endangered species or their critical habitat (Part III.D.8.).

This EAP requirement does not apply to this facility. This facility is not located in one of the listed counties requiring and endangered species EAP.

2.8 Emergency Action Plan

Refer to the general incident Emergency Action Plan and Safety Precautions (EAP) located in Appendix B. This EAP is taken from the NM-NRCS CNMP program.

7

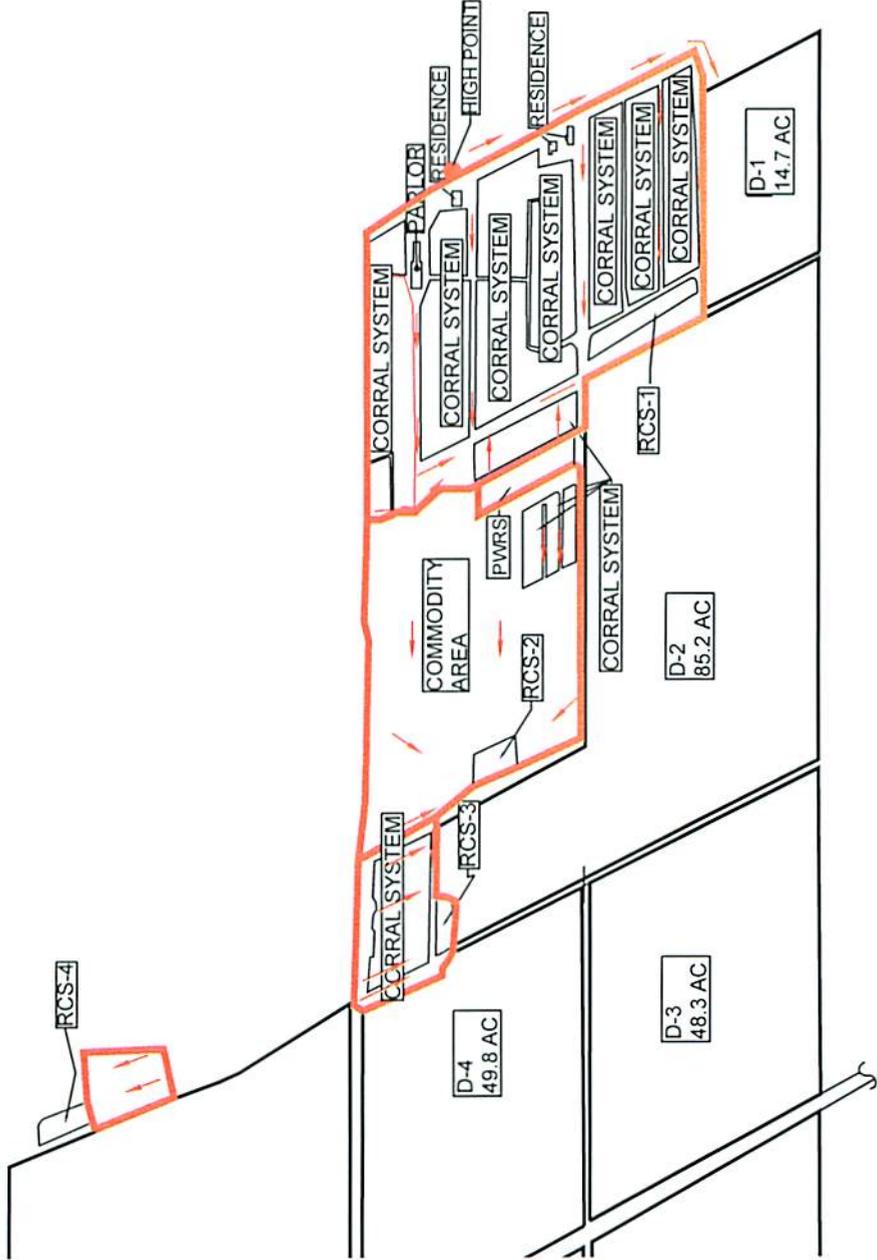


— DRAINAGE AREA BOUNDARY
 → FLOW DIRECTION
 * BOUNDARY IS BASED ON MAGEE AND ASSOCIATES, INC. REPORT



Title: **DOMINGUEZ #1 DP-624**
BASIN & FLOW DIRECTION PLAN
 Date: 12/3/09
 DWG/Dwg Ref: Sheet No
 1"=1000' 1/2

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— DRAINAGE AREA BOUNDARY*
 → FLOW DIRECTION
 * BOUNDARY IS BASED ON MAGEE AND ASSOCIATES, INC. REPORT



Title: DOMINGUEZ #1 DP-624	
BASIN & FLOW DIRECTION PLAN	
Date: 12/3/09	DWG/Doc Ref Sheet No 1"=1000' 2/2

3. Storage Capacity

3.1 Storage Capacity; Process Wastewater & Storm Water Runoff

Estimated Total Annual Process Wastewater Production: 41.45 ac-ft
Estimated Total Annual Storm Water Runoff: Unknown

* Based on permitted volume under State Permit DP-624

Storage Capacity and Certification of liquid Retention and/or Control Structures

<u>Control Unit</u>	<u>Date Certified</u>	<u>Total Storage</u>	<u>Required Storage</u>	<u>Liner Certification</u>	<u>Drainage Area</u>
PWRS	3-7-08	15.52 ac-ft*	2.38 ac-ft**	3-7-08	na
RCS-1	5-27-08	12.39 ac-ft	8.63 ac-ft	5-27-08	69.6 ac
RCS-2	5-27-08	6.19 ac-ft	3.63 ac-ft	5-27-08	36.6 ac
RCS-3	5-27-08	1.69 ac-ft	1.03 ac-ft	5-27-08	8.0 ac
RCS-4	5-27-08	1.62 ac-ft	0.71 ac-ft	5-27-08	3.3 ac

* PWRS total storage is net 2' of freeboard space.

** Required storage volume is based on 21 days of storage at 37,000 gpd inflow.

Process wastewater from the milking center operations is treated by pumping the water over a screen to separate manure solids from the water. This is done to conserve PWRS storage capacity. From the screen, process water is drained to the PWRS for temporary storage. Process water is typically stored in the PWRS for approximately 30 days and is then applied with irrigation water to one of the fields in the crop land program, or may be transferred off-site. There are crops growing at this facility year round.

The Runoff Control Structures (RCS) are not used for long term storage of runoff storm water. These RCSs are designed to capture and detain only storm water runoff. The amount of storm water runoff collected in any given year is not predictable. As soon as possible, but within 14 days, any runoff detained in an RCS is de-watered to the PWRS, to land application or transferred off-site.

3.2 No-hydrologic connection (liner) documentation

There are retention structure liner certification(s) to document no direct hydrologic connection via ground water to surface water. A copy of the certification is kept with the design and operating records for this facility.

3.3 Dry Manure Storage

Estimated Total Manure Solids Production Annually: 18,565 tons
Refer to the calculation worksheet in the Tables Section of this NMP

The dry manure solids storage capacity is greater than 18,565 tons.

