

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0166

WASTE DISCHARGE REQUIREMENTS  
FOR  
LAWRENCE M., ANTHONY R., AND JOSEPH J. NELES,  
dba NELES DAIRY  
TEHAMA COUNTY

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

1. Lawrence M., Anthony R., and Joseph J. Neles, dba Neles Dairy, (hereafter Discharger) submitted a report of waste discharge dated 3 January 2002 requesting waste discharge requirements for the discharge of approximately 250,000 gallons per day of manure wastewater from a 2,890 cow dairy to two retention ponds followed by irrigation of croplands.
2. The 650 acre property, (Assessors Parcel Nos. 063-170-07 and 061-100-11) is approximately 10 miles south of the City of Red Bluff northwest of the intersection of Gyle and Rawson Roads in Tehama County on agricultural land that is currently used for livestock production. The proposed dairy is located in Sections 19, 20 and 24, T25N, R3 and R4W, MDB&M, as shown in Attachment A, which is attached hereto and made a part of this Order. The approximate latitude and longitude of the proposed facility are 40°00'15" and 122°14'00", respectively. The proposed dairy lies within the Upper Sacramento Hydrologic Unit (No. 525), Hydrologic Subarea (No. 504.20), Red Bluff, as depicted on the interagency hydrologic maps prepared by the California Department of Water Resources in August 1986. Surface drainage from the site is to McClure Creek, a tributary to the Sacramento River.
3. The dairy facilities will be constructed in four phases. The facilities will be situated on an approximately 40-acre parcel of the 650-acre main farm. The total area to be occupied by actual milking cow housing and waste processing facilities is 12 acres. In addition, approximately 14 acres will be required for two wastewater retention ponds. In Phase I, approximately 845 animals will be housed in total confinement. A milking parlor and two free stall barns will be constructed to contain 768 stalls. Dry cows and heifers will be housed in a portion of the free stall barns. A 23.32 million gallon clay lined retention pond (main retention pond) will be constructed to store wastewater. There will be no areas of pasture for traditional grazing, and the remainder of the farm property will be utilized for growing forage crops. In addition to the free stall barn and milking parlor there will be a 125-foot by 170-foot feed and equipment storage building, a maintenance shop, a single-family dwelling and a mobile home. Bagged silage (Ag Bags) will be stored on a concrete

pad adjacent to the dairy buildings. The general layout of the dairy facilities is shown on Attachment B, which is attached hereto and made a part of this order.

4. In Phase II a new free stall barn will be constructed and approximately 1050 animals will be housed in total confinement. An additional 700 dry cows and heifers will be housed in a new corral area constructed to the north of the main dairy complex. A second wastewater pond (heifer pond) with a volume of 11.40 million gallons will be constructed to receive wastewater from the corral area. Phase II will take place approximately two years after the dairy begins operation. The location of the corral area and heifer retention pond is shown on Attachment B. The Discharger indicates the remaining phases, III and IV, would be completed within 10 years after the dairy begins operation. In Phase III, additional free stall barn space will be constructed and approximately 1,268 animals will be housed in total confinement. Approximately 1,000 dry cows and heifers will be held in an enlarged corral area. In Phase IV, approximately 1,690 animals will be held in total confinement and 1,200 heifers and dry cows will be held in the corral area. Total animals at the dairy at Stage IV will be approximately 2,890 head. All cattle at the facility will be held within the confinement areas.
5. A flush system will transfer waste generated within the milking parlor and free stall barns, to the waste processing area and ultimately to the main retention pond. For the purposes of these requirements, waste include process wastewater resulting from water directly or indirectly used at the dairy or resulting from animal water system, washing, cleaning of flushing stalls, barns, manure pits or feedlot activities, washing or spray cooling animals and dust control as defined in Title 40 Code of Federal Regulations (CFR) 412.21. It also includes process wastewater which includes manure and any precipitation which comes in contact with any manure, litter, bedding, or with any other raw material, intermediate or final material, product used in or resulting from the dairy, or products generated by the dairy (e.g., milk).
6. The waste processing area for the free stall barns and milking facilities will consist of a concrete collection sump, earthen surge overflow basin, concrete grit removal tank, static screen separators, stack auger, manure stack pad and two settling basins which will be rotated to allow solids removal. Screened solids will be dried and used for bedding. Wastewater from the settling basins will be discharged to the main retention pond. The main retention pond is approximately 9.4 acres in area with a 10 ft maximum depth and a volume of approximately 23.32 million gallons. The Discharger has submitted a hydraulic balance, which demonstrates the main retention pond can retain all runoff and wastewater generated within an average year, plus that resulting from a 25 year, 24-hour, storm while maintaining a two-foot freeboard. Wastewater from the main retention pond will be discharged to the flood irrigation system to irrigate forage crops.

