NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(Pursuant to NAC 445A.236)

PERMITTEE: Rockview Farms, Inc.
7011 Stewart & Gray Road
Downey, CA 90241-4347

PERMIT: **NEV89057 - Renewal**

LOCATION: Pahrump Dairy
558 North Blagg Road
Pahrump, Nye County, Nevada 89041

Latitude: 36° 13' 49" N; Longitude: 116° 00' 55" W
Township 20 S, Range 53 E, Section 9 MDB&M

Public Water Supply: The facility is not located within a wellhead capture zone and is approximately 6,000 feet from the nearest public water supply well.

General: The Permittee has applied for a water pollution control discharge permit, **NEV89057**, to continue to discharge process wastewater from the Pahrump Dairy in Pahrump. The proposed permit will authorize the discharge of process wastewater to groundwater via flood irrigation in accordance with a Division approved Nutrient Management Plan (NMP); all solid manure will continue to be transported off-site.

The 320-acre property is owned by the Focus Group and operated as a dairy by the Permittee. The property includes 12 agricultural production fields totaling approximately 196 acres. The facility is bounded by North Blagg Road on the east, Irene Street on the north, Lola Street on the west, and Basin Avenue on the south. The facility was opened in 1988 and was first permitted by the Division in October 1994. The facility is irrigated and the nitrogen is managed per the May 1999 Effluent Management Plan (EMP).

The facility is defined as a concentrated animal feeding operation (CAFO) because the dairy confines at least 700 mature dairy cows for 30 days or more in a 12-month period in an area devoid of vegetation during the normal growing season. The CAFO process wastewater definition is any water directly or indirectly used in the operation of the facility including spillage or overflow from animal watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other process components; direct contact: swimming, washing, or spray cooling of animals; dust control, not including uncontaminated groundwater used outside of the production area; or any water which comes into contact with, or is a constituent of, any raw materials, products, or byproducts including manure, feed, milk, or bedding. The production area means the portion of the facility that is not used for land application and includes all areas used for animal product production activities. This includes, but is not limited to, the animal confinement areas, the manure storage areas, the raw materials storage areas, and the waste containment areas.

Per the permit renewal application and the EMP, the facility milks approximately 2,400 Holstein cows twice daily and houses approximately 600 dry cows and young cattle in open containment. Milking center facilities include a double-32 stall milking parlor, cow holding pen, wash pen building, and three 8,000-gallon milk storage silos. Support facilities include a shop/office building, maternity barn, hoof trimming area, commodity storage shed, scale, fuel storage, hay storage sheds, and employee housing. Cows are housed in dry lot corrals adjacent to the milking center.

Approximately 5,800 tons of dry manure and 36 million gallons of process wastewater are generated annually by the facility. Process wastewater generated at the facility includes liquid manure, cow wash water, barn wash water, water from washing the milk transport lines and milk storage silos, precipitation, and runoff. The Permittee has requested a daily maximum discharge limitation of 0.200 million gallons per day (MGD). Process wastewater is applied to cropland every day on a rotating basis; the facility does not include lined process wastewater storage. The corrals are groomed daily to remove manure for odor and fly management with all solids transferred off-site.

Cow manure is collected from the wash pen and the milking barn via floor drains. Barn water is supplied from 2 wells, the North Barn Well and the South Barn Well. Barn water flows through the wash pen and holding pen

drains, where it mixes with the manure, and through several other drains throughout the barn, and into the approximately 7,500-gallon concrete sump pit. This process wastewater is pumped from the sump pit through a static screen separator to remove solids prior to discharge to the concrete mixing tower for blending with groundwater. From the mixing tower, the process wastewater flows through a 12-inch main line that runs the length of the property along Blagg Road, to the fields. Three of the 4 irrigation wells discharge only to this buried main line. Gate valves are used to control the flood irrigation flow of process wastewater to the individual fields.

