

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2007-0043  
WASTE DISCHARGE REQUIREMENTS  
FOR  
SIERRA NEVADA CHEESE COMPANY, INC.  
AND  
GREGERSEN PROPERTIES LLC  
CHEESE PRODUCTION FACILITY  
GLENN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. Sierra Nevada Cheese Company, Inc. and Gregersen Properties LLC (hereafter Discharger) own and operate a cheese production facility (Facility) in Glenn County. The 120-acre Facility is approximately four miles north of the City of Willows, in Sections 15 and 22 of T20N, R3W, MDB&M. The Facility is located on three parcels: APN 020-160-0040 (96.9 acres), APN 020-160-0060 (12.3 acres), and APN 020-330-0049 (10.8 acres). The location of the Facility is shown on Attachment A, a part of this Order by reference.
2. Previously, Dairy Farmers of America operated the Glenn Milk Plant at this site. The Glenn Milk Plant processed raw milk into butter and powdered milk and discharged up to 280,000 gallons per day (gpd) of cooling water to Walker Creek and up to 200,000 gpd of process water to treatment ponds. Order No. R5-2002-0161 National Pollutant Discharge Elimination System (NPDES) CA0077763, adopted by the Regional Water Board on 6 September 2002, prescribes requirements for Dairy Farmers of America-Glenn Milk Plant for the discharge of cooling water to Walker Creek and for the discharge of process water from powdered milk manufacturing to onsite wastewater ponds. Dairy Farmers of America ceased operations at the Glenn Milk Plant in 2003.
3. The current Discharger purchased the Facility in 2003 and submitted a Report of Waste Discharge (RWD) dated 3 August 2004 to rescind the NPDES permit and apply for waste discharge requirements in order to discharge wastes to land. The RWD was reviewed by Regional Water Board staff and deemed complete on 3 September 2004. On 27 January 2005, the Regional Water Board adopted Order No. R5-2005-0019, which only reflected the change in facility ownership and name, pending the adoption of waste discharge requirements. Additional information regarding Facility operations was submitted in May, June, and September 2006.
4. Order No. R5-2002-0161 is not adequate because the current Discharger has:
  - 1) converted the large powdered milk facility to a small cheese production facility,
  - 2) ceased discharging to surface waters, and
  - 3) significantly reduced the volume and organic loading of wastewater discharged to land.This Order rescinds the existing NPDES permit and prescribes Waste Discharge Requirements that reflect changes in the operation of the Facility and in the location, nature, and volume of the discharge. This Order regulates the discharge of wastewater for land disposal.

### **Cheese Facility and Production**

5. Gregersen Properties, LLC owns the land and some of the buildings, infrastructure, and equipment; while, Sierra Nevada Cheese Company, Inc., operates the Facility and owns the business and some of the equipment.
6. The Facility consists of the plant, storage buildings, silos, propane tanks, and wastewater ponds. The layout of the Facility is shown on Attachment B, a part of this Order by reference.
7. All supply waters (process, wash, cooling, and domestic water) are provided by an on-site production well, which is approximately 200 feet deep. A second production well is located on-site; however, it is held in reserve. Both production wells are located immediately north of the plant building. Water from the production well is chlorinated prior to use. Only makeup water for the boiler and clean-in-place water are softened using a self-regenerating water softener. The water softener uses approximately 600 pounds of salt per month.
8. Under the current rate of production, cheese and other products are manufactured approximately five days per week. Approximately 65,000 gallons of milk are processed monthly. Cow's milk is primarily used, however, goat milk, soy milk, and cream are also used.
9. The Discharger primarily produces cheese, including jack, cheddar, paneer, and cream cheese, as well as a small amount of yogurt, butter, and sour cream. Cheese is produced from milk, which is coagulated by adding lactic acid forming bacteria and enzymes. Coagulation results in the separation of milk into solid (curd) and liquid (whey) fractions. Curd consists primarily of casein protein, fat, and water, while whey consists primarily of lactose and water. Liquid whey is removed from the curd by draining, washing, and/or pressing the curd. Whey is discharged as wastewater, while the curd is further processed into cheese. The production of cream cheese, yogurt, sour cream, and butter yields very little wastewater.
10. Salt is added to some of the products, but only after the whey has been drained and washed. Adding salt to the curd after the whey has been drained, rather than adding it to the initial milk mixture, greatly reduces the overall discharge of salt in wastewater.
11. Domestic wastewater is discharged to a septic tank/leachfield system, located between the office and Pond 1. The treatment and disposal of domestic wastewater at the site is regulated by this Order.

### Effluent Characteristics

12. The effluent consists of two waste streams: process wastewater and non-contact cooling water. Process wastewater includes whey waters from cheese production, wash water, and boiler blowdown. Whey wastewater consists mainly of whey, the liquid fraction of milk that is not made into cheese. Wash water includes water, detergents, and caustic acid used to clean equipment, work areas and to flush lines. A couple of gallons of boiler blowdown are released manually each day. Process waters are finely screened to remove solids prior to the discharge to ponds.