Manure solids removal is not based on a pre-determined annual schedule. Dry manure solids are normally stored within the confinement pens until an off-site removal event is scheduled. At that time the manure is piled in the pen with a wheel loader. At the time of removal, the manure solids are loaded onto haul trucks and taken from the facility. Haul trucks may be weighed and a computerized record made of the removal. Small amounts, such as a pickup or small trailer loads may not be recorded.

At times some corral pens may need to be cleaned and the manure solids stored outside of the pen. In this event, manure solids are stored in an area northwest of the corral system. Manure solids so stored are removed with other corral pen solids.

3.4 Schedule of De-watering and Manure Solids Removal.

De-watering of the RCS or PWRS is not performed on a pre-scheduled basis.

De-watering of the RCS to the PWRS or to crop land is conducted on an as needed basis. Refer to discussion in Sub-Part 3.1. De-watering of accumulated runoff is conducted as soon as possible after the storm event, normally within 7 to 10 days, but within 14 days.

De-watering of the PWRS is based on crop irrigation throughout the year. De-watering options occur approximately once a month. PWRS and RCS De-watering can occur at any time, except for brief periods of time following heavy precipitation.

Manure solids removal is not based on a pre-determined annual schedule. Refer to Section 3.3.

3.5 Composting

This facility does compost some mortality animals. This is done when local rendering services are not available. Mortality composting is managed in a location and in accordance with procedures designed to prevent contact with Water of the United States.

At this time there is no large scale manure solids composting operation at this facility. If a composting operation is implemented in the future it will be designed to prevent contact with Water of the United States.

3.6 Records/Certifications

A copy of the engineers certification(s) will be kept with the facility design and operation records for the term of this permit or a minimum of 5 years.

At least once in every 5 years, an independent professional or NRCS engineer will review the liner maintenance record and conduct a site evaluation. A report on the review and evaluation will be prepared and entered into the records.

DOMINGUEZ DAIRY
WASTEWATER POND
LINER RE-CERTIFICATION

An HDPE-lined pond contains wastewater from the dairy operations at the Dominguez Dairy, located in Mesquite, New Mexico. This pond has been in operation for five years, and requires re-certification by a professional engineer licensed to operate in New Mexico.

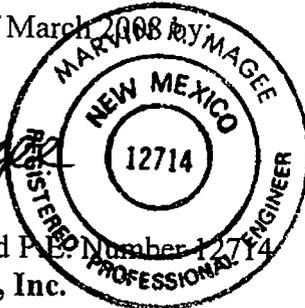
An inspection of the pond was performed on February 21, 2008. The liner was visible down to the 10-foot level. The liner had no cuts or tears above the 10-foot level. The wastewater pond berm was free of vegetation, and erosion of the berm was limited to minor surface rills. There was no evidence of leaks at any point in the berm.

To the best of my knowledge, the wastewater pond is appropriate for use as a wastewater retention structure as constructed. This pond was designed and constructed in conformance with New Mexico Environment Department and Environmental Protection Agency criteria for wastewater ponds.

Certified this 7th day of March 2008 by



Marvin Magee,
New Mexico Registered Professional Engineer Number 12714
Magee and Associates, Inc.



MAGEE AND ASSOCIATES, Inc.
Consulting Engineers – Civil and Environmental

P.O. Box 730
Mesilla Park, NM 88047

Phone (505) 523-9613
Fax (505) 523-9614

May 27, 2008

Mr. Isaac Dominguez
Dominguez Dairy
P.O. Box 21
Mesquite, NM 88048

**Re: Certification Report on the Construction of Four Stormwater Ponds at
Dominguez Dairy (DP-624 and NPDES NMG010026)**

Dear Mr. Dominguez:

Attached is the certification report for the construction of four (4) Stormwater Ponds at Dominguez Dairy. Construction of these ponds was completed during April 2008.

If you have any questions, please call me at (505) 523-9613.

Sincerely,

Magee and Associates, Inc.


Marvin Magee, P.E.
Principal



Attachment

cc: Mary Sanchez, NRCS
Shawna Clark, NMED

CERTIFICATION OF CONSTRUCTION

CERTIFICATION OF CONSTRUCTION

I was responsible for the design of the four HDPE-lined stormwater runoff ponds (pond #s 1, 2, 3 and 4) at Dominguez Dairy, and am a Registered Professional Engineer in the State of New Mexico, under license #12714. The ponds were constructed in accordance with the approved plan and specifications. As constructed, these pond liners provide equal or greater protection of both surface- and groundwater as a pond lined with 1½ feet of soil having a hydraulic conductivity value of 1×10^{-7} cm/sec. I certify to the best of my knowledge and belief that the ponds are safe for their intended use.


Marvin Magee, P.E. #12714



**CERTIFICATION REPORT ON THE CONSTRUCTION OF
FOUR STORMWATER PONDS AT DOMINGUEZ DAIRY,
MESQUITE, NEW MEXICO;
NMED DISCHARGE PERMIT NO. 624 & NPDES NMG010026**

INTRODUCTION

Environmental Protection Agency (EPA) and New Mexico Environment Department (NMED) regulations require runoff from dairy operations be contained on dairy property. Previously, the dairy had three clay-lined stormwater retention ponds for this purpose. Dominguez Dairy constructed four (4) new HDPE-lined ponds to replace the clay-lined ponds. Each pond services a distinct drainage area, as described in the following sections. Construction was completed during April 2008.

Runoff from the 25-year/24-hour precipitation event is based on rainfall amount, soil types and land uses. For each stormwater retention pond, it is assumed that 100% of the precipitation landing within the pond is included in the runoff volume. As recommended by the Natural Resource Conservation Service, impervious areas (buildings, concrete roads) are assigned a curve number (CN) of 95 for runoff volume calculations, and cow pens are assigned a CN of 90. For the remainder of dairy property, respective CN's are assigned based on soil type and current land use. Roads, feed storage, and equipment storage areas, dominate the remaining property.

Analysis of the existing topography, drainage patterns, and land use at the facility was done to divide the facility into appropriate drainage areas. This analysis has characterized four individual drainage areas, and a new HDPE-lined stormwater retention pond will be constructed within each area.

DRAINAGE AREAS

The four drainage areas at the dairy are shown on the attached site plan. These areas include:

- Area 1 – East Operations; southern and eastern pens and milking parlor;
- Area 2 – West Operations; north central pens, hospital, feed and equipment storage;
- Area 3 – Calf Pens; west of Area 2;
- Area 4 – Manure / Compost; northwest storage area.

Area 1 occupies 71.8 acres, including pens, the milking parlor and wash pad, concrete roads, gravel roads and cultivated ground. Soils at Area 1 are classified as hydrologic soil groups A/B. The proposed stormwater retention pond occupies 2.2 acres at the southwest corner of Area 1. The remainder of Area 1 includes 61% cow pens, 35% roads and storage areas, and 4% impervious.

Area 2 occupies 37.8 acres, including cow pens, the hospital, feed storage area, and equipment storage. Soils are hydrologic soil groups A and B. The proposed pond covers 1.2 acres at the southwest corner of the area. Area 2 includes 72% roads and storage areas, 16% pens, and 12% impervious.

Area 3 occupies 8.4 acres with cow pens and roads. Soils are hydrologic soil groups A and B. The proposed pond covers 0.4 acre at the southwest corner of the area. Area 3 includes 56% pens, 41% roads, and 3% impervious.