The flood irrigated fields are identified as Field 1 - 16.83 acres, Field 2 – 16.76 acres, Field 3 – 16.86 acres, Field 4 – 10.07 acres, Field 5 – 10.47 acres, Field 6 – 13.81 acres, Field 7 – 20.28 acres, Field 8 – 22.73 acres, Field 9 – 23.21 acres, Field 10 – 16.15 acres, Field 11 – 13.45 acres, and Field 12 – 15.23 acres. There are 2 unlined, irrigation tailwater recovery ponds, estimated capacity 1.20 million gallons each, on the western side of the property that collect excess water from the fields. The south tailwater pond includes a pump back system.

Sordan is the primary summer crop, 5 fields approximately 82 acres, and wheat is the primary winter crop, 7 fields approximately 112 acres planted in the irrigated fields. In the 2006 annual report, the Permittee reported that the annual average nitrogen application rate was 136 pounds/acre (lb/A) and the annual average nitrogen removed was 149 lb/A. In the renewed permit, the process wastewater application rate shall be determined by the more restrictive of the nitrogen and phosphorus application rates.

The Permittee is required to contain all process wastewater resulting from the 25-year, 24-hour storm event. The Permittee has excavated the unlined containment basin, estimated volume 11.22 million gallons, but has not confirmed the storage capacity of the basin or that all of the production area drains to the basin.

Runoff from cropland that has had process wastewater applied in compliance with an approved NMP is covered by the agricultural stormwater exemption. A 10-foot wide, approximately 10-foot high containment berm has been constructed along the west side of the facility to prevent process wastewater from leaving the property. A small, 10-inch high by 12-inch wide, berm is located along the eastern edge of the property to divert run-on.

The separated solids and manure removed from the corrals may be transported to Ponderosa Dairy, NV0023027, for composting in accordance with that facility's NMP and permit, transferred to Beverly Hills Dairy, NEV2006504, for land application in accordance with the facility's NMP and permit, or transferred to other parties.

In June 2002, the Permittee made the following changes to the groundwater monitoring system:

a. Plugged and abandoned the old MW1 and drilled a deeper replacement well, MW-1, near the previous location. This replacement was necessary due to water level changes. MW-1 serves as the facility upgradient monitoring well.

b. Replaced the surface completion for MW2. The previous surface completion was flush with the ground surface and was replaced with a 36-inch above-ground steel well shroud, MW-2.

c. Plugged and abandoned the old MW3 that was located in one of the flood irrigated fields. The replacement well, MW-3, was moved from the perimeter of the property to a site adjacent to the dairy corrals to monitor the groundwater between the upgradient MW-1 and the downgradient MW-4.

d. Plugged and abandoned the old MW4 and replaced the well with MW-4 located near the southwest corner of the property. MW4 was also located in a flood irrigated field. The new location was intended to monitor water quality downgradient of all land application fields at the facility.

The facility includes 4 irrigation wells, 2 wells are located east of the facility in Section10 and 2 wells are located on the eastern perimeter of the property. The permit renewal application identified 213 wells in the west ½ of Section 9, 27 wells in Section 3, 118 wells in Section 4, 99 wells in Section 5, 269 wells Section 8, 57 wells in Section 10, 120 wells in Section 15, 106 wells in Section 16, and 435 wells in Section 17. The majority of these wells are residential. The application identified the groundwater flow direction as to the southwest with portions of Sections 9 and 16 being downgradient of the facility.

Flow: **0.200 million gallons per day (MGD) – daily maximum**

This flow is the discharge of process wastewater from the sump pit. The discharge rate shall be quantified at a flow

meter on the pipeline from the sump pit to the screen separator. All process wastewater will be used for irrigation or transferred to other parties.

The previous permit did not require flow monitoring. The volume of process wastewater used for irrigation was based on the amount of water pumped from the two milking center wells less the cow consumption, 70 gallons/day/cow (GDC) in the summer and 50 GDC in the winter.

The proposed permit will require containment of all runoff of manure and process wastewater in response to storms that do not exceed the 25-year, 24-hour event. The storm discharge flow rate into the stormwater pond will not be limited by the permit and will be dependent upon the magnitude of the storm event.

