

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2003-0178

WASTE DISCHARGE REQUIREMENTS
FOR
MORADA PRODUCE COMPANY
LINDEN PACKING SHED
SAN JOAQUIN COUNTY

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

1. Morada Produce Company (“Discharger”) submitted a Report of Waste Discharge (RWD), dated 30 September 2002, for the land application of food processing wastewater. The RWD was determined to be incomplete. An RWD addendum was submitted in March 2003, and additional information was submitted on 23 July 2003. The RWD was submitted for an existing vegetable processing facility and an associated wastewater treatment and application facility.
2. The vegetable processing facility is at 500 N. Jacktone Road, Linden, near the intersection of Copperopolis Road and Jacktone Road. The processing facility and the land application area is on Assessor’s Parcel No. 105-040-15.
3. The properties are in Section 31, T2N, R8E, MDB&M, as shown in Attachment A, which is attached hereto and made part of the Order by reference. The Discharger owns the parcels that will be used for processing and/or land application.
4. The Discharger has operated a dry operation for many years without the need for Waste Discharge Requirements (WDRs). However, the Discharger will begin packing other products and will generate wastewater; therefore, WDRs are necessary for this facility.

BACKGROUND

5. The Discharger packages freshly harvested onions and is expanding its operations to include packaging of fresh asparagus and cherries. Onions are packaged dry but wastewater will be generated while processing asparagus and cherries. Wastewater is generated while washing and chilling the product, and will be generated seven days a week from February to April (asparagus season) and May to June (cherry season).
6. The Discharger plans to expand the existing facility in two phases. Phase I will be a 27,800 sq. ft. addition to the existing onion packing operation. This addition will comprise a 20,000 sq. ft. asparagus packing operation and a 7,800 sq. ft. cold storage room. Phase II will be the expansion of the 20,000 sq. ft. building for a cherry processing line, a new office, and an attached restroom facility.
7. Industrial wastewater will consist of rinse water and hydrocooler water. Rinse water is discharged daily during the processing season; hydrocooler water is discharged twice a week as needed. Wastewater is stored in an unlined storage pond into which stormwater will also be discharged.

Wastewater in the pond will be used for irrigation of approximately 160 acres of walnut orchards adjacent to the packing facility.

8. Asparagus will be spray washed on a conveyor with uncooled non-chlorinated water. The clean asparagus will then be packed into boxes and sprayed for five to seven minutes with chilled chlorinated water in two hydrocooler units. The chlorine concentration will be 50 to 60 mg/L. Chilled water in the hydrocooler will be recycled during processing activities. The hydrocooler water will be discharged to the wastewater pond twice weekly.
9. Similar to the asparagus, cherries will be rinsed with non-cooled water followed by chilled chlorinated water. The chlorine concentration will be 50 to 60 mg/L. Chilled water in the hydrocooler will be recycled during processing activities. Approximately twice a week, the hydrocooler water will be discharged to the wastewater pond.
10. The Discharger cannot characterize the asparagus and cherry washing wastewater until the processing season begins in 2004. However, it is anticipated that the wastewater should contain low levels of total dissolved solids (TDS) and biochemical oxygen demand (BOD). Wastewater quality data for chlorine and trihalomethanes (THMs) was collected, as described below.
11. THMs are formed when chlorinated water is brought into contact with organic matter. At Morada Packing Company, organic matter may be naturally present in the well water supply, may be introduced into the process water during the chilling operation, or may be present in the wastewater pond. Therefore, it is possible that THMs will be present in the wastewater.
12. A THM formation potential test was performed using water from the site's supply well. The test determines the amount of THMs that could be formed with up to seven days of contact time. The THM formation potential was low (6.5 µg/L after seven days). However, the test did not take into account the chlorine concentration in the hydrochiller water, which contains a chlorine concentration of 50-60 mg/L. Samples were also collected from the hydrochiller water and were analyzed for chlorine and THMs. Chlorine concentrations ranged from 0.50 mg/L to 2.14 mg/L. Chloroform was the only THM detected; its concentration ranged from 16 µg/L to 25 µg/L.
13. The Discharger is currently evaluating the use of peroxyacetic acid (PAA) as an alternative to chlorine for disinfection of process water. Because THMs are not generated when PAA is used, the use of PAA may result in reduced monitoring requirements. The Monitoring and Reporting Program (MRP) attached to this order includes requirements for monitoring chlorine and THMs. If the Discharger discontinues the use of chlorine, the Discharger can request revision of the MRP to remove the chlorine and THMs monitoring requirements.