All cooling water consists of un-chilled well water used to cool the compressor and culture vats. The cooling water effluent is essentially the same quality as the regional groundwater with an increased temperature.

13. The Discharger measured the volume of each waste stream during a typical week of cheese production and also projected for increased production in order to determine the volume of effluent. The following table lists the characteristics and volume of each waste stream.

Waste Stream Characteristics					
Waste Stream	Characteristics	Volume (gal/month)	Volume (gpd)	Volume (mgd) <sup>1</sup>	% of Total Discharge
<b>Process Water:</b>					
Whey wastewater	Milk, cream, enzymes, bacteria, salt	190,000	6,333	0.0063	28
Wash water	Milk, cream, enzymes, bacteria, salt, detergents, caustic acid	50,000	1,667	0.0017	8
Boiler blowdown	Source water, salt for water softener	60	2	<0.0001	<1
<b>Process Water Subtotal</b>		<b>240,000</b>	<b>8,000</b>	<b>0.008</b>	<b>36</b>
<b>Non-contact Cooling water<sup>2</sup></b>	Heated source water	<b>430,000</b>	<b>14,333</b>	<b>0.014</b>	<b>64</b>
<b>Total</b>		<b>670,000</b>	<b>22,333</b>	<b>0.022</b>	<b>100</b>

<sup>1</sup> mgd=million gallons per day  
<sup>2</sup> Cooling water is discharged 24 hours per day, seven days per week.

14. The Discharger has eliminated all discharges to surface waters and has significantly decreased the discharge of process wastewater and cooling water, as compared to the previous milk plant. The volume of process wastewater has been reduced by 97 percent, from 0.25 mgd at the milk plant to 0.008 mgd at the cheese Facility. Cooling water has been reduced by 97 percent, from 0.50 mgd at the milk plant to 0.014 mgd at the cheese Facility. The overall discharge to wastewater ponds has been reduced by 91 percent, from 0.25 mgd at the milk plant to 0.022 at the cheese Facility.

15. In March 2005 and May 2006, Sierra Nevada Cheese and Regional Water Board staff collected wastewater samples and measured flows to document waste loads during various steps of cheese production, cleaning, etc. The quality of the various types of process water is highly variable. The table below provides the waste loads and average concentration for each constituent based on the combined wastewater sources. The average concentration was calculated from the total monthly load and an average overall flow of 670,000 gallons of wastewater per month. Characterization of discrete waste streams is presented in the Information Sheet, a part of this Order by reference.

Combined Wastewater Sources							
Constituent	Load (lbs/mo)	Load (lbs/day)	Average Concentration (mg/L)	Constituent	Load (lbs/mo)	Load (lbs/day)	Average Concentration (mg/L)
BOD	60,465	2,016	10,821	Chloride	2,847	95	509
COD	115,873	3,862	20,737	Total N	2,613	87	468
Sodium	1,266	42	227	Kjeldahl N	2,593	86	464
Potassium	2,413	80	432	NO <sub>3</sub> + NO <sub>2</sub>	9	0.3	2
Calcium	907	30	162	TDS	47,943	1,598	8,580
Sulfate	156	5.2	28				

### Wastewater Ponds

16. The Facility includes seven, unlined, wastewater ponds, totaling 77 acres, as shown on Attachment B. The ponds are separated by dikes and are plumbed together by means of conveyance pipelines and pumps. Storm water from the Facility is collected at several storm drain inlets and discharged to Pond 1. Wastewater treatment is primarily through aeration, biological degradation, settling, and percolation through soils.
17. All wastewater is currently contained in the three smallest ponds (Ponds 1, 2, and 3) located immediately east of the plant and south of County Road 39. Process and cooling waters are discharged directly to Pond 1, which is aerated. Water from Pond 1 overflows to Ponds 2 and 3, which also have aerators. Previously, the owners of the milk plant pumped excess wastewater to the large ponds north of County Road 39 (Ponds 4, 5, 6 and 7); however, due to substantial reductions in wastes and flows, these ponds have not been utilized since the cheese Facility began operation. Ponds 4 through 6 also have aeration capability, while Pond 7 does not. The combined capacity of Ponds 1, 2, and 3 is 16.1 million gallons, while the combined capacity of all seven ponds is approximately 201 million gallons. The average annual wastewater discharge is 8.0 million gallons. The area and capacity of each pond is as follows:

Capacity of Wastewater Ponds					
Pond No.	Pond Use	Area (acres)	Depth (feet)	Capacity (With 2' Freeboard)	
				(acre-feet)	(million gallons)
1	Aeration	0.97	7	7	2.2
2	Aeration	1.37	7	10	3.1
3	Aeration	4.16	8	33	10.8
4	Overflow	16.2	8	130	42.2
5	Overflow	14.4	8	115	37.5
6	Overflow	9.3	8	74	24.2
7	Overflow	30.9	8	247	80.6
<b>Total</b>		<b>77.3</b>		<b>616</b>	<b>201</b>

18. In the August 2004 RWD, the Discharger provided a water balance indicating that the wastewater ponds will provide adequate capacity for wastewater and storm water in normal and above-normal precipitation years; including the 100-year precipitation event.
19. All of the wastewater ponds are outside the 100-year flood zone (source: Federal Flood Insurance Rate Maps).
20. Due to the small-scale operation at the Facility, the accumulation of solids within the ponds is minimal. The Discharger has not needed to remove solids from any of the ponds during the past three years of operation. The Discharger proposes to periodically remove solids from the ponds and haul them to an approved facility.