7. The dry lot corrals constructed in Phase II will employ a flush cleaning system for the concrete feed lanes and scrapings of the accumulated manure in the corrals. The corrals will be scraped once every six months. Effluent from the corral area will discharge to a second retention pond (heifer pond). The heifer pond will have an area of approximately 4.65 acres, a maximum depth of 10 ft, and a volume of 11.4 million gallons. Solid waste will be stored on concrete stack pads. All runoff from the corral area that has the potential to contact manure will discharge to the heifer pond. The Discharger has submitted a hydraulic balance which demonstrates the heifer pond is capable of retaining all runoff and waste generated within an average year plus that resulting from a 25 year, 24- hour storm. Crops will not be irrigated directly from the heifer pond. Wastewater from the heifer pond will be discharged to the main retention pond for crop irrigation.
  
8. The main crops grown on the property will be forages including corn and oats for silage. The Discharger proposes to irrigate the forage crops using wastewater from the main retention pond. The application of wastewater to fields is required to be at an agronomic rate consistent with the nutritional requirements of the crop, soil type and cropping system. The Discharger has developed an “Animal Waste Pollution Prevention Plan”, which includes a “Nutrient and Irrigation Water Management Plan” (NIWMP) as shown in Attachment C. The NIWMP describes the operation of the wastewater irrigation system, identifies the individual fields and provides nitrogen (N) and phosphorus (P) loading rates based on the estimated N and P produced by the cattle at the facility and assumed losses at various stages of storage and application. These calculated rates use the total animals at Stage IV and the crop requirements for the entire farm. These requirements use the agronomic rate of N as the basis for the maximum annual rate of wastewater application. Nitrogen, in the form of nitrates, poses the greatest threat to groundwater quality if applied in excess of agronomic rates. The application of manure wastewater to land also results in the discharge of salts, primarily total dissolved solids (TDS), which has the potential to adversely impact the quality of groundwater. Monitoring for Total Kjeldahl Nitrogen (TKN) and TDS is required for the main retention pond. These requirements contain a provision to revise the NIWMP as needed based on the monitoring results and/or if new information becomes available on applicable loading rates.
  
9. All liquid wastewater will be applied utilizing a flood irrigation system to 14 fields totaling 560.8 acres, as described in the NIWMP and shown on Attachment D, a part of this Order. A portion of Field Number 1 will be used for the corral and heifer pond. Field Number 7 will contain the main dairy facility and will not be cropped. Eleven of the 14 fields border McClure Creek. Pumps and underground piping will deliver wastewater from the waste retention ponds to the high end of the sloped irrigation fields. All of the 14 application fields will have control berms that contain the wastewater applied for irrigation within the field. Wastewater will flow across the fields to the low end allowing the crop to absorb both water and nutrients. Excess wastewater that is not absorbed by the cropland will flow to a “tailwater” pond at the end of each field where it will be stored. All of the “tailwater”

ponds will be equipped with pumps that will transfer the collected irrigation water to the high end of the sloped fields where it can be re-applied to cropland. Wastewater applications will be monitored to ensure minimal “tailwater” generation. Any cross connections with water from irrigation wells will require backflow prevention.