Area 4 occupies 3.7 acres with manure/compost piles and gravel roads. Soils are hydrologic soil groups A/B and B. The proposed pond covers 0.4 acre in the northwest portion of the area. Area 4 includes 95% manure/compost piles and 5% roads.

25-YEAR / 24-HOUR PRECIPITATION EVENT RUNOFF VOLUME

All calculations of runoff volume shown below are in accordance with the Natural Resource Conservation Service guidance included in the Engineering Field Manual for Conservation Practices. Runoff volumes for each drainage area are as follows:

Area 1 (east operations to hospital)

- Area 1 = 71.8 acres
- SW pond = 2.2 acres
- Area 1 excluding SW pond = 69.6 acres
- Soils
 - Bm (HSG A) 38.0 ac 53.0% of total area
 - Cb (HSG A/B) 3.8 ac 5.3%
 - Pa (HSG B) 29.9 ac 41.7%
- 25 yr-24 hr storm = 2.8 inches
- CN for Area 1 excluding the SW pond (using Table 2-2 in Chapter 2 of the Engineering Field Manual for Conservation Practices)
 - Concrete and buildings 2.8 ac 4.1% of total area
 - Pens 42.2 ac 60.6%
 - Roads 24.6 ac 35.2%

4.1% = impervious, soil HSG A and B → CN = 95
 60.6% = pens (soil and manure), soil HSG A and B → CN = 90
 17.6% = dirt roads, soil HSG A → CN = 72
 17.6% = dirt roads, soil HSG B → CN = 82

$$CN = (0.041*95) + (0.606*90) + (0.176*72) + (0.176*82) = 85.55$$

Use CN = 86

- Direct Runoff excluding the SW pond (using Figure 2-5 in Chapter 2 of the Engineering Field Manual for Conservation Practices): Q = 1.4 inches
- Runoff in SW pond = 100% of precipitation, 2.8 inches x 2.2 acres

$$Q = [(1.4 \text{ in.} * 69.6 \text{ ac})/12] + [(2.8 \text{ in.} * 2.2 \text{ ac})/12] = 8.63 \text{ ac-ft}$$

Area 2 (west operations)

- Area 2 = 37.8 acres
- SW pond = 1.2 acres
- Area 2 excluding SW pond = 36.6 acres
- Soils
 - Bm (HSG A) 19.3 ac 51.0% of total area
 - Pa (HSG B) 18.5 ac 49.0%
- 25 yr-24 hr storm = 2.8 inches

- CN for Area 2 excluding the SW pond (using Table 2-2 in Chapter 2 of the Engineering Field Manual for Conservation Practices)

◦ Concrete and buildings	4.4 ac	12.0% of total area
◦ Pens	5.9 ac	16.2%
◦ Roads	26.3 ac	71.8%

12.0% = impervious, soil HSG A and B → CN = 95

16.2% = pens (soil and manure), soil HSG B → CN = 90

35.9% = dirt roads, soil HSG A → CN = 72

35.9% = dirt roads, soil HSG B → CN = 82

$$CN = (0.12*95) + (0.162*90) + (0.359*72) + (0.359*82) = 81.26$$

Use CN = 81

- Direct Runoff excluding the SW pond (using Figure 2-5 in Chapter 2 of the Engineering Field Manual for Conservation Practices): Q = 1.1 inches
- Runoff in SW pond = 100% of precipitation, 2.8 inches x 1.2 acres

$$Q = [(1.1 \text{ in.} * 36.6 \text{ ac})/12] + [(2.8 \text{ in.} * 1.2 \text{ ac})/12] = 3.63 \text{ ac-ft}$$

Area 3 (calf pens by field D-9)

- Area 3 = 8.4 acres
- SW pond = 0.4 acre
- Area 3 excluding SW pond = 8.0 acres

- Soils

◦ Bm (HSG A)	7.1 ac	84.1% of total area
◦ Pa (HSG B)	1.3 ac	15.9%

- 25 yr-24 hr storm = 2.8 inches

- CN for Area 3 excluding the SW pond (using Table 2-2 in Chapter 2 of the Engineering Field Manual for Conservation Practices)

◦ Concrete and buildings	0.2 ac	3.0% of total area
◦ Pens	4.5 ac	56.5%
◦ Roads	3.2 ac	40.5%

3.0% = impervious, soil HSG A and B → CN = 95

56.5% = pens (soil and manure), soil HSG A → CN = 90

30.5% = dirt roads, soil HSG A → CN = 82

10.0% = dirt roads, soil HSG B → CN = 72

$$CN = (0.03*95) + (0.565*90) + (0.305*82) + (0.10*72) = 85.91$$

Use CN = 86

- Direct Runoff excluding the SW pond (using Figure 2-5 in Chapter 2 of the Engineering Field Manual for Conservation Practices): Q = 1.4 inches
- Runoff in SW pond = 100% of precipitation, 2.8 inches x 0.4 acres

$$Q = [(1.4 \text{ in.} * 8.0 \text{ ac})/12] + [(2.8 \text{ in.} * 0.4 \text{ ac})/12] = 1.03 \text{ ac-ft}$$

Area 4 (manure storage)

- Area 4 = 3.7 acres
- SW pond = 0.4 acre
- Area 4 excluding SW pond = 3.3 acres
- Soils
 - Cb (HSG A/B) 0.5 ac 14.3% of total area
 - Gg (HSG B) 3.1 ac 84.0%
 - Pa (HSG B) 0.1 ac 1.7%
- 25 yr-24 hr storm = 2.8 inches
- CN for Area 4 excluding the SW pond (using Table 2-2 in Chapter 2 of the Engineering Field Manual for Conservation Practices). The Area 4 CN is assigned based on anticipated land use (manure and compost storage). Once constructed and operating, Area 4 will consist almost entirely of fine-grained soils that will limit infiltration, therefore a CN of 90 is assumed for the entire area excluding the SW pond.
 - Manure/compost piles/roads 3.3 ac 100% of area excluding SW pond

100% = roads, soil and manure → CN = 90

Use CN = 90

- Area 4 Direct Runoff excluding the SW pond (using Figure 2-5 in Chapter 2 of the Engineering Field Manual for Conservation Practices): Q = 1.8 inches
- Runoff in SW pond = 100% of precipitation, 2.8 inches x 0.4 acres

$$Q = [(2.3 \text{ in.} \cdot 3.3 \text{ ac})/12] + [(2.8 \text{ in.} \cdot 0.4 \text{ ac})/12] = 0.71 \text{ ac-ft}$$

STORMWATER POND DESIGNS

The proposed stormwater retention ponds are designed to contain the 25-year/24-hour runoff volumes calculated in the previous section, with two feet of freeboard. Design volumes for each drainage area are shown below:

Area 1

- 25 Year/24 hour precipitation runoff volume = 8.63 ac-ft
- Area 1 proposed design volume with 2' freeboard = 9.2 ac-ft
- Area 1 proposed design volume for full pond = 11.7 ac-ft

Area 2

- 25 Year/24 hour precipitation runoff volume = 3.63 ac-ft
- Area 2 proposed design volume with 2' freeboard = 4.4 ac-ft
- Area 2 proposed design volume for full pond = 5.9 ac-ft

Area 3

- 25 Year/24 hour precipitation runoff volume = 1.03 ac-ft
- Area 3 proposed design volume with 2' freeboard = 1.2 ac-ft
- Area 3 proposed design volume for full pond = 1.8 ac-ft

Area 4

- 25 Year/24 hour precipitation runoff volume = 0.71 ac-ft
- Area 4 proposed design volume with 2' freeboard = 0.71 ac-ft
- Area 4 proposed design volume for full pond = 1.35 ac-ft

CONSTRUCTION PHASE

Dominguez Dairy began excavation at each pond location, and removed the majority of the material from the ponds. Dominguez Dairy then retained Rio Services (Anthony, NM) to perform final excavation and surface preparation at each pond.