#### Site Specific Conditions

21. The project area slopes gently eastward towards the Colusa Basin Drain, with surface elevations at the Facility ranging from approximately 140 to 150 feet above mean sea level.
22. The surface soils have been classified as primarily Hillgate loam (HgA), Hillgate gravelly loam (HmA), and Riverwash (Rh). The Hillgate soils are well to moderately well drained and permeability is slow to very slow.
23. The average annual rainfall for this vicinity is approximately 17.5 inches and the 100-year total annual precipitation is 32.46 inches, according to data from the Willows 6W climate station, which is approximately 7.5 miles southwest of the site (Source: California Data Exchange Center).
24. Average annual evaporation is approximately 68 inches according to pan evaporation data from the Chico Experiment Stations (Source: Western Regional Climate Center).

25. The annual evapotranspiration rate for the area is approximately 52.1 inches. Monthly evapotranspiration ranges from 1.05 inches in January to 7.93 inches in July (Source: California Irrigation Management Information System, Orland Station).
26. Storm water from the Facility is collected in several storm drain inlets and conveyed to Pond 1. There is no discharge of storm water to Walker Creek.
27. The Facility is within the Colusa Trough Hydrologic Subarea (No. 520.21), as depicted on interagency hydrologic maps prepared by the Department of Water Resources (DWR), August 1986. Surface water in the vicinity drains to Walker Creek, which is a tributary of Willow Creek, a tributary of Colusa Trough, and a tributary of Colusa Basin Drain.
28. Land uses surrounding the Facility are primarily agricultural. There are approximately a dozen rural residences located within ½ mile of the Facility.

### **Groundwater Conditions**

29. The Facility is in the Stony Creek Fan of the Sacramento Valley Groundwater Basin (5-021.52), as depicted on interagency hydrologic maps prepared by DWR. The Stony Creek Fan is an unconfined aquifer system, consisting mainly of unconsolidated, unweathered gravel and sand, with areas of clay interspersed.
30. Water supply for the Facility is supplied by two on-site production wells, which are approximately 200 feet deep. The quality of the deep, regional groundwater is represented by the non-contact cooling water data, shown in the Information Sheet.
31. Four shallow groundwater monitoring wells are located around the Facility, as shown on Attachment B. Groundwater in the shallow aquifer has been measured in these wells between 6 to 20 feet below ground surface. Although a site-specific determination has not been made, shallow groundwater is expected to flow in the direction of Walker Creek, to the southeast.
32. According to the driller's logs, soils in the vicinity of the wastewater ponds vary widely and consist of gravel, sandy gravel, sand, silt, gravelly silt, sandy silt, clayey silt, sandy clay, and silty clay to the depth explored (approximately 30 feet).
33. Only eight groundwater sampling events were conducted between 1994 and 2006. Dairy Farmers of America conducted four sampling events between 1994 and 2001, during their large-scale operation. The Discharger conducted four additional sampling events between 2005 and 2006, under a much smaller operation. A summary of all the groundwater quality data collected between 1994 and 2006 is provided below. Due to questionable sampling procedures during past groundwater monitoring and the limited data set, it is not possible to adequately characterize the shallow groundwater until additional information is collected.

Groundwater Quality from Monitoring Wells (1994-2006)					
Constituent	Well No. 2 (Assumed Upgradient)	Well No. 1 (Assumed Downgradient)	Well No. 3 (Assumed Downgradient)	Well No. 4 (Assumed Downgradient)	Water Supply Well (Deep Aquifer)
pH	6.5 to 7.6	6.5 to 7.5	6.2 to 7.3	7.2 to 7.3	--
Electrical Conductivity (umhos/cm)	320 to 770	460 to 1110	350 to 960	350 to 380	470 to 703
COD (mg/L)	<5.0 to 28	7.3 to 24	<3 to 5.3	<3 to 4.2	<3 to 4.5
Nitrate as N (mg/L)	0.3 to 19	0.2	1.3 to 5.1	3 to 4.5	--
Kjeldahl N (mg/L)	1.2 to 2.1	<1	<1 to 1.6	--	--
TDS (mg/L)	185 to 630	230 to 330	175 to 274	--	256 to 340

### Basin Plan, Beneficial Uses, and Regulatory Considerations

34. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board. Pursuant to Section 13263(a) of the California Water Code (CWC), waste discharge requirements must implement the Basin Plan.
35. The designated beneficial uses of the Colusa Basin Drain are agricultural supply; water contact recreation; warm and cold (potential) freshwater habitat; migration of warm water aquatic organisms; spawning, reproduction and/or early development of warm water aquatic organisms; and wildlife habitat.
36. The designated beneficial uses of underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
37. The Basin Plan establishes numerical and narrative water quality objectives for surface water and groundwater that waste discharge requirements must implement. To implement narrative water quality objectives, relevant water quality criteria and guidelines are to be considered on a case-by-case basis to determine the appropriate numerical limitation.
38. The chemical constituent objective in the Basin Plan requires, at a minimum, compliance with California maximum contaminant levels (MCLs) for waters designated as municipal supply. More stringent criteria than MCLs are sometimes necessary to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