WASTEWATER SYSTEM

14. Stormwater is collected from paved areas and buildings, and is piped to the storage pond. Because industrial wastewater is mixed with stormwater in the pond, all the water collected in the pond will be handled and disposed of as industrial wastewater.

15. The RWD presents a water balance that demonstrates adequate storage and disposal capacity for the wastewater and stormwater that will be generated on site. Stormwater volumes were calculated using the 100-year return annual total distributed monthly in accordance with historical trends. Stormwater runoff amounts were determined with the rational method using a runoff coefficient of 0.95 for roofed/paved areas.
16. Wastewater and stormwater generation estimates are presented in the table below:

<u>Month</u>	<u>Asparagus Wastewater¹</u>	<u>Cherry Wastewater¹</u>	<u>Stormwater^{1,2}</u>	<u>Total¹</u>
January	0	0	600,629	600,629
February	128,400	0	566,669	695,069
March	142,157	0	401,885	544,042
April	137,571	0	198,454	336,026
May	0	142,157	155,201	297,358
June	0	137,571	29,134	166,706
July	0	0	5,002	5,002
August	0	0	7,342	7,342
September	0	0	32,163	32,163
October	0	0	137,475	137,475
November	0	0	292,994	292,994
December	0	0	323,144	323,144

¹ All units are Gallons per Month.

² Stormwater calculated using 100-year return annual total distributed in accordance with historical pattern and the rational runoff method.

17. The Discharger's treatment of process wastewater consists of screening prior to discharge into the wastewater pond. Wastewater in the pond will be further treated through biological activity, settling, and volatilization of organic compounds.
18. The pond is approximately 150 feet by 145 feet, and is 15 feet deep. The storage capacity of the pond is approximately 1.46 million gallons.
19. The September 2002 RWD included an odor control contingency plan for the wastewater storage pond. If the pond generates odors, or if the dissolved oxygen level is less than 1.0 mg/L, then an aerator will be added to the pond.

LAND APPLICATION SYSTEM

20. Wastewater is discharged from the pond to a 160-acre walnut orchard as shown on Attachment B, which is attached hereto and made part of the Order by reference.
21. Based on the RWD's water balance, the pond will go dry in September, even using the 100-year return annual rainfall amount. The pond will likely go dry earlier in the year during normal rainfall years. Because the wastewater does not provide enough water for irrigation of the orchard,

supplemental irrigation water is mixed with the wastewater and applied to the crops. Mix ratios (the amount of supplemental water divided by the amount of process/stormwater) will vary from a minimum factor of 5 for the month of December, to a maximum of 217 in the month of July.

22. To control tailwater, the land application area is bermed. Wastewater application will be by flood irrigation. Sprinkler application of wastewater in the land application areas is acceptable if the application is in compliance with Section D, "Land Application Area Specifications" of this Order and if the land application area has been adequately prepared to receive sprinkler-applied wastewater. The Discharger may add cover crops in the rows between the trees. Other crops may be acceptable as long as the discharge complies with the Effluent Limitations.
23. Wastewater applications will be rotated to provide soil drying time and to prevent odors. If odors are detected, the irrigated areas will be allowed to dry out thoroughly. Discing activities can be performed between crop activities.

OTHER WASTE STREAMS

24. Solids are generated while processing each of the crops. Each solid waste is disposed of differently as described below:
 - a. Onions are harvested, bagged, and shipped dry. There is no washing or other wastewater generated associated with onions. Solids are swept up and disced into the soil in the walnut orchard.
 - b. Asparagus are unloaded onto a conveyor-packing belt. The butt ends are manually trimmed and the spears are washed. The butt ends are placed into a trough with flowing water and float to a loading pit where a conveyor belt loads them onto trucks. The butt ends are used as cattle feed.
 - c. Cherries generate little solids. The crop is hand picked. Any solids that are generated are disposed of by applying to the walnut orchard or are landfilled.
25. Domestic wastewater is discharged to a septic system that is permitted by the San Joaquin County Environmental Health Department, who will continue to provide oversight for the septic system. Domestic wastewater is not commingled with the process water.