The Snow Co. (Albuquerque, NM) installed 60-mil HDPE liner in each pond in accordance with construction standards for stormwater ponds. Liner installation began on April 21, 2008 and was completed, including testing, on April 24, 2008. The Project Quality Control Documentation section includes all project submittals from the Snow Co.

The ponds were surveyed following final excavation to determine the capacity of each pond. The results of this survey are as follows:

**Dominguez Dairy Stormwater Ponds
As-Built Volumes**

Area 1 pond, Full, Pond Level 3805' to 3811'		gallons	acre-feet
Analysis Method	Grid	4,001,433	12.28
	Composite	4,035,767	12.39
Area 1 pond, 2-foot Freeboard, Pond Level 3805' to 3809'			
Analysis Method	Grid	3,221,464	9.89
	Composite	3,261,654	10.01
Area 2 pond, Full, Pond Level 3814.5' to 3829.5'			
Analysis Method	Grid	1,992,537	6.12
	Composite	2,017,378	6.19
Area 2 pond, 2-foot Freeboard, Pond Level 3814.5' to 3827.5'			
Analysis Method	Grid	1,522,576	4.67
	Composite	1,654,860	5.08
Area 3 pond, Full, Pond Level 3805' to 3814'			
Analysis Method	Grid	524,894	1.61
	Composite	549,533	1.69
Area 3 pond, 2-foot Freeboard, Pond Level 3805' to 3812'			
Analysis Method	Grid	386,148	1.19
	Composite	415,432	1.28
Area 4 pond, Full, Pond Level 3805' to 3811'			
Analysis Method	Grid	500,457	1.54
	Composite	526,308	1.62
Area 4 pond, 2-foot Freeboard, Pond Level 3805' to 3809'			
Analysis Method	Grid	283,754	0.87
	Composite	306,979	0.94

Contained in the following sections are:

Site Plan

Ponds 1, 2, 3 and 4 Certification

As-Built Drawings (Areas 1, 2, 3 and 4)

Project Quality Control Documentation

4. Mortality Animals and Veterinary Waste Management

4.1 Mortality Animals

Mortality animals are not disposed in any location that could provide direct access to Water of the United States.

Off-Site Removal: All deceased animals are removed from the facility by a processor. If the processor does not pick them up within 48 hours, they are composted in accordance with NMSU and/or NMED guidelines.

4.2 Veterinary Waste Management

Veterinary Waste is disposed through the services of a medical/veterinary waste disposal service. Waste materials are stored on-site in secure containers until removed from the facility for disposal by the service.

5. Diversion of Clean Water

There is no animal contact, animal waste contact or stored raw material contact with storm water runoff originating outside the facility production area.

Storm water runoff that originates off-site is diverted from entering the facility production area. In cooperation with New Mexico Department of Transportation (NMDOT) and the Dona Ana County Flood Control District, drainage control features have been established to divert and drain off-site storm water runoff around this facility. These control features are maintained as needed by this facility, NMDOT and Dona Ana County Flood Control District to assure proper operation. A site plan is included in Figures Section of this NMP.

Within the CAFO facility clean water from roof areas is not diverted from the surface drainage generated within the production area. This clean water is accounted for in the capacity of the runoff control structure (RCS).

6. Direct Animal Contact with Water of the United States

There is no direct animal contact with Water of the United States at this facility. All animals are confined by steel pipe and cable corral fences and are not allowed to roam freely about the facility property. All animals are confined such that they have no access to Water of the United States. Off-site storm water runoff is not allowed to enter or pass through this facility in any way that allows such runoff to come into contact with confined animals or animal waste.

A Site Plan is provided in the Figures section of this NMP. In addition, a copy of a section of the USGS Topographic map is also included for reference.

7. Chemicals and Other Contaminants Handling

7.1 Storage, use & disposal

All chemical compounds used at this facility are to be stored and used in accordance with manufacturer recommendations. Storage volume is generally limited to immediate use projected for the next 15 to 30 days. Storage is provided in a sheltered area or enclosed storeroom to prevent contact with storm water runoff.

All chemical compounds are to be used in accordance with manufacturer recommendations.

Unused portions of chemicals and empty container are disposed in accordance with manufacturer recommendations and are not disposed in any wastewater retention or runoff control structure.

The normal day-to-day use of any chemical compounds for, including but not limited to, equipment sanitizing, disinfection, animal health or facility cleaning, which by virtue of its use in the operation of this facility may enter wastewater or come in contact with manure or storm water within the production area does not constitute disposal of the product.

7.2 Other Contaminants (SPCC)

Other contaminants of special interest are fuels and lubricants. These materials are to be properly stored and managed in accordance with any applicable spill prevention rules.

Raw inputs or manure stockpiles are stored at this facility so that any storm water that has come in contact with them is captured in the RCS watershed.

7.3 Spill management

Refer to the Emergency Action Plan and Safety Precautions found in Appendix B of this NMP. This Plan is taken from the NM-NRCS CNMP program. The appropriate emergency contact number will be entered and up-dated as needed.

8. Conservation Practices

8.1 Site proximity to Water of US

It is approximately 3,400' from the land application areas at this facility to a Water of the US.

As a protective control, there are off-site run-on diversions maintained by this facility, NMDOT and the Dona Ana County Flood Control District.

8.2 Application Area Setback Requirements

There is a set back distance of 3,400' between the crop land and Water of the US.

8.3 Buffers, Vegetated Filter Strips

The crop fields are bounded by elevated levies and irrigation ditch berms such that field runoff is prevented. .

8.4 Field Leveling

This facility uses flood irrigation techniques and the fields are leveled prior to planting to assure proper irrigation coverage.

8.5 Nutrient Transport Potential

Nutrient transport potential is minimal. All of the fields are leveled prior to planting. All of the fields are bordered by elevated levies or berms that prevent field runoff.

8.6 Soil Type, Topography & Erosion Potential

This information is located in Appendix A and the Figures section of this NMP.

8.7 Tillage Practices

This information is located on the WEQ Worksheet which is with the field evaluation information in Appendix A. To the extent possible tillage practices are used that will leave crop residue on the surface to help prevent wind erosion.

Summary of Conservation/Control Practices Protecting the Mesquite Drain, Del Rio Drain and East Side Canal.