39. The Basin Plan contains narrative water quality objectives for chemical constituents, tastes and odors, and toxicity. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that product detrimental physiological responses in humans, plants or animals associated with beneficial uses. The chemical constituent objective requires that groundwater shall not contain chemical constituents in concentrations that adversely affect beneficial uses. The tastes and odors objective requires that groundwater shall not contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

### **Groundwater Degradation**

40. State Water Resources Control Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
- a. The degradation is consistent with the maximum benefit to the people of the State;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
  - d. The discharger employs Best Practicable Treatment and Control (BPTC) to minimize degradation.
41. Existing groundwater monitoring data for the Facility is inadequate for determining compliance with Resolution 68-16. Only eight groundwater-sampling events were conducted over a 13-year period. In addition, there is potential for significant differences between the groundwater impacts from the large-scale operation of the previous owner (Dairy Farmers of America), discharging a maximum of 0.25 mgd of process wastewater to all seven wastewater ponds, and the small-scale operation of the current Discharger, discharging approximately 0.022 mgd of combined non-contact cooling water and process wastewater to only three wastewater ponds.

In order to determine compliance with Resolution 68-16, regular groundwater monitoring must be conducted to establish both background and downgradient groundwater concentrations for selected constituents. If groundwater is degraded or there is evidence that the discharge may cause degradation, then the Discharger will be required to evaluate and implement additional BPTC measures. Completion of these tasks will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the state will be achieved.

42. The Discharger will be allowed to operate in accordance with current practices, until the *Groundwater Quality Assessment Report* required under this Order has been submitted

by the Discharger and has been reviewed and approved by the Executive Officer. If, after reviewing the *Groundwater Quality Assessment Report*, the Regional Water Board concludes that unreasonable groundwater impacts may occur or have occurred, this Order may be rescinded and a new order adopted requiring implementation of additional BPTC measures to prevent unreasonable impacts from occurring or continuing to occur.

### **Other Regulatory Considerations**

43. Section 13267(b) of the CWC states, in part, that *“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state within its region shall furnish under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs of these reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”*

The reports required by this Order and the attached “Monitoring and Reporting Program No. R5-2007-0043” are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates facilities that discharge wastes subject to this Order.

44. The State Water Resources Control Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001), specifying waste discharge requirements for discharges of storm water associated with certain industrial activities. Cheese production is covered under the Standard Industrial Classification (SIC) of 2022- Natural, Processed, and Imitation Cheese, and would be required to obtain coverage under the General Permit if any storm water from the Facility discharged to surface waters. However, the Discharger does not discharge storm water to surface waters, and therefore is not required to obtain coverage under the General Permit.
45. In 2003, Glenn County determined that the cheese Facility could operate under the milk plant’s existing use permit. Consequently, no new environmental document was prepared. Glenn County adopted a negative declaration for the previous owner’s initial use permit in accordance with CEQA and the CEQA Guidelines (CCR, Title 14, Section 15000 et seq.).

46. The action to adopt waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA; Public Resources Code Section 21000 et. seq.) in accordance with Title 14, CCR, Section 15301.
47. The DWR has established standards for the construction and destruction of groundwater wells, as described in *California Water Well Standards, Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to CWC section 13801, apply to all monitoring wells.
48. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

#### **Public Notice**

49. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
50. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
51. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that Order No. R5-2002-0161 is rescinded and Sierra Nevada Cheese Company, Inc. and Gregersen Properties LLC, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

#### **A. Discharge Prohibitions**

1. The discharge of liquid or solid wastes to surface waters or surface water drainage courses is prohibited.
2. By-pass or overflow of untreated or partially treated waste is prohibited, except as allowed in Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements.
3. Discharge of waste classified as 'hazardous' under Title 23, CCR, Section 2521(a), or as 'designated' under CWC, Section 13173, is prohibited.

**B. Discharge Specifications**

1. The monthly average discharge of all process wastewaters (excluding non-contact cooling water) into the wastewater pond system shall not exceed 8,000 gpd.
2. Neither the treatment nor the discharge shall cause a condition of nuisance or pollution as defined by the CWC, Section 13050.
3. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Interim Groundwater Limitations.
4. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the Discharger's property.
5. As a means of ensuring compliance with Discharge Specification No. 4, the dissolved oxygen content in the upper one-foot of any wastewater pond shall not be less than 1.0 mg/L.
6. The wastewater treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
7. The wastewater treatment facilities shall have sufficient capacity to accommodate allowable wastewater flow, inflow, and design seasonal precipitation. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly, in accordance with historical rainfall patterns.
8. Freeboard in all ponds shall not be less than two feet as measured vertically from the water surface to the lowest point of overflow.
9. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - a. erosion control measures shall be implemented to minimize small coves and irregularities around the perimeter of the water surface;
  - b. weeds within and around the perimeter of the pond shall be minimized; and
  - c. dead algae, vegetation, and debris shall not accumulate on the water surface.
10. The discharge of domestic waste to subsurface leaching systems shall remain underground at all times.