GROUNDWATER CONDITIONS

26. According to information published by the San Joaquin County Flood Control and Water Conservation District, the depth to groundwater is approximately 95 feet below ground surface and flows to the south-southeast, although locally, groundwater depth and flow may be influenced by local pumping and irrigation patterns.
27. A groundwater sample was collected from the on-site well that serves the facility. Nitrate as nitrogen was reported in the sample at a concentration of 4.0 mg/L.

28. Although not fully characterized yet, it is presumed that the wastewater in the pond will contain chloroform at concentrations exceeding groundwater water quality objectives. The Toxicity objective in the Basin Plan applies to all groundwaters, which states, in part, “[g]round waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life associated with designated beneficial use(s).” Chapter IV of the Basin Plan contains the *Policy for Application of Water Quality Objectives*, which provides that “[w]here compliance with narrative objectives is required (i.e., where the objectives are applicable to protect specified beneficial uses), the Regional Water Board will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.” The policy further provides that to evaluate compliance with narrative water quality objectives the Regional Board considers, among other things, “relevant numerical criteria and guidelines developed and/or published by other agencies and organizations (e.g., ... California Office of Environmental Health Hazard Assessment, ...).” The Office of Environmental Health Hazard Assessment (OEHHA) has published and maintains the Toxicity Criteria Database, which contains cancer potency factors for chemicals, including chloroform, that have been used as a basis for regulatory actions by the boards, departments and offices within the California Environmental Protection Agency (Cal/EPA). The cancer potency factor for oral exposure to chloroform in this database is 0.031 milligrams per kilogram body weight per day (mg/kg-day). By applying standard toxicologic assumptions used by OEHHA, USEPA and other environmental agencies in evaluating health risks via drinking water exposure (i.e., 70 kg body weight and 2 liters per day water consumption), this cancer potency factor is equivalent to a concentration in drinking water of 1.1 ug/L (ppb) at the 1-in-a-million cancer risk level. The 1-in-a-million risk level is consistent with that used by the Department of Health Services (DHS) to set *de minimis* risks from involuntary exposure to carcinogens in drinking water in the development of drinking water MCLs and Action Levels and by OEHHA to set negligible cancer risks in the development of Public Health Goals for drinking water. The one-in-a-million cancer risk level is also mandated by USEPA in applying human health protective criteria contained in the National Toxics Rule and the California Toxics Rule for priority toxic pollutants in California surface waters. Chloroform is projected to be present in the pond wastewater at concentrations ranging 16 ug/L to 25 ug/L, well in excess of the 1.1 ug/L human toxicity value.
29. Because the facility is not yet in operation, wastewater has not been fully characterized and chloroform could be present in the storage pond at concentrations that could degrade the underlying groundwater. However, chloroform could also volatilize from the wastewater stored in the pond. Due to the unknown potential for chloroform impacts, it is appropriate to require the Discharger to reevaluate the discharge after a year of monitoring. If chloroform, or other constituents, are present at concentrations that could degrade the underlying groundwater, then the Discharger will be required to take steps to prevent degradation. These steps could include treating the waste, using different chemicals, or lining the pond. The Discharger may also be required to install lysimeters or groundwater monitoring wells.

SITE SPECIFIC CONDITIONS

30. The area surrounding the facility contains agricultural, industrial, residential, and educational land uses. The topography of the surrounding area is level.

31. The land application areas are located outside the 100-year flood zone.
32. The average annual total precipitation for this area of San Joaquin County is 15.28 inches. The 100-year annual total precipitation for this area is 26.65 inches. The peak monthly 100-year precipitation of 5.82 inches occurs in January.
33. Soil borings were drilled at the facility in September 2001 for a geotechnical investigation and in November 2001 as part of the RWD preparation. The boring logs describe subsurface soil as sand, silt, and clay mixtures. The deepest borings were drilled in November 2001 to 46.5 feet below the ground surface. No groundwater was encountered in any of the borings.
34. Surface soil in the land application area consists of Hollenbeck Silty Clay. The surface soil possesses a low infiltration rate (0.06 to 0.2 in/hr).