Mesquite Drain

At this site the Mesquite Drain is bordered by fields D-3, D-4, D-5, DM-1, DM-5, DM-6 and DM-7. Please refer to the Cross-section Plan for information regarding the direction of irrigation water flow. Only part of fields DM-5 and DM-7 flow toward the drain. Fields D-4, DM-6 and part of DM-5 flow away from the Drain and fields D-3, D-5 and DM-1 flow parallel to the Drain. All of these fields are laser leveled prior to each planting. The end row is also leveled so tail water does not run perpendicular to the end of the row.

The Mesquite Drain has excavation spoil berms on both sides of the drain channel. The top of the spoil berms are about 35-60 feet wide and are significantly elevated above the adjacent field elevation. Please refer to the cross-section profiles A, B, C & D for more information. The berms provide a physical barrier to cross-gradient and down-gradient irrigation flow, which prevents agricultural runoff from entering the drain. The Drain and it's berms are maintained by the Elephant Butte Irrigation District (EBID).

East Side Canal

The East Side Canal is bordered by fields D-5, DM-1, DM-2, DM-3 and DM-4. Field DM-2 and part of field DM-3 have irrigation water flowing away from the canal. Fields D-5, DM-1, DM-4 and part of DM-3 flow parallel to the canal. All of these fields are laser leveled prior to each planting. The end row is also leveled so tail water does not run perpendicular to the end of the row.

The canal lip is elevated above the adjacent field elevation. The canal berms provide a physical barrier to cross-gradient irrigation flow, which prevents agricultural runoff from entering the drain. The Canal and it's berms are maintained by the Elephant Butte Irrigation District (EBID). Please refer to the cross-section profiles E & F for more information.

Del Rio Drain

The Del Rio Drain is located west of the farm and is separated from the crop land by State Road 478 and a BNSF rail road track. There is a setback of over 100 feet between the crop land and Del Rio Drain. No surface drainage conduits between the east side of State Road 478 and the drain were observed in the area of this crop land. Cross-section profiles G & H show these transportation structures provide a significant physical barrier to down-gradient irrigation flow, which prevents agricultural runoff from entering the drain.

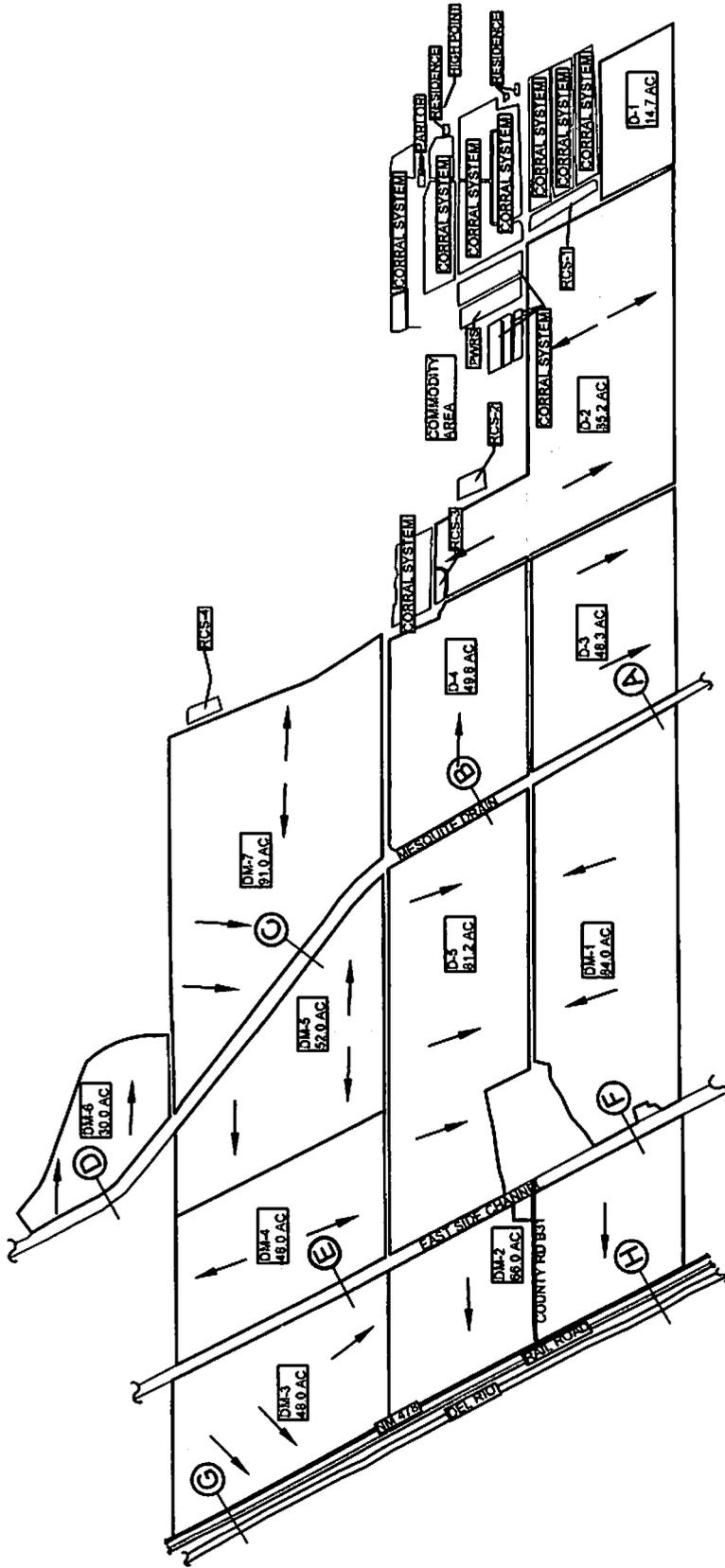
Cross-Section Profiles

The enclosed cross-section profiles were created using site data provided by a New Mexico licenced surveyor. The cross-section sites were selected to represent what was believed to be drain and canal locations most likely to be impacted by potential runoff. These profiles illustrate the constructed barrier preventing runoff from entering either the drains or the canal.

Conclusion

The Mesquite Drain, East Side Canal and the Del Rio Drain are all bounded by constructed berms or transportation features that provide a physical barrier preventing agricultural runoff from entering these structures. This provides equivalent or better pollutant reduction than what would be achieved by a 100 foot set back.

U 7



LEGEND:
 → FIELD FLOW DIRECTION
 (A) CROSS-SECTION ID & LOCATION

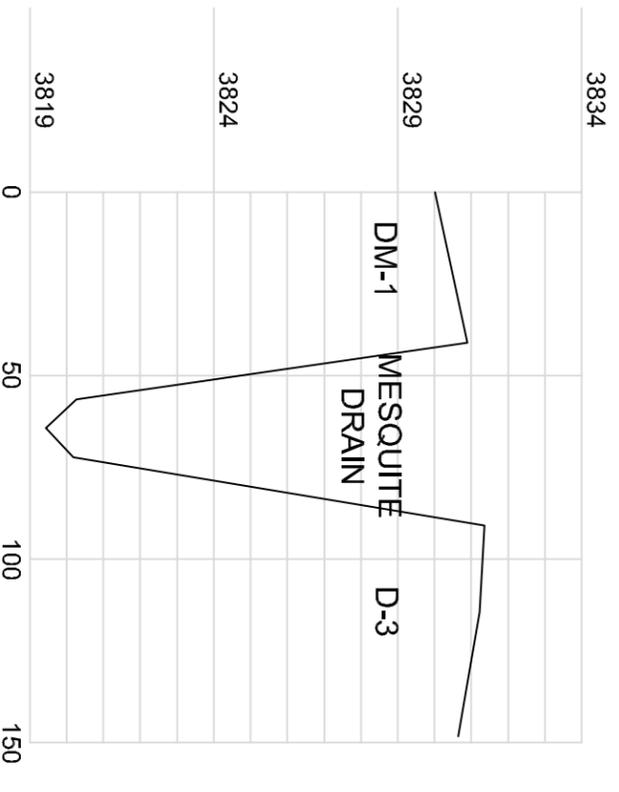


Title: **DOMINGUEZ #1 DP-624**
CROSS-SECTION PLAN
 Date: 12/3/09
 DWG/Doc Ref: Sheet No
 1" = 1500' 1/1