#### D. Solids Disposal Specifications

1. If not sold or beneficially reused, collected solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in CCR, Title 27, Division 2, Subdivision 1, Section 20005, et seq.
2. Sludge and other solids shall be removed from wastewater ponds, sumps, screens, etc. as needed to ensure adequate operation and adequate hydraulic capacity.
3. Any proposed change in solids use or disposal practice shall be reported to the Executive Officer at least **90 days** in advance of the change.

#### E. Interim Groundwater Limitations

Release of waste constituents from any storage, treatment, or disposal component shall not cause or contribute to any of the following in underlying groundwater:

1. Total coliform organisms equal to or greater than 2.2 MPN/100mL.
2. Chemical constituent concentrations that adversely affect any beneficial use or that exceed a Title 22 MCL, such as listed below:

<u>Constituent</u>	<u>Concentration</u>
Electrical Conductivity	700 umhos/cm
Nitrate, as N	10 mg/L
Sulfate	250 mg/L
3. Taste, odor, color, or toxicity that creates nuisance or impairs any beneficial use.

#### E. Provisions

1. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by, or under the direction of, persons registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports must bear the signatures(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
2. The following reports shall be submitted pursuant to Section 13267 of the CWC, and shall be prepared by a California registered professional as described in Provision E.1.

- a. Within **90 days of Order adoption**, the Discharger shall submit a *Flow Measurement and Groundwater Monitoring Plan* (Plan) for review and approval by the Executive Officer. The Discharger shall maintain the Plan and shall amend it whenever there is a change that affects the flow or groundwater monitoring. At a minimum, the Plan shall contain or describe the following:
    - i. The plan must describe how both process wastewater and cooling water flows will be measured accurately, using a flow meter device, volumetric device, or other method.
    - ii. The plan must provide for the surveying of all groundwater monitoring wells (vertical survey data shall be at least 0.01 foot) by a California licensed Civil Engineer or Land Surveyor. The feature(s) to be surveyed shall be noted (i.e. top of casing, horizontal and vertical coordinates, etc.)
    - iii. The plan must describe the sampling and maintenance activities for the groundwater monitoring wells, including: sampling equipment, decontamination procedures, water level measurement procedures, well purging, monitoring and record keeping, analytical methods, sample containers and preservatives, sampling techniques, chain of custody, and sample handling and transport. USEPA methods must be used to collect and analyze groundwater samples.
  - b. Within **90 days of Executive Officer approval**, the Discharger shall submit a *Completion Report* certifying that the Flow Measurement and Groundwater Monitoring Plan has been implemented.
  - c. Within **30 months of Order adoption**, the Discharger shall submit a *Groundwater Quality Assessment Report*. For each groundwater monitoring parameter/constituent identified in the Monitoring and Reporting Program, the report shall present a summary of monitoring data (including data obtained prior to adoption of this Order), calculation of the concentration in background monitoring well(s), and comparison of background groundwater quality to wells downgradient of the wastewater treatment facilities. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10), and shall be based on data from at least eight consecutive quarterly (or more frequent) groundwater monitoring events. For each monitoring parameter/constituent, the report shall compare measured concentrations for compliance monitoring wells with the calculated background concentration.
3. Upon completion of tasks set forth in Provision E. 2, the Regional Water Board will consider the evidence provided and make a determination regarding whether

the Discharger has justified continued discharge from the Facility as consistent with water quality policies and plans and the CWC or whether substantial evidence indicates continued discharge should not be permitted due to violated water quality objectives, impaired beneficial uses, pollution, nuisance or contamination, or unreasonable degradation.

4. The Discharger shall comply with Monitoring and Reporting Program No. R5-2007-0043, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
5. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" (Standard Provisions), dated 1 March 1991, which are attached hereto and a part of this Order by reference.
6. In the event of any change in control or ownership of the Facility described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. Transfer shall be approved or disapproved by the Executive Officer.
7. The Discharger shall immediately notify the Regional Water Board by telephone whenever a violation of these WDRs or an adverse condition that may impair water quality occurs; written confirmation shall follow within two (2) weeks.
8. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
9. The Discharger shall submit to the Regional Water Board on or before each compliance report due date the specified document, or if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is reported, then the Discharger shall state the reasons for noncompliance and shall provide a schedule to come into compliance.
10. The Discharger shall report promptly to the Regional Water Board any material change or proposed change in the character, location, or volume of the discharge.

11. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
12. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
13. The Regional Water Board will review this Order periodically and will revise requirements when necessary.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 4 May 2007.