Receiving Water Characteristics: Based on 4th quarter 2006 through 3rd quarter 2007 average data from the four monitoring wells, the depth to groundwater at the facility ranges from 44 feet below ground surface (bgs) at MW-2, the west side of the property, to 52 feet bgs at MW-1, the northeast corner of the property. The average depth to groundwater at MW-3, near the center of the property, was 47 feet bgs and at MW-4, at the southwest corner of the property, was 46 feet bgs. The minimum depth to groundwater, 20 feet bgs, was measured in MW-2 during the 2nd quarter of 1996 and the maximum depth to groundwater, 57.5 feet bgs, was measured in the 4th quarter 2003.

The following table provides the 4th quarter 2006 through 3rd quarter 2007 average water quality data for the four monitoring wells:

Average Groundwater Quality

Well	Nitrate (mg/L)	Chloride (mg/L)	Total Dissolved Solids (mg/L)
MW-1	8.2	30	1,475
MW-2	6.5	117	850
MW-3	22	88	885
MW-4	20	54	818

Other than irrigation in accordance with the approved NMP, the permit will allow discharge to groundwater only during storms greater than or equal to the 25-year, 24-hour storm event or after a series of chronic events that exceed the total volume of the 25-year, 24-hour storm event.

Proposed Effluent Limitations: During the period beginning on the effective date of this permit, and lasting until the permit expires, the Permittee is authorized to discharge process wastewater:

a. To flood irrigation fields in accordance with a Division approved Nutrient Management Plan.

Samples taken in compliance with the monitoring requirements specified below shall be taken from:

a. Manure and process wastewater;

b. Soil from each field eligible for land application of process wastewater;

c. Each field that has had process wastewater applied; and

d. Flow meter on the discharge line from the sump pit.

The discharge shall be limited and monitored by the Permittee as specified in **Table I.1**.

TABLE I.1.: Discharge Limitations

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
		Sample Locations	Measurement Frequency	Sample Type
Flow, daily maximum (MGD)	0.200	d.	Daily	Flow Meter
pH (standard units)	Monitor and Report	a.	Quarterly	Discrete
Chlorides (mg/L, mg/kg)[2]	Monitor and Report	a.	Quarterly	Composite
Total Dissolved Solids (mg/L, mg/kg)[2]	Monitor and Report	a.	Quarterly	Composite
Total Suspended Solids (mg/L)	Monitor and Report	a.	Quarterly	Composite
5-day Biological Oxygen Demand (mg/L)	Monitor and Report	a.	Quarterly	Composite
Total Nitrogen -N (mg/L, mg/Kg)[2]	Monitor and Report	a.	Quarterly	Composite
		b.	(3)	Composite
Total Nitrogen -N Applied (lbs/acre)	See NMP for Annual Limit[7]	c.	Annually[1]	Calculation
Total Kjeldahl Nitrogen – N (mg/L, mg/kg)[2]	Monitor and Report	a.	Quarterly	Composite
		b.	(3)	Composite
Nitrate –N (mg/L, mg/kg)[2]	Monitor and Report	a.	Quarterly	Composite
		b.	(3)	Composite
Ammonia -N (mg/L, mg/kg)[2]	Monitor and Report	a.	Quarterly	Composite
		b.	(3)	Composite
Total Phosphorus -P (mg/L, mg/kg)[2]	Monitor and Report	a.	Quarterly	Composite
		b.	(3)	Composite
Total Phosphorus -P Applied (lbs/acre)	See NMP for Annual Limit[7]	c.	Annually[1]	Calculation
Fecal Coliform (CFU or MPN/100 mL)	Monitor and Report	a.	Quarterly	Composite
Volume of Manure and/or Process Wastewater[4] (units)	Monitor and Report	a.	Monthly	Estimate
Crop Yield[5] (tons/acre)	Monitor and Report	c.	Annually[1]	Estimate

Notes:

[1]. Annual characterizations shall be conducted in the fourth quarter and reported in the fourth quarter Discharge Monitoring Report (DMR).

[2]. mg/L for liquids, mg/kg for solids – a leaching procedure may be necessary for solids analyses.

[3]. Annually cropped fields shall have soil analyses every three years or when a major change in crop rotation occurs. Perennially cropped fields shall have soil analyses every five years.