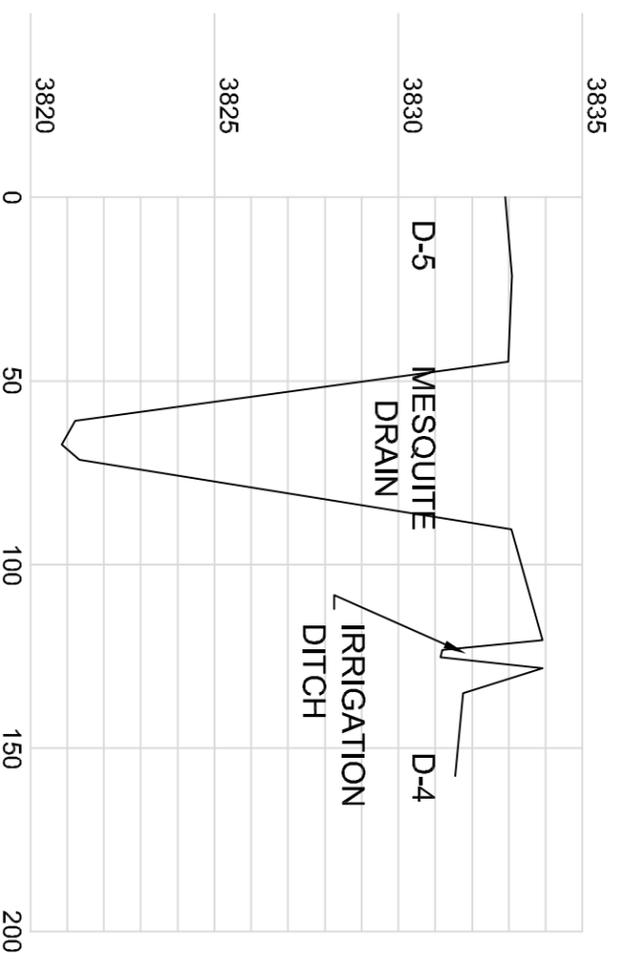
Enviro Compliance Services, Inc.
 Office (575) 762-9674 Fax (575) 762-3749
 Providing Management Assistance for Environmental Compliance Since 1981

Title:
 DOMINGUEZ #1 DAIRY
 MESQUITE DRAIN

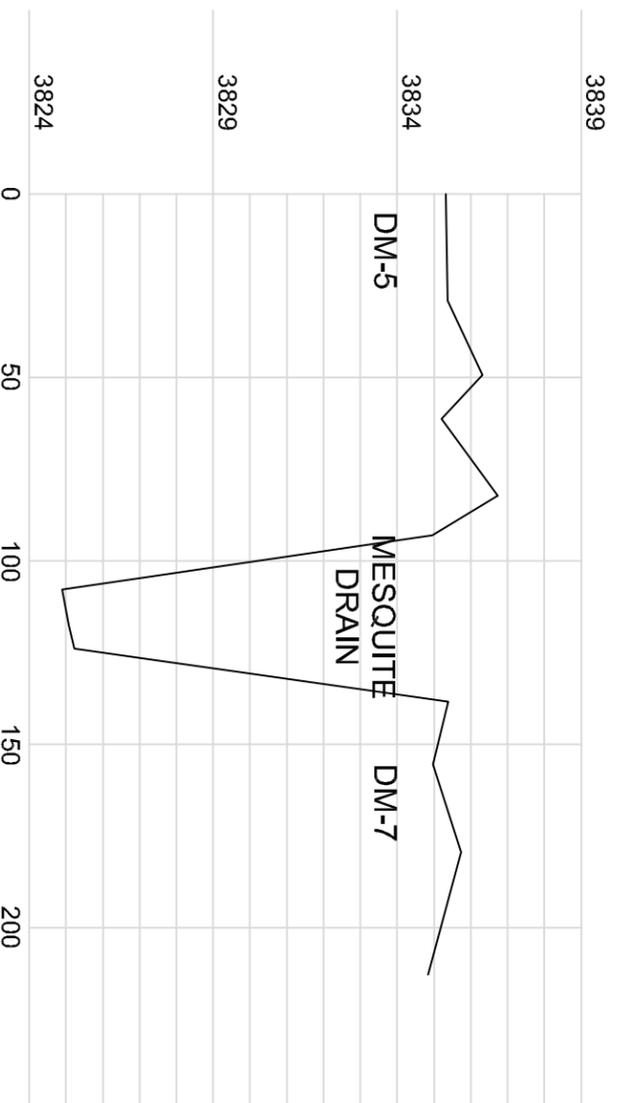
CROSS SECTIONS: A TO D



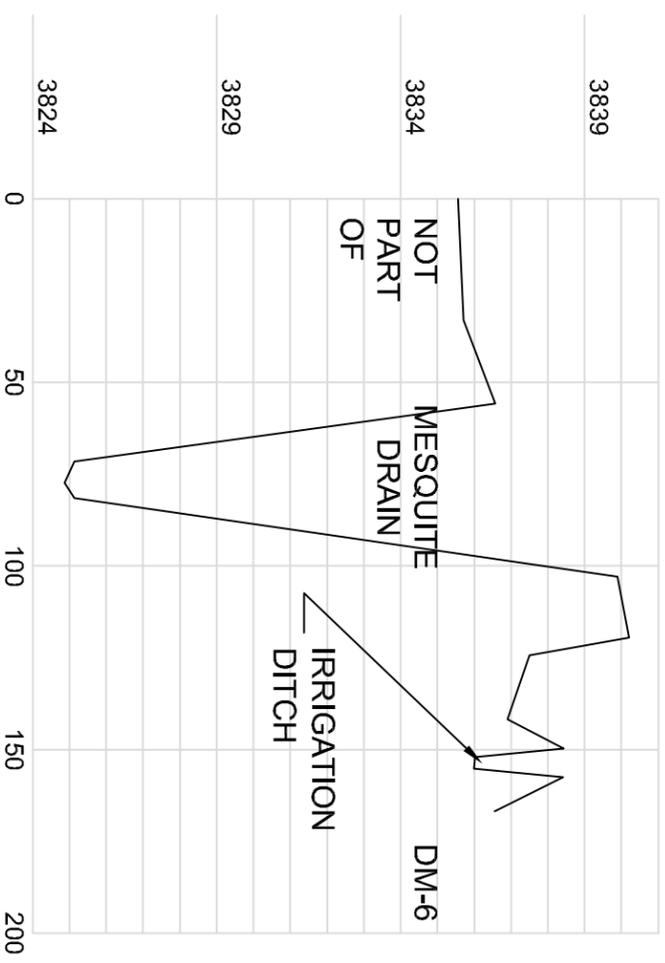
A CROSS SECTION
 SCALE: VERTICAL 1"=5'
 HORIZONTAL: 1"=50'