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PAMELA C. CREEDON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-0043  
FOR  
SIERRA NEVADA CHEESE COMPANY, INC.  
AND  
GREGERSEN PROPERTIES LLC  
CHEESE PRODUCTION FACILITY  
GLENN COUNTY

The Discharger shall comply with this Monitoring and Reporting Program (MRP), issued pursuant to California Water Code Section 13267, which describes requirements for monitoring industrial flows, wastewater ponds, groundwater, and solids. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to test pH and dissolved oxygen) may be used, provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated per the manufacturer's recommended frequency; and
4. A statement is provided annually, certifying when the flow meters and other monitoring instruments and devices were last calibrated (Standard Provision C.3).

**FLOW MONITORING**

Process and cooling water flows shall be measured prior to the discharge to the wastewater ponds. Process and cooling water monitoring shall include, at a minimum, the following:

<u>Parameter</u>	<u>Reporting Unit</u>	<u>Type of Measurement</u>	<u>Reporting Frequency</u>
<b>Process Water Flow<sup>1</sup></b>			
• Daily Flow	gallons/day	Meter, Continuous	Monthly
• Total Monthly Flow	gallons/month	Meter or Computed	Monthly
• Average Daily Flow	gallons/day	Computed	Monthly
<b>Non-contact Cooling Water<sup>2</sup></b>			
• Daily Flow	gallons/day	Meter, Continuous	Monthly
• Total Monthly Flow	gallons/month	Meter or Computed	Monthly

<u>Parameter</u>	<u>Reporting Units</u>	<u>Type of Measurement</u>	<u>Reporting Frequency</u>
• Average Daily Flow	gallons/day	Computed	Monthly

1. The total of all process water flows shall include whey waters, wash waters, and boiler blowdown.
2. The total of all cooling water flows shall include compressor and vat cooling waters.

### POND MONITORING

Pond monitoring shall be conducted as described below. If any pond is dry, the monitoring report shall so state. Water samples from the ponds shall be collected as grab samples at a depth of one foot from each pond in use, opposite the inlet, in a quiescent surface area.

<u>Parameter/Constituent</u>	<u>Units</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>	<u>Pond(s)</u>
Freeboard <sup>1</sup>	0.1 feet	Weekly	Monthly	1 through 7
Berm Seepage <sup>2</sup>	Observation	Weekly	Monthly	1 through 7
Odors	Observation	Weekly	Monthly	1 through 7
Dissolved Oxygen	mg/L	Weekly	Monthly	1 through 7
pH	pH units	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
Electrical Conductivity	umhos/cm	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
20°C BOD <sub>5</sub>	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
Ammonia (as NH <sub>3</sub> )	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
Kjeldahl Nitrogen	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
Nitrate (as N)	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
Total Dissolved Solids	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
Fixed Dissolved Solids	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1
General Minerals <sup>4</sup>	mg/L	Monthly <sup>3</sup>	Monthly <sup>3</sup>	1

1. To be measured vertically from the water surface to the lowest point of potential overflow.
2. Containment levees shall be observed for signs of seepage or surfacing water along the exterior of the levees.
3. After twelve months of monitoring, the monitoring and reporting frequency may be evaluated for possible reduction.
4. General Minerals shall include arsenic, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity, bicarbonate, carbonate, and hardness.

### GROUNDWATER MONITORING

This monitoring program applies to the four wells shown on Attachment B of the Waste Discharge Requirements (WDRs) and any other wells installed to monitor the discharge areas subsequent to this MRP. Prior to sampling and purging, depth to groundwater shall be measured and then the wells shall be purged of at least three well volumes until

temperature, electrical conductivity, and pH of extracted well water have stabilized. Samples shall be collected and analyzed using standard USEPA methods. Groundwater monitoring for each well shall include, at a minimum, the following:

<u>Parameter/Constituent</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Depth to groundwater <sup>1</sup>	0.01 feet	Quarterly	Quarterly
Groundwater elevation <sup>1</sup>	0.01 feet, MSL	Quarterly	Quarterly
Groundwater gradient	feet/feet	Quarterly	Quarterly
Groundwater direction	bearing, degrees	Quarterly	Quarterly
pH	pH units	Quarterly	Quarterly
Electrical Conductivity	µmhos/cm	Quarterly	Quarterly
20°C BOD <sub>5</sub>	mg/L	Quarterly	Quarterly
Ammonia (as NH <sub>3</sub> )	mg/L	Quarterly	Quarterly
Kjeldahl Nitrogen	mg/L	Quarterly	Quarterly
Nitrate (as N)	mg/L	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Quarterly	Quarterly
Fixed Dissolved Solids	mg/L	Quarterly	Quarterly
General Minerals <sup>2</sup>	mg/L	Quarterly <sup>3</sup>	Quarterly <sup>3</sup>

1. The positions and reference elevations of each groundwater monitoring well shall be surveyed by a California registered Civil Engineer or Land Surveyor. Groundwater elevations shall be determined based on depth-to-water measurements using surveyed reference points.
2. General Minerals shall include arsenic, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity, bicarbonate, carbonate, and hardness.
3. After eight consecutive quarters of monitoring, the monitoring and reporting frequency may be evaluated for possible reduction.