BASIN PLAN, BENEFICIAL USES, AND REGULATORY CONSIDERATIONS

35. 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, waste discharge requirements must implement the Basin Plan.
36. Surface water drainage is to Mormon Slough, a tributary of the Calaveras River.
37. The beneficial uses of the Calaveras River (from New Hogan Reservoir to the Sacramento San Joaquin Delta) are municipal and domestic supply; agricultural supply; industrial process and service supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.
38. The beneficial uses of underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
39. State Water Resources Control Board (State Board) Resolution No. 68-16 requires that the Regional Board, in regulating the discharge of waste, must maintain high quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the State Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 also requires that the discharge be required to meet waste discharge requirements which will result in the Best Practicable Treatment or Control (BPTC) of the discharge to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.
40. The Regional Board has considered antidegradation pursuant to State Board Resolution No. 68-16 and finds that not enough data exists to determine whether this discharge is consistent with those

provisions. Background groundwater conditions are not yet defined at the pond or land application area and the specific quality of the wastewater has not yet been characterized. Therefore, this Order provides a schedule for data collection to determine whether the discharge will cause an increase in groundwater constituents above that of background levels. If the discharge will cause an increase, then the Discharger may be required to cease the discharge, implement source control, change the method of disposal, or take other action to prevent groundwater degradation. This Order establishes effluent limitations that are protective of the beneficial uses of the underlying groundwater and requires groundwater monitoring to evaluate whether the discharge of waste is impacting the groundwater quality.

41. Section 13267(b) of 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 monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2003-0178 are necessary to assure compliance with these WDRs. The Discharger operates the facility that discharges the waste subject to this Order

42. Excessive application of food processing wastewater to land application areas can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater by overloading the shallow soil profile and causing waste or soil constituents (organic carbon, nitrate, dissolved solids, and metals) to percolate below the root zone. If sufficient information becomes available, this Order may be revised to increase or further reduce loading rates as appropriate. If the Discharger is unable to modify its waste stream or application methods such that groundwater quality will not be impacted, then the Regional Board would be required to classify the waste as a designated waste and require full containment under Title 27 of the California Code of Regulations (CCR), Division 2, Subdivision 1, beginning with Section 20005 (hereafter Title 27).
43. State regulations that describe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the facility is currently exempt from Title 27, the data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

44. According to *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency (US EPA Publication No. 625/3-77-0007) (hereafter *Pollution Abatement*), in applying food processing wastewater to land for biological treatment, the loading of BOD₅ should not exceed 100 lbs/acre/day (average) to prevent development of nuisance conditions.
45. Acidic soil conditions can be detrimental to land treatment system function, and may also cause groundwater degradation. If the buffering capacity of the soil is exceeded and soil pH decreases below 5, naturally occurring metals (including iron and manganese) may dissolve and degrade underlying groundwater. *Pollution Abatement* recommends that water applied to crops have a pH between 6.4 and 8.4 to protect crops from damage by food processing wastewater. Near neutral pH is also required to maintain adequate active microbial populations in the soil.
46. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells, as described in *California 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.
47. Federal regulations for stormwater discharges promulgated by the U.S. Environmental Protection Agency (40 CFR Parts 122, 123, and 124) require specific categories of facilities which discharge stormwater to obtain NPDES permits. This facility is within the specific categories described by the US EPA, and it is therefore appropriate to require that the Discharger submit a Notice of Non-Applicability, apply for a No Exposure Certification, or obtain coverage for its processing facility under the State Board's Water Quality Order No. 97-03-DWQ to comply with these regulations.
48. On 3 October 2001, the San Joaquin County Community Development Department adopted a Negative Declaration for the expansion project, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et. seq.) and State CEQA guidelines.
49. This discharge is currently exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq., (hereafter Title 27). The exemption, pursuant to Section 20090(b), is based on the following:
 - a. The Regional Board is issuing waste discharge requirements,
 - b. The discharge complies with the Basin Plan, and
 - c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.

The basis for this exemption, pursuant to (b) above, may be revised as new information becomes available on background water quality and the potential for water quality impacts from the waste discharge.

50. Pursuant to California Water Code 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

51. 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.
52. The Discharger and interested agencies and persons have been 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.
53. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that pursuant to Sections 13263 and 13267 of the California Water Code, Morada Produce Company, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

Note: Other prohibitions, conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.