B CROSS SECTION
 SCALE: VERTICAL 1"=5'
 HORIZONTAL: 1"=50'



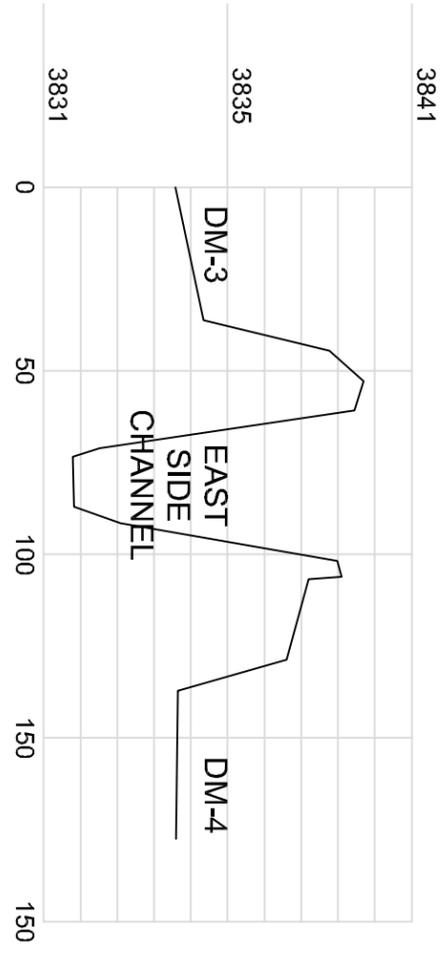
C CROSS SECTION
 SCALE: VERTICAL 1"=5'
 HORIZONTAL: 1"=50'



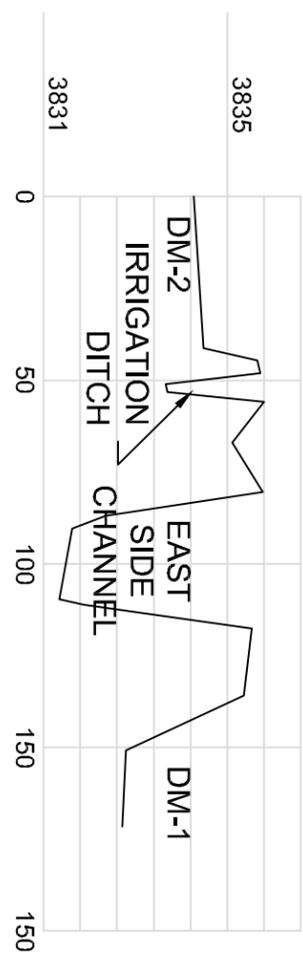
D CROSS SECTION
 SCALE: VERTICAL 1"=5'
 HORIZONTAL: 1"=50'

Title:
DOMINGUEZ #1 DAIRY
 /EAST SIDE CHANNEL

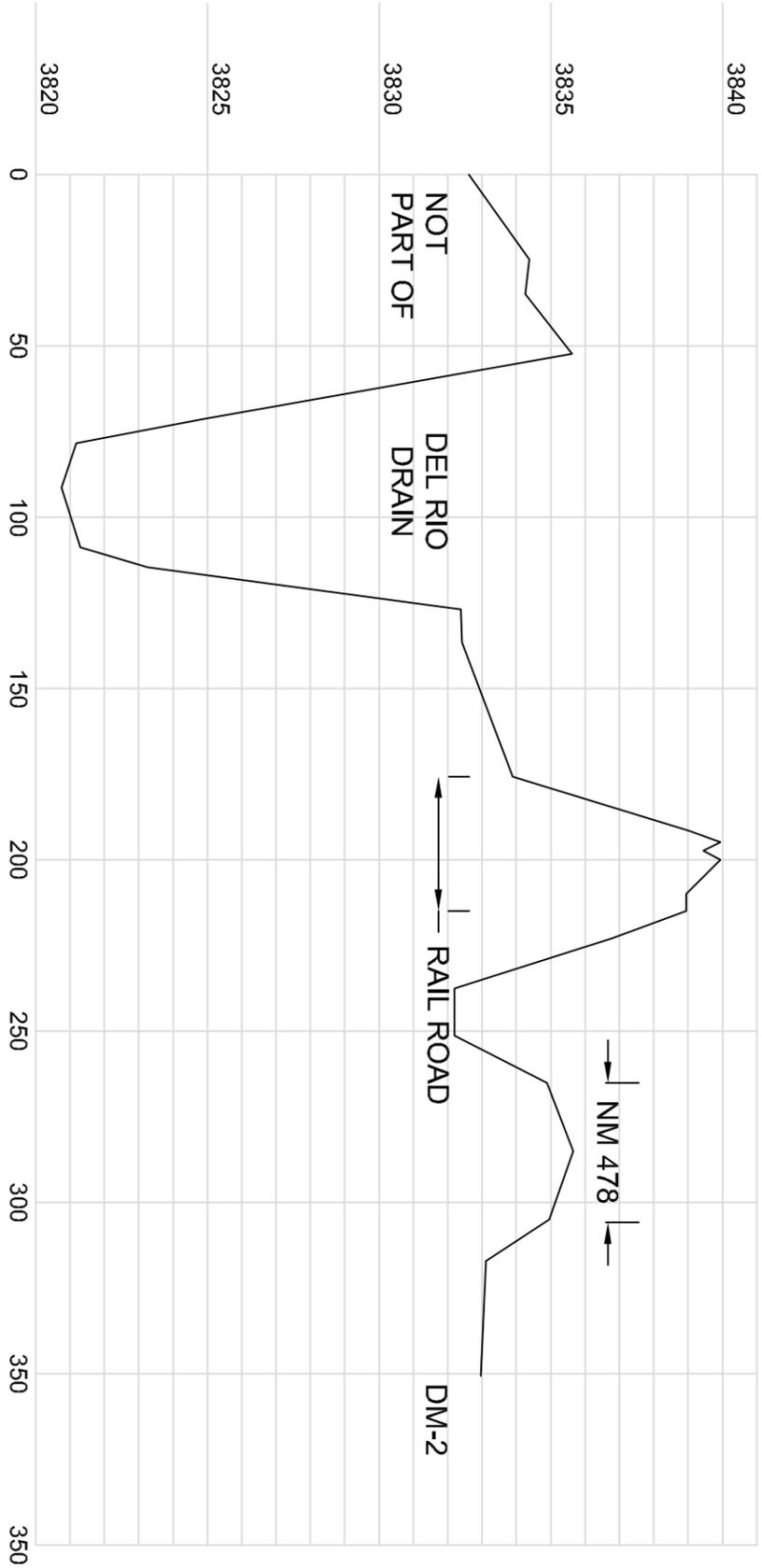
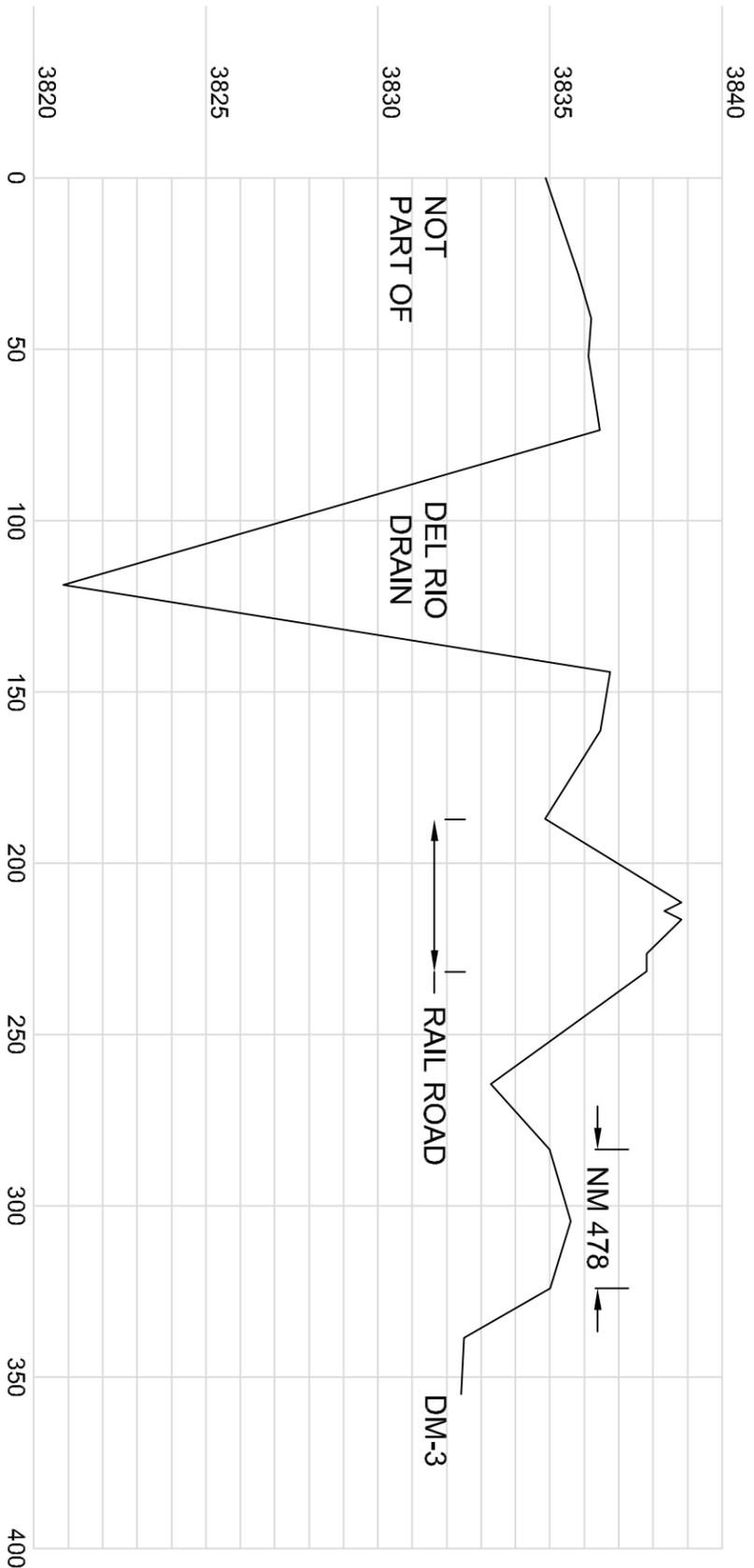
CROSS SECTIONS: E & F