An annual groundwater monitoring report shall include the following:

1. Contour maps showing the gradient and direction of groundwater flow in the vicinity of the wastewater ponds, using groundwater surface elevations from the Facility's monitoring wells.
2. Graphs of the laboratory analytical data for groundwater samples within the previous five calendar years. Each graph shall include the concentration of one or more waste constituents specified over time for a given monitoring well, at a scale appropriate to show trends or variations in water quality.

### **SOLIDS MONITORING**

The Discharger shall record and report **quarterly** the quantity, disposal location, and method of disposal of any solids disposed of, if applicable. If solid waste is shipped

offsite, then a description of the quantity of each type of waste shipped offsite and the location of the disposal area(s) shall be included with the report.

### LEACHFIELD MONITORING

The Discharger shall inspect leachfield areas and submit results in the quarterly monitoring report. Monitoring shall include any observations of seeps, erosion, field saturation, ponding liquid, the presence of nuisance and other field conditions.

### REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., flow, pond, groundwater, solids, etc.), sample location, and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate whether discharge is occurring in compliance with waste discharge requirements and whether there are any spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported to the Regional Board.

Reports shall be submitted as follows:

**Monthly** reports shall be submitted to the Central Valley Water Board by the **first day of the second month after the month of sampling** (i.e., the March report is due by 1 May).

**Quarterly** reports shall be submitted to the Central Valley Water Board by the **first day of the second month following the end of the calendar quarter** (i.e., the January-March quarterly report is due by 1 May) and may be combined with the monthly report due at the same time.

An **annual** report shall be submitted to the Central Valley Water Board by **1 February** each year and may be combined with other reports.

At a minimum the reports shall include:

1. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format.
2. If requested by staff, copies of laboratory analytical report(s).
3. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the

reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements, Section B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

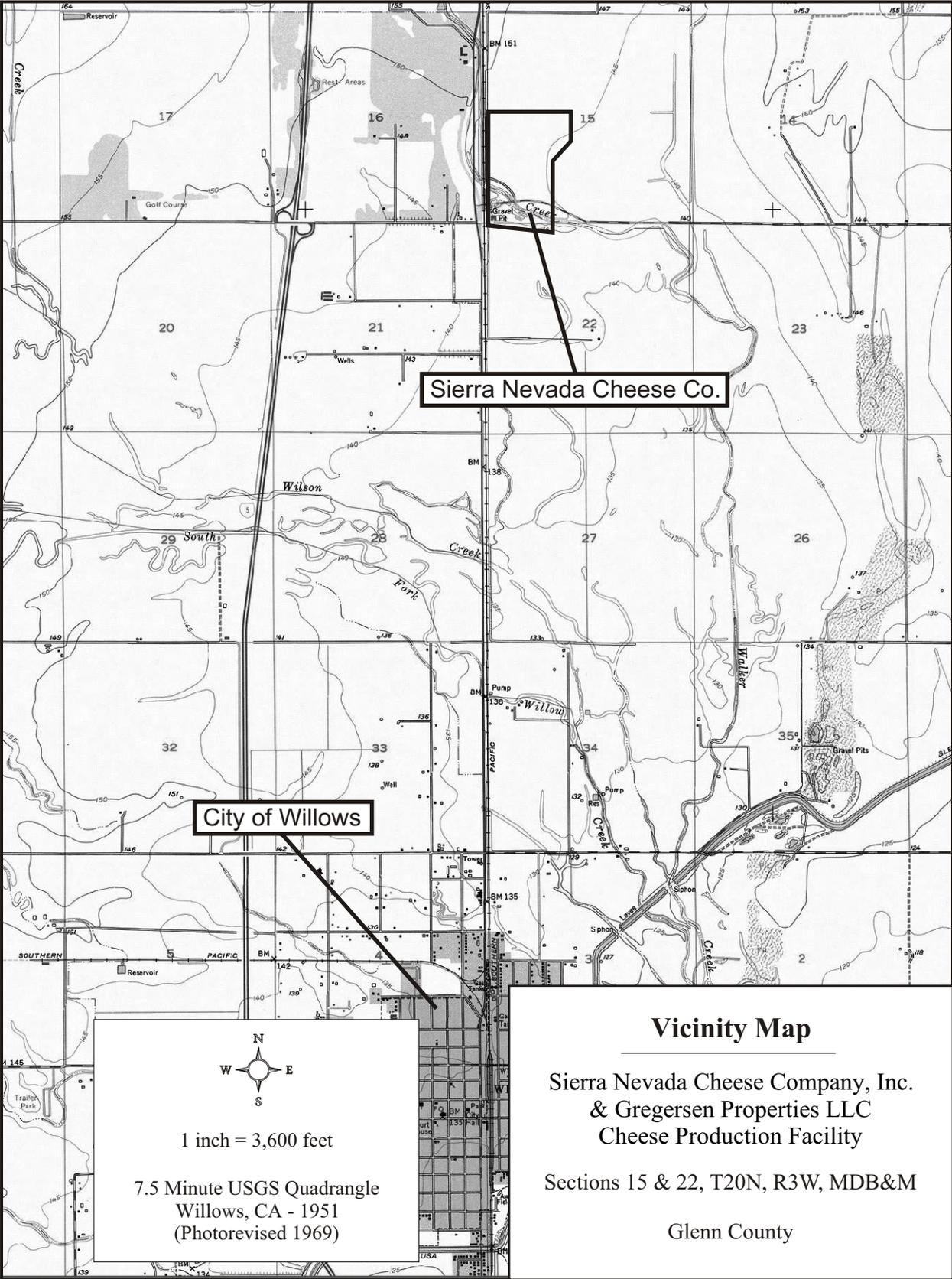
Ordered by:

\_\_\_\_\_  
PAMELA C. CREEDON, Executive officer

\_\_\_\_\_  
4 May 2007

(Date)

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2007-0043



Sierra Nevada Cheese Co.