A. Discharge Prohibitions:

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. The discharge shall not cause the degradation of any water supply.
3. Discharge of waste classified as hazardous, as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15), or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.
4. Discharge of domestic wastewater to the process wastewater treatment system or land application sites is prohibited.
5. Discharge of process water to areas other than the designated land application area described in the Findings is prohibited.
6. Excessive irrigation with wastewater that results in tailwater runoff is prohibited.

B. Discharge Specifications:

1. The monthly average process wastewater discharge to the storage pond shall not exceed 150,000 gallons per month. The process wastewater discharge does not include stormwater.

2. Neither the treatment nor the discharge shall cause a condition of pollution or nuisance as defined by the California Water Code, 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 Groundwater Limitation.
4. Public contact with wastewater shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
5. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the property owned by the Discharger.
6. As a means of discerning compliance with Discharge Specification No. B.5, the dissolved oxygen content of any pond water shall not be less than 1.0 mg/L at any time.
7. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
8. The Discharger's wastewater treatment system and land application system shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
9. Wastewater ponds shall be managed to prevent breeding of mosquitoes. In particular,
 - a. An erosion control program shall be implemented to 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.
10. The facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter months. 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.
11. Freeboard in any pond shall never be less than two feet as measured from the water surface to the lowest point of overflow.
12. On or about **15 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.10 and B.11.

C. Effluent Limitations

1. The maximum total nitrogen loading to the land application areas shall not exceed the agronomic rate for plant available nitrogen (PAN) for the type of crop to be grown, as specified in the most recent edition of the Western Fertilizer Handbook. PAN shall be calculated as 100 percent of the total nitrogen content of the waste, unless and until the Discharger demonstrates that another proportion is technically justified, as described in Provision No. G.14.
2. The maximum BOD₅ loading to the land application areas shall not exceed any of the following, unless the Discharger demonstrates that another loading rate is technically justified, as described in Provision No. G.13 :
 - a. 300 lbs/acre on any single day;
 - b. 100 lbs/acre•day as a 7-day average;
 - c. The maximum loading rate that ensures that the discharge will not create a nuisance.
3. Wastewater discharged to the land application area shall not have a pH of less than 6.5 or greater than 8.4.

D. Land Application Area Specifications

1. The discharge shall be distributed uniformly on adequate acreage in compliance with the Discharge Specifications.
2. Crops shall be grown on the application area. Crops shall be selected based on nutrient uptake capacity, tolerance to anticipated soil moisture conditions, and consumptive use of water and irrigation requirements. Cropping activities shall be sufficient to take up all the nitrogen applied. Crops shall be harvested and removed from the land application area.
3. Hydraulic loading of wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the percolation of process wastewater and irrigation water below the root zone (i.e., deep percolation).
4. The discharge of process wastewater, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the land application area.
5. The Discharger may not discharge effluent to the land application area 24 hours before a predicted storm, during periods of precipitation, or within 24 hours after cessation of any precipitation event, nor shall effluent be discharged when the soil is saturated.
6. Wastewater conveyance lines shall be clearly marked as such. Wastewater controllers, valves, etc. shall be posted with advisory signs; all equipment shall be of a type, or secured in such a manner, that permits operation by authorized personnel only.
7. No physical connection shall exist between wastewater piping and any domestic water supply or other domestic/industrial supply well without an air gap or approved reduced pressure device.

8. The land application area shall be managed to prevent breeding of mosquitoes. More specifically:
 - a. All applied irrigation water must infiltrate completely within 24 hours.
 - b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.
 - c. Low pressure pipelines, unpressurized pipelines, and ditches that are accessible to mosquitoes shall not be used to store wastewater.
9. Discharges to the land application area shall be managed to minimize both erosion and runoff from the land application area.
10. Application of wastewater to the land application areas via flood irrigation shall only occur on contours, furrows, or checks graded so as to achieve uniform distribution, minimize ponding and provide for tailwater control. Furrow runs shall be no longer and slopes shall be no greater than what permits reasonably uniform infiltration and maximum practical irrigation efficiency. The minimum furrow slope shall not be less than 0.2 percent.
11. Wastewater application areas shall be allowed to dry for at least 72 hours from the end of wastewater application.
12. There shall be no standing water in the land application area 24 hours after wastewater is applied.
13. Wastewater discharge shall not occur within a 50-foot wide buffer zone along any property lines adjacent to properties developed with residences.
14. The perimeter of the land application areas shall be bermed or graded to prevent ponding along public roads or other public areas.
15. The resulting effect of the wastewater discharge on the soil pH shall not exceed the buffering capacity of the soil profile.