E CROSS SECTION
 SCALE: VERTICAL: 1"=5'
 HORIZONTAL: 1"=50'



F CROSS SECTION
 SCALE: VERTICAL: 1"=5'
 HORIZONTAL: 1"=50'



DATE: MAY 2, 2011
 DRAWN BY: DCB
 CHECK BY: GJM

Title:
 DOMINGUEZ #1 DAIRY
 DEL RIO DRAIN

CROSS SECTIONS: G & H



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SHEET NO.
3
 OF 3

9. Nutrient Sampling Protocols

9.1 Manure, Dry

Dry manure solids will be sampled annually. Nutrient analysis will be provided to all recipients who remove significant amounts of dry manure from the facility. Persons receiving small amounts, ie pickup load, will be provided a copy of the analysis upon request. The analysis will be used by this facility as a factor in calculating the on-site crop land nutrient application rates.

Sampling Protocol: Manure samples will be collected randomly from throughout the corral system and/or from manure stockpiles. A minimum of 10 sub-samples will be collected and combined to make a single composite sample for analysis.

Nutrient Analysis: Nutrient analysis will, at a minimum, be in accordance with the guideline set forth in Appendix D of the Permit, NM NRCS Conservation Practice Standard Code 590, *Additional Criteria Applicable to Manure or Other Organic By-Products Applied as a Plant Nutrient Source*, Nutrient Values.

9.2 Process Wastewater

Process wastewater will be sampled annually. The annual analysis will be used by this facility as a factor in calculating the on-site crop land nutrient application rates.

Sampling Protocol: Wastewater samples will be collected from the process water retention structure with a long handled dipper. Samples to be analyzed for nitrogen will be field preserved with H₂SO₄ and all sample bottles will be immediately placed on ice. The samples will be held on ice or refrigerated until shipping to the laboratory. Samples will be shipped on ice with an appropriate Chain of Custody.

Nutrient Analysis: Nutrient analysis will, at a minimum, be in accordance with the guideline set forth in Appendix D of the Permit, NM NRCS Conservation Practice Standard Code 590, *Additional Criteria Applicable to Manure or Other Organic By-Products Applied as a Plant Nutrient Source*, Nutrient Values.

9.3 Soil

Crop land under the control of this facility that receives manure solids and/or wastewater from this facility will be sampled and analyzed annually. The analysis will be used as a factor to calculate the crop land nutrient application rates.

Sampling Protocol: The sampling protocol will follow the procedures set forth in the NMSU Extension Service Guideline A114 or may be collected by a vehicle mounted hydraulic probe using a similar depth, frequency and commingling protocol.

Nutrient Analysis: Soil analysis will, at a minimum, be in accordance with the guideline set forth in Appendix D of the Permit, NM NRCS Conservation Practice Standard Code 590, Soil Samples. This facility is located in Dona Ana County and is not required to analyze soils for metals in accordance with Part III.D.8.

9.4 Plant tissue Sampling

Plant tissue sampling and analysis may, but is not required by this NMP, be performed by this facility to establish farm specific crop nutrient removal values. These values may then be used to modify the annual land application calculation factors.

Sampling Protocol: Plant tissue sampling will be conducted in accordance with the NMSU Extension Guide A-123.

Analysis: Plant tissue samples will be shipped to a qualified laboratory for analysis. Samples will be analyzed for percent moisture and total nitrogen or crude protein which will be converted to a plant nitrogen value.