[5]. List each type of material separately and include the dates of application for each field and the information required by Part I.A.13. for manure.

[6]. If the crop yield is not within 10% of the expected crop yield of the Nutrient Management Plan (NMP), the NMP shall be reviewed and revised as necessary.

[7]. Report the calculated allowable nutrient application rate per the NMP as well as the actual application rate. Include calculations used to determine the total nitrogen and total phosphorus loadings from all sources.

mg/L:	Milligram per liter.	CFU:	Colony Forming Unit.
MGD:	Million gallons per day.	MPN:	Most Probable Number.
-N:	As nitrogen.	mL:	Milliliter.
-P:	As phosphorus.	NMP:	Nutrient Management Plan.
mg/kg:	Milligrams per kilogram.	lbs/acre:	Pounds per acre.

Proposed Groundwater Monitoring and Limitation: Discrete groundwater samples shall be collected to confirm

the effective protection of groundwater under the established discharge conditions of this permit.

a. All wells shall be monitored in accordance with the following parameters:

TABLE I.2.: Groundwater Monitoring

PARAMETER	REQUIREMENTS	SAMPLE LOCATIONS[1]	FREQUENCY	SAMPLE TYPE
Depth to Groundwater (feet)	Monitor & Report	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Field Measurement
Groundwater Elevation (feet)	Monitor & Report	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Calculate
pH (standard units)	Monitor & Report	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Discrete
Chlorides (mg/L)	Monitor & Report	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Discrete
Nitrate -N (mg/L)	Monitor & Report	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Discrete
Total Nitrogen –N (mg/L)	10.0[2]	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Discrete
Total Dissolved Solids (mg/L)	Monitor & Report	MW-1, MW-2, MW-3, MW-4	Quarterly[3]	Discrete

Notes:

[1]: Additional monitoring wells may be added to the permit as a minor modification.

[2]: The groundwater at MW-3 and MW-4 exceed this standard at permit issuance. Ten mg/L total nitrogen as nitrogen concentration is a goal to be achieved through improved nutrient application procedures and potentially other remedial activities.

[3]: Use of the unlined containment basin shall trigger weekly MW-2 groundwater analyses for two months. If no increasing trends are identified, MW-2 analyses shall revert to quarterly. If increasing trends are identified, the term of the weekly monitoring will be extended and lining of the basin may be required.

mg/L: Milligrams per liter. MW-1: Monitoring well 1. MW-3: Monitoring well 3.
-N: As nitrogen. MW-2: Monitoring well 2. MW-4: Monitoring well 4.

b. The detection of concentrations of total nitrogen as nitrogen (-N) in groundwater samples invoke the following limitations and response requirements:

i. If the total nitrogen-N concentration increases to 7.0 mg/L, an alternate method of process wastewater and/or manure storage, approved by the Division, shall be selected;

ii. If the total nitrogen-N concentration increases to 9.0 mg/L, construction of the approved alternate process wastewater and/or manure storage facility shall begin; and

iii. If the total nitrogen-N concentration increases to 10.0 mg/L, discharge to groundwater shall cease.

See Part I.A.30.j. of the permit.

Rationale for Permit Requirements: Monitoring requirements for the parameters specified in Table I.1: Discharge Limitations and Table I.2: Groundwater Monitoring are being proposed to ensure that the Permittee has appropriate manure and process wastewater data to comply with the NMP, Part I.A.3., and Manure Transfer Requirements, Part I.A.13., and to determine any potential impact to waters of the State that may occur in response to a discharge.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the

permit.

b. **Within thirty (30) days** of the permit effective date, the Permittee shall submit to the Division for review and approval a Nutrient Management Plan prepared in accordance with NRCS Conservation Practice Standard Code 590, Nutrient Management, June 2002 or more recent; NRCS Conservation Practice Standard Code 633, Waste Utilization, October 2003 or more recent; and all applicable sections of this permit.

c. **Within thirty (30) days** of Division approval, the Permittee shall implement the Nutrient Management Plan.