10. The Discharger plans to store diesel fuel and gasoline at the facility. At the time the tanks are installed the Discharger proposes to provide containment for the tanks and comply with the conditions of the Aboveground Petroleum Storage Tank Act applicable to farms. The Aboveground Petroleum Storage Tank Act requires facilities storing petroleum in a single tank greater than 660 gallons or combined capacity greater than 1,320 gallons to file a storage statement and fee to the State Water Resources Control Board (SWRCB), and to prepare and implement a Spill Prevention Control and Countermeasure, (SPCC), Plan. However, farms storing petroleum are exempted from preparing the SPCC Plan.
11. The Regional Board adopted a Water Quality Control Plan, Fourth Edition, for the Sacramento River Basin and the San Joaquin River Basin, (hereafter Basin Plan) which designates beneficial uses, establishes water quality objectives, and describes an implementation program and policies to achieve those objectives for all waters of the Basin. The Basin Plan includes plans and policies of the SWRCB incorporated by reference, including Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California. Pursuant to the California Water Code (CWC), §13263(a), waste discharge requirements must implement the relevant provisions of the Basin Plan and take into consideration the beneficial uses to be protected.
12. The designated beneficial uses of the underlying groundwater are municipal and domestic supply (MUN), agricultural supply (AGR), and industrial supply (IND). The site is located within the Red Bluff Subbasin of the Sacramento Valley Groundwater Basin. The Red Bluff Subbasin is bounded on the west by the Coast Range, on the north by the Red Bluff Arch, on the south by Thomes Creek and on the east by the Sacramento River. The prevailing groundwater flow in the proximity of the site conforms to the regional slope of the land surface and trends from the west to the east towards the Sacramento River. Four irrigation wells are located within one mile of the dairy. The irrigation wells are screened from approximately 100 to 300 feet below ground surface (bgs). Seven domestic wells are located within one mile of the dairy. Domestic wells are generally screened between 60 to 140 feet bgs.
13. Surface water drainage from the site is to McClure Creek, a tributary to the Sacramento River. The beneficial uses of the Sacramento River downstream of the discharge as identified in Table II-1 of the Basin Plan are municipal and domestic supply; agricultural irrigation and agricultural stock watering; industrial service supply; hydropower generation; contact recreation, canoeing and rafting, and non-contact recreation; freshwater habitat; fish migration; fish spawning; wildlife habitat; and navigation. The beneficial uses

of McClure Creek are not identified in the Basin Plan, however the Basin Plan states, “The beneficial uses of any specifically identified water body generally apply to its tributary streams.” Upon review of the flow conditions, habitat values, and beneficial uses of McClure Creek, the Regional Board finds that the beneficial uses identified in the Basin Plan for the Sacramento River are applicable to McClure Creek.

14. Based on precipitation data obtained from a meteorological monitoring station in Red Bluff (NCDC Station 047292) located approximately 13 miles north of the site, the average annual precipitation is 23.03 inches, ranging from an average of 0.07 inches in July to 4.48 inches in January. On average, approximately 77 percent of the annual precipitation falls in the winter and spring, and 23 percent falls in the summer and fall. Annual extremes have ranged between 7.2 inches in 1976 and 48.98 inches in 1983. The 25 year, 24-hour storm event for this area yields 4.00 inches of precipitation. Average annual pan evaporation in the vicinity of the proposed site is approximately 70 inches per year.
15. Title 40 CFR 122.23 defines a concentrated animal feeding operation as any animal feeding operation that has more than 1,000 animal units. Dairy cattle are considered 1.4 animal units. The proposed Neles Dairy would have a total of 4046 animal units at the completion of Stage IV. The United States Environmental Protection Agency (USEPA) promulgated Effluent Limit Guidelines and New Source Performance Standards for confined animal feeding operations in 1974 (40 CFR 412). Standards of performance for new sources are defined in 40 CFR 412.15. These guidelines established a “no discharge” requirement for process wastewater. The guidelines prohibit discharges except those that result from chronic or catastrophic rainfall events from a facility designed, constructed, and operated to contain wastewater plus the runoff from a 25 year, 24-hour rainfall event for the location of the point source. Section 402(p) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987 and the related regulations published by USEPA on 16 November 1990 (40 CFR Parts 122, 123, and 124) require an National Pollutant Discharge Elimination System (NPDES) permit for discharges to surface waters resulting from chronic or catastrophic rainfall events for concentrated animal feeding operations in conformance with 40 CFR 412.15.
16. The USEPA, on 16 November 1990, promulgated storm water regulations (40 CFR Parts 122, 123, and 124) which require specific categories of industrial facilities which discharge storm water to obtain NPDES permits and to implement best available technology (BAT) economically achievable and best conventional pollutant control technology (BCT) to reduce or prevent industrial storm water pollution. The regulations provide that discharges of storm water to surface waters from construction projects and specific categories of industrial facilities are prohibited unless the discharge is in compliance with an NPDES Permit.