City of Willows

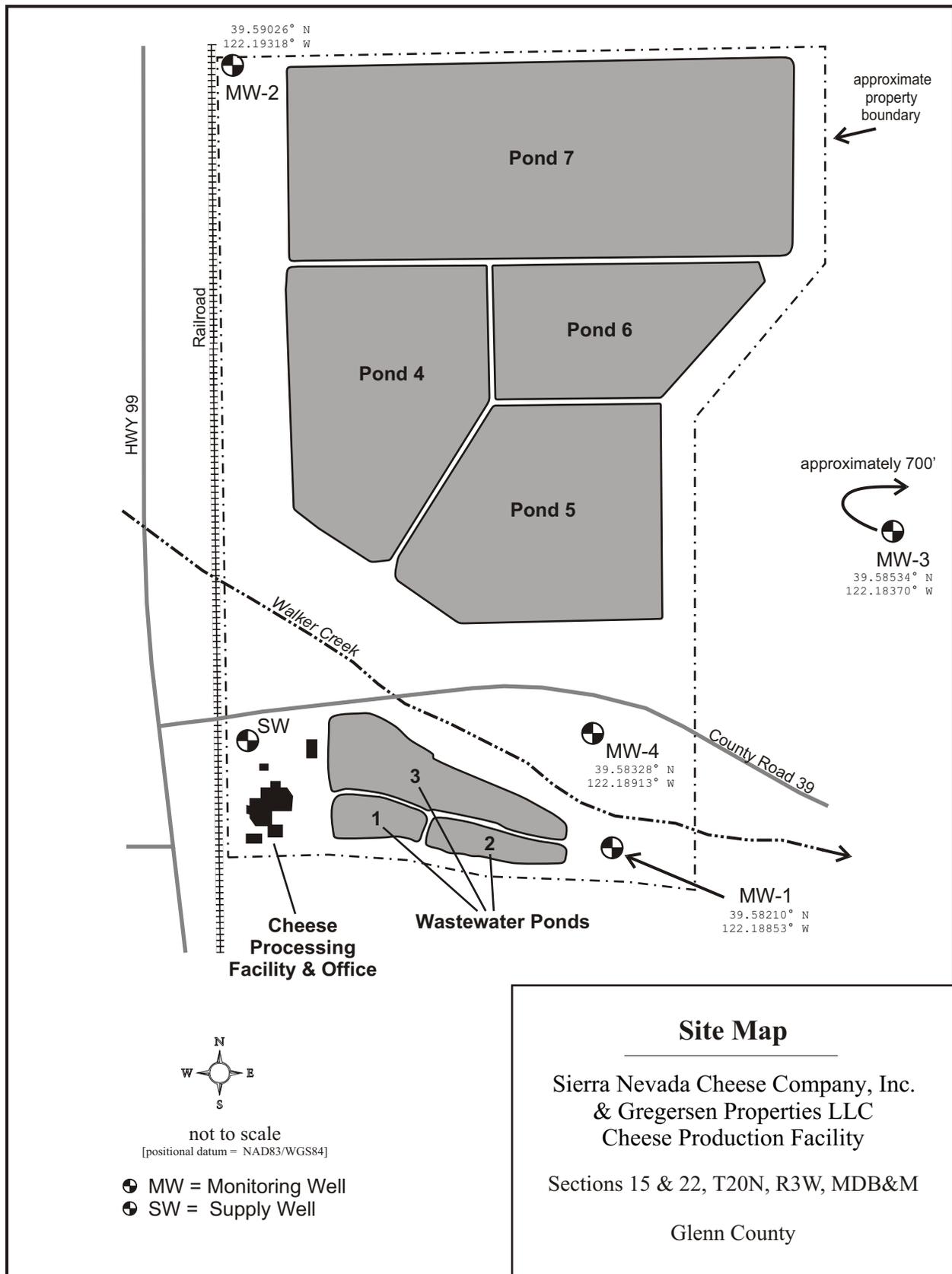
**Vicinity Map**

Sierra Nevada Cheese Company, Inc.  
& Gregersen Properties LLC  
Cheese Production Facility

Sections 15 & 22, T20N, R3W, MDB&M

Glenn County

WASTE DISCHARGE REQUIREMENTS ORDER Number R5-2007-0043



**Site Map**

Sierra Nevada Cheese Company, Inc.  
& Gregersen Properties LLC  
Cheese Production Facility

Sections 15 & 22, T20N, R3W, MDB&M

Glenn County