E. Solids Disposal:

1. Collected screenings, sludge, and other solids removed from wastewater shall be disposed of in a manner that is consistent with Title 27, Division 2, Subdivision 1 of the CCR and approved by the Executive Officer.
2. Sludge and other solids shall be removed from wastewater treatment equipment, sumps, ponds, etc. as needed to ensure optimal plant operation and adequate hydraulic capacity. Drying operations shall take place such that leachate does not impact the quality of groundwater or surface water.

3. Storage and disposal of domestic wastewater sludge (septage) shall comply with existing Federal, State, and local laws and regulations, including permitting requirements and technical standards.
4. Sludge and other solids shall be removed from septic tanks as needed to ensure optimal operation and adequate hydraulic capacity. A duly authorized carrier shall haul sludge, septage, and domestic wastewater.
5. Any proposed change in solids use or disposal practice from a previously approved practice shall be reported to the Executive Officer at least 90 days in advance of the change.

F. Groundwater Limitations:

The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations greater than natural background water quality.

G. 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. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(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. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared by a registered professional as described by Provision G.1.
 - a. By **5 January 2004**, the Discharger shall submit either a Notice of Non-Applicability, an application for a No Exposure Certification, or a Notice of Intent to comply with State Board Water Quality Order No. 97-03-DWQ for discharges of stormwater from the facility.
 - b. By **1 February 2004**, the Discharger shall submit a technical report describing how wastewater pond inflows and supplemental irrigation flows will be metered.
 - c. By **1 February 2004**, the Discharger shall submit an *Operation and Maintenance (O&M) Plan* for the wastewater treatment facility wastewater storage pond and land application area. The O&M Plan shall instruct field personnel on how to manage the day-to-day discharge operations to comply with the terms and conditions of this order and how to make field adjustments, as necessary, to preclude nuisance conditions (e.g., standing water, runoff from land application areas, and objectionable odors from ponded wastewater). It shall also include a nuisance condition troubleshooting flowchart and a description of

notification requirements if a surface water discharge occurs. Operating personnel shall keep a copy of the O&M Plan at the facility for reference. Key operating personnel shall be familiar with its contents.

- d. If the wastewater pond generates odors, or if the dissolved oxygen concentration is consistently less than 1.0 mg/l, then the Discharger shall implement the odor control contingency plan described in the September 2002 RWD. The Discharger shall submit a summary report within **30 days** of implementing the plan.
- e. By **1 November 2004**, the Discharger shall submit an Effluent Evaluation report. The report shall summarize the effluent monitoring data for the year 2004 and shall evaluate whether the continued discharge of wastewater to the unlined pond has the potential to degrade water quality. If there is a potential for degradation, then the Discharger shall evaluate contaminant control alternatives, describe a preferred alternative, and propose a timeline to meet the Groundwater Limitations of this Order. The selected contaminant control alternative must comply with State Board Resolution No. 68-16 and be consistent with the most recent Basin Plan. Remedial measures shall be implemented prior to the 2005 packing season.

If remedial measures are not proposed, but chloroform is consistently present in the wastewater, then the Discharger shall submit a workplan for the installation of lysimeters or groundwater monitoring wells around the pond. The workplan shall be consistent with the first section of Attachment C, *“Items to be Included in a Monitoring Well Installation Workplan and Monitoring Well Installation Report of Results.”*

- f. If the Effluent Evaluation Report includes a workplan for the installation of groundwater monitoring wells or lysimeters, then by **1 April 2005**, the Discharger shall submit a Monitoring Well/Lysimeter Installation Report of Results. The report shall contain the items listed in the second section of Attachment C.
3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2003-0178, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.
 4. The Discharger shall comply with the “Standard Provisions and Reporting Requirements for Waste Discharge Requirements”, dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as “Standard Provision(s).”
 5. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving the land application area used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Regional Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
 6. The Discharger shall submit to the Regional 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 scheduled 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.