17. The SWRCB adopted Order No. 97-03-DWQ (General Permit No. CAS000001), on 17 April 1997, specifying waste discharge requirements for discharge of storm water associated with industrial activities, including confined animal feeding operations. Coverage under this General Order requires submittal of a Notice of Intent (NOI), preparation of a Storm Water Pollution Prevention Plan, site map, and monitoring program by industries to be covered under the permit. Order No. 97-03-DWQ would allow a properly designed and operated dairy to discharge from its waste management system during periods of chronic rainfall or catastrophic rainfall events.
18. The SWRCB adopted Order No. 98-08-DWQ (General Permit No. CAS000002), on 19 August 1999, specifying waste discharge requirements for discharge of storm water associated with construction projects and requiring submittal of a NOI to obtain coverage under the permit for construction activity that disturbs five acres or more. The Discharger intends to submit an NOI to obtain coverage under the General Permit and will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) to include best management practices (BMP) for construction of the dairy facilities and retention ponds.
19. State regulations governing discharges from confined animal facilities, including dairies, are contained in Title 27, Chapter 7, Subchapter 2 of the California Code of Regulations (CCR), (hereafter Title 27). Title 27 prescribes minimum standards for discharges of animal waste from confined animal facilities, which shall be implemented in waste discharge requirements. Section 22565 of Title 27 states the Regional Board can require confined animal facility operations to undertake a monitoring program as a condition to the issuance or waiver of waste discharge requirements. These requirements implement the minimum standards contained in Title 27 and contain a monitoring and reporting program.
20. Section 22562 (d) of Title 27 states that retention ponds shall be lined with, or underlain by, soils which contain at least 10% clay and not more than 10% gravel or artificial materials of equivalent impermeability. Soils mapped for the site consist of Corning gravelly loam (CwA), Corning-Redding gravelly loam (CyB), Maywood loam (Mf), Perkins gravelly loam (PkA), Redding gravelly loam (0-3% slopes, RnA; 3-8% slopes, RnB), and Riverwash (Rr). Those soils are reported as generally being granular and having varying percentages of gravels and cobbles. Interspersed within the soils are fine-grained interbeds. The native soil in the vicinity of the two ponds is Corning Series (CwA), which consist of yellowish-red gravelly loams at or near the surface to gravelly clays and loams approximately three feet below the surface. Soil samples taken within the proposed pond areas beneath the level of the pond bottoms exhibit low permeabilities, with laboratory determined hydraulic conductivities of approximately  $5 \times 10^{-8}$  cm/sec. Core samples in the vicinity of the area proposed for construction of the main pond indicate that the topsoil is underlain by layers containing greater than 10% gravel. A physical analysis of the soil revealed that they contained approximately 12% fine gravel, (2-5 mm). Since the percentage of gravel exceeds 10%, the Discharger proposes to import suitable clayey soil

from other areas on site and construct a one-foot liner having a permeability of not greater than  $1 \times 10^{-6}$  cm/sec. If suitable material is not available on site, the addition of Bentonite to soil materials is proposed to achieve the desired permeability. Field-testing will be conducted to confirm compaction and permeability. The Discharger has retained Five-G Consulting and a "Construction Quality Assurance Plan" (CQAP) has been prepared for construction of the wastewater retention ponds. The CQAP is shown in Attachment E, a part of this Order.

21. The Basin Plan procedure for applying water quality objectives as terms of discharge in waste discharge requirements requires maintenance of existing quality of groundwater except where the Regional Board determines an adverse change is consistent with SWRCB Resolution 68-16. Resolution No. 68-16 requires the Regional Board to regulate waste discharges in a manner that maintains high quality waters of the State. Any change in quality may only occur after full application of best practicable treatment and control (BPTC) or the waste and must be consistent with maximum benefit to the people of the State, not unreasonably affect a beneficial use, and not result in water that exceeds a water quality objective.
22. The Regional Board has considered SWRCB Resolution No. 68-16 and finds that the potential for discharge of pollutants from the retention ponds to groundwater is minimized by the natural soil factors, construction of the retention ponds to insure a soil permeability not greater than  $1 \times 10^{-6}$  cm/sec, and compliance with the minimum standards prescribed by Title 27. Background water quality has not been defined. The Discharger has proposed the installation of three groundwater monitoring wells to 20 feet below the first encountered groundwater, one up gradient and two down gradient of the main wastewater retention pond as shown in Attachment B. Monitoring wells will also be required up gradient and down gradient of the heifer pond. The installation of the wells and collection of data is required before the construction of the ponds in order to establish background groundwater conditions. Groundwater monitoring is required to evaluate if the discharge is impacting groundwater quality beneath the dairy site.