d. **Within thirty (30) days** of the permit effective date, the Permittee shall submit to the Division for review and approval an Animal Mortality Management Plan.

e. **Within thirty (30) days** of Division approval, the Permittee shall implement the Animal Mortality Management Plan.

f. **Within thirty (30) days** of the permit effective date, the Permittee shall submit to the Division documentation of the installation of a process wastewater flow meter.

g. **Within sixty (60) days** of the permit effective date, the Permittee shall:

   i. Submit to the Division a certification stamped by a Nevada licensed Professional Engineer stating that the facility production areas have been constructed to contain, with no discharge to waters of the State, all process wastewater, including direct precipitation and runoff from the 25-year, 24-hour storm event; or

   ii. Submit to the Division a schedule to complete the upgrade and/or replacement of the production area, within one year.

h. **Within ninety (90) days** of the permit effective date, the Permittee shall:

   i. Submit to the Division for review and approval a Nevada licensed Professional Engineer stamped certification of integrity of the sump pit as a lined process component; or

   ii. Submit to the Division for review and approval a Nevada licensed Professional Engineer stamped design and schedule for replacement of the sump pit; or

   iii. Install a down gradient monitoring well to determine whether groundwater is being impacted by the sump pit.

i. **Within ninety (90) days** of the permit effective date, the Permittee shall:

   i. Submit to the Division for review and approval a Nevada licensed Professional Engineer stamped plan for the **rehabilitation** of both Monitoring Well – 3 (MW3) and Monitoring Well – 4 (MW4) to address current DMR results; or

   ii. Submit to the Division for review and approval a Nevada licensed Professional Engineer stamped plan for the **replacement** of both Monitoring Well – 3 (MW3) and Monitoring Well – 4 (MW4) to address current DMR results.

j. **Within one hundred eighty (180)** day of the permit effective date, the Permittee shall submit to the Division for review and approval an analysis of the groundwater to determine the source and extent of the nitrogen contamination. If the source of nitrogen is determined to be the dairy, the

analysis shall propose actions to eliminate the source(s) and to remediate the contaminated groundwater.

k. **Within twenty-four (24) hours** of receiving any water other than direct precipitation in the unlined containment basin, the Permittee shall notify the Compliance Coordinator at (775) 687-9438.

l. **Within seventy-two (72) hours** of receiving any process wastewater due to a storm event, the unlined runoff containment shall be completely evacuated.

m. **At least ninety (90) days** prior to the closure of a lagoon, pond, surface impoundment, or other manure or process wastewater storage or treatment facility, the Permittee shall submit to the Division for review and approval a component closure plan or facility closure plan, if operations will cease.

n. **At least ninety (90) days** prior to the temporary closure of a lagoon, pond, surface impoundment, or other manure or process wastewater storage or treatment facility, the Permittee shall submit to the Division for review and approval a component temporary closure plan or facility temporary closure plan, if operations will temporarily cease.

o. **Within thirty (30) days** of closure or temporary closure of a lagoon, pond, surface impoundment, or other manure or process wastewater storage or treatment facility, the Permittee shall notify the Division of the closure.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the facility to discharge process wastewater to the groundwater of the State via flood irrigation is being sent to the **Las Vegas Review-Journal** and the **Pahrump Valley Times** for publication. The notice is being mailed to interested persons on the Division's mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the Notice of Proposed Action in the newspapers. The comment period can be extended at the discretion of the Administrator. The deadline for receipt of all comments pertaining to this proposed permit is 5:00 PM **January 9th, 2009.**

Members of the public wishing to comment upon the proposed permit and/or to recommend terms and conditions for consideration of incorporation in the permit are invited to provide comments and information that are pertinent to the groundwater discharge permit. Comments not related to water quality issues cannot be considered.

All comments or objections received within the thirty (30) day period will be considered in the formulation of final determinations regarding the application. If the determinations of the Administrator are substantially changed from the tentative determinations, the Administrator will give public notice of the revised determinations. Additional comments and objections will be considered at that time.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination:

The Division has made the tentative determination to issue the proposed groundwater discharge for a period of five (5) years.

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