7. The Discharger shall use the best practicable cost effective control technique(s) currently available to comply with discharge limits specified in this order.
8. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
9. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, then the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.
10. The Discharger shall 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 in revision or rescission of this Order.
11. 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.
12. If the Discharger can demonstrate to the satisfaction of the Executive Officer that higher BOD loadings than that specified in Effluent Limitation No. C.2 will not cause or contribute to cause waste constituents to leach into and degrade underlying groundwater, or cause any other violation of the terms and conditions of this Order, then this Order may be reopened for consideration of revision of BOD loading limits. The demonstration shall include the submittal of a technical report that describes, at a minimum, the results of a field demonstration project conducted over the course of at least two years on similar soil types as those in the land application areas and using similar food processing wastewater as that described in the Findings. Any proposed field demonstration project will be regulated under the terms and conditions of separate waste discharge requirements. As such, at least 120 days prior to conducting the field demonstration project, the Discharger (and/or other reasonable party) must submit a complete Report of Waste Discharge for the proposed field demonstration project.
13. If the Discharger can demonstrate to the satisfaction of the Executive Officer that higher nitrogen loadings than that specified in Effluent Limitation No. C.1 will not cause or contribute to cause waste constituents to leach into and degrade underlying groundwater, or cause any other violation of the terms and conditions of this Order, then this Order may be reopened for consideration of revision of nitrogen loading limits. The demonstration shall include the submittal of a technical report that describes, at a minimum, the results of a field demonstration project conducted over the course of at least two years on similar soil types as those in the land application areas and using similar food processing wastewater as that described in the Findings. Any proposed field demonstration project will be regulated under the terms and conditions of

separate waste discharge requirements. As such, at least 120 days prior to conducting the field demonstration project, the Discharger (and/or other reasonable party) must submit a complete Report of Waste Discharge for the proposed field demonstration project.

14. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, 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 5 December 2003.

THOMAS R. PINKOS, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2003-0178

FOR

MORADA PRODUCE COMPANY
LINDEN PACKING SHED
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring industrial wastewater, ponds, land application areas, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities.

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 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 by the manufacturer, or manufacturer approved repair shop, at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

Wastewater influent samples shall be collected prior to discharge into the wastewater storage pond. If wastewater was not generated during the month, then the monitoring report shall so state. Effluent monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow ¹	gpd	Continuous ²	Daily	Monthly
BOD ₅	mg/L	Grab	Weekly	Monthly
PH	S.U.	Grab	Weekly	Monthly

¹ Flow rate shall be monitored by a meter.

² Continuous monitoring requires the flow meter data to be recorded daily.

EFFLUENT MONITORING

The wastewater in the storage pond shall be sampled for the parameters specified below. If the pond is dry, then the monitoring report shall so note.

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
BOD ₅	mg/L	Grab	Monthly	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
pH	S.U.	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Chlorine	mg/L	Grab	Monthly	Monthly
Trihalomethanes ¹	µg/L	Grab	Monthly	Monthly

¹ Trihalomethanes shall be analyzed by EPA Method 8010 or equivalent and shall be specified in both the laboratory and monitoring report.

STORAGE POND MONITORING

The wastewater storage pond shall be sampled for the parameters specified below:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen ¹	mg/l	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
pH	Standard units	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

¹ Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

LAND APPLICATION AREA MONITORING

Application of wastewater to the land application areas shall be monitored to prevent overloading the area with wastewater constituents, which can cause objectionable odors and/or groundwater degradation. For each application site, the following parameters shall be calculated and reported in the monthly monitoring reports.

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Application Area	acres	Measured	Daily	Monthly
Wastewater Loading Rate ²	inches/acre•month	Calculated	Daily	Monthly
Rainfall	Inches	Measurement	Daily	Monthly
Supplemental Irrigation ²	inches/acre•month	Calculated	Daily	Monthly

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Mix Ratio ³	--	Calculated	Daily	Monthly
BOD ₅ Loading Rate	lbs/acre•day	Calculated ¹	Monthly	Monthly
Total Nitrogen Loading Rate	lbs/acre•month