The infiltration of pollutants to groundwater resulting from the application of manure wastewater and manure to the croplands will be minimized by adherence to the NIWMP, which is included in Attachment C. The application of wastewater to fields is required to be at agronomic rates consistent with the nutritional requirements of the crop, soil type and cropping system. The NIWMP describes the operation of the wastewater irrigation system, identifies the individual fields and provides nitrogen (N) and phosphorus (P) loading rates. These requirements use the agronomic rate of N as the basis for the maximum annual rate of wastewater application. Nitrogen, in the form of nitrates poses the greatest threat to groundwater quality if applied in excess of agronomic rates. Procedures specified in the NIWMP are consistent with groundwater protection standards in Title 27.

23. Section 13267(b) of the California Water Code provides 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 waste 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 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 report 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 technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2002-0166 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

24. On 6 September 2002, the Regional Board, acting as lead agency, adopted a Mitigated Negative Declaration and a Mitigation Monitoring and Reporting Program for the Discharger’s proposed 2,890 cow dairy in accordance with the California Environmental Quality Act, (Pub. Resources Code section 21000 et seq.) (CEQA). The Regional Board determined that the project would not have a significant effect on the environment, provided the mitigation measures and mitigation monitoring were implemented as required in the Mitigation Monitoring Program and waste discharge requirements. The Board determined that the potentially significant short-term water quality impact from construction of the dairy facilities would be mitigated by compliance with the general construction storm water permit (General Order 99-08-DWQ) so long as the Discharger submits a SWPPP that includes best management practices for construction of the dairy facility and retention ponds. The Regional Board determined that compliance with these waste requirements implementing the minimum standards pursuant to Title 27 for construction of the retention ponds and manure and wastewater application would mitigate potential impacts to groundwater.
25. The Regional Board considered all the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, in establishing the following conditions of discharge.
26. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them

with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

27. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that, pursuant to California Water Code (CWC) Sections 13263 and 13267, Lawrence M., Anthony R., and Joseph J. Neles, dba Neles Dairy, 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 wastewater to surface waters or surface water drainage courses is prohibited unless a chronic or catastrophic rainfall causes overflow from a storage facility designed, constructed, maintained and operated to contain all process generated wastewater plus runoff from a 25-year, 24-hour storm. (*Chronic rainfall means a series of wet weather conditions which would not provide the opportunity for dewatering the storage facility and which the total precipitation is greater than that which would be expected within a 25-year return period.*)
2. The discharge of hazardous or toxic substances including solvents, oil, grease, or other petroleum products, is prohibited.
3. The discharge of wastewater, storm water which has commingled with manure or wastewater, or irrigation "tailwater" containing wastewater to lands not owned or controlled by the Discharger, or in a manner not approved by the Executive Officer is prohibited.
4. The discharge of waste classified as 'hazardous', as defined in Sections 2521 (a), Chapter 15 of Title 23 is prohibited.

**B. Discharge Specifications:**

1. Neither the treatment nor disposal of wastes shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.
2. The discharge shall not cause degradation of any water supply.
3. The discharge of wastewater to irrigation fields shall not result in runoff to surface waters or surface water drainage courses.
4. The Discharger's facility shall comply with all standards in Title 27, Subchapter 2, of the California Code of Regulations, (CCR), including the following:
  - a. The Discharger shall prevent animals at a confined animal facility from entering any surface water within the confined area.
  - b. Confined animal facilities shall be designed and constructed to retain all facility wastewater generated, together with all precipitation on, and drainage through, manured areas during a 25-year, 24-hour storm.

- c. All precipitation and surface drainage outside manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events described in (b) above, shall be diverted away from the manured areas unless such drainage is fully contained.
  - d. Retention ponds shall be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows.
  - e. Retention ponds shall be lined with, or underlain by, soils containing not more than 10% gravel and not less than 10% clay or artificial materials of equivalent permeability.
  - f. Application of manure and wastewater to disposal fields or croplands shall be at rates which are reasonable for the crop, soil, climate, special local situations, management system, and type of manure. Application manure and wastewater shall be in a manner to maximize the uptake of Nitrogen.
  - g. Discharge of facility wastewater to disposal fields shall not result in surface runoff from disposal fields and shall be managed to minimize percolation to groundwater.
  - h. Manured areas shall be managed to minimize infiltration of water into underlying soils.
5. A minimum freeboard of two (2) feet shall be maintained at all times in the retention ponds.
  6. Retention ponds shall be managed to prevent the breeding of mosquitoes, In particular,
    - a. An erosion control program shall ensure that small coves and irregularities are not created around the perimeter of the water surface.
    - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
    - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
  7. Dead animals shall be disposed of in accordance with appropriate state and local laws and regulations.

8. No new containment structures shall be constructed of manure, and manure shall not be used to improve or raise existing containment structures.
9. All cross-connections shall be designed to prevent backflow or wastewater into production or irrigation wells.
10. Corrals shall be graded and maintained to prevent the ponding of water and to minimize the infiltration of water into the underlying soils.
11. Manure and feed storage areas shall be managed to minimize infiltration of leachate from these areas to the underlying soils and to collect and store runoff from these areas.

**C. Solids Management and Disposal Requirements:**

1. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Title 27 and approved by the Executive Officer.
2. Solids and sludges shall be removed from screens, sumps, etc., as needed to ensure optimal operation of the units.
3. Manure removed from corrals shall be applied to croplands as specified in Discharge Specification 4.f. above. On two (2) designated "clean days" per calendar year the dairy shall be free of all stockpiled manure that has been removed from the corrals. These "clean days" shall be selected by the Discharger. The two (2) "clean days" shall be at least four (4) months apart. Each "clean day" shall be identified and reported to the Regional Board office in writing at least five (5) working days in advance of the selected time.
4. Any proposed change in solids disposal practice from a previously approved practice shall be reported to the Executive Officer.

**D. Groundwater Quality Limitations:**

1. The discharge, in combination with other sources, shall not cause groundwater underlying the wastewater disposal areas to contain taste- or odor-producing substances in concentrations that cause a nuisance or adversely affect beneficial uses.

2. The discharge, in combination with other sources, shall not cause usable groundwater underlying the facility to contain waste constituents statistically greater than background water quality except that coliform organisms shall not exceed 2.2 MPN/100mL over any seven-day period.

**E. Provisions:**

1. The Discharger shall comply with Monitoring and Reporting Program No. R5-2002-0166, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.
2. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are a part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provision(s)."
3. The Discharger shall comply with the "Nutrient and Irrigation Water Management Plan" (NIWMP), Attachment C. Proposed revisions to the NIWMP shall be approved by the Executive Officer prior to implementation.
4. The Discharger shall comply with the "Construction Quality Assurance Plan" (CQAP) for construction of the retention ponds, Attachment E. Proposed revisions to the CQAP shall be approved by the Executive Officer prior to implementation. Construction of the retention ponds shall be under the direction of a registered civil engineer or a certified engineering geologist. Following completion of construction a report certified by the above individual shall be submitted to the Executive Officer for review and approval. The report shall contain sufficient information and test results to verify that the bottom and side slopes were properly compacted to 90% and that the permeability of less than  $1 \times 10^{-6}$  cm/sec in a one-foot layer was achieved.
5. 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 Board or court orders requiring corrective action or imposing civil monetary liability, or revision or rescission of this Order.
6. By **1 January 2003**, the Discharger shall submit a work plan for characterization of groundwater quality. The work plan shall describe the installation and sampling of monitoring wells to allow evaluation of the groundwater quality upgradient and downgradient of the main retention pond and heifer pond. Each monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost usable aquifer and to comply with applicable well standards. The work plan shall be consistent with, and include the items listed in, the first section of Attachment F, *Monitoring Well Installation Workplan*.
7. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.

8. In the event of any change in control or ownership of land or waste discharge facilities 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 Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the proposed 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 California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

9. A copy of this Order and its attachments shall be maintained at the Neles Dairy for reference by key operating personnel. Key operating personnel shall be familiar with its contents.
10. Pursuant to Section 13267 of the California Water Code, the Discharger may be required to submit technical reports as directed by the Executive Officer.
11. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Acting 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 6 September 2002.

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THOMAS R. PINKOS, Acting Executive Officer

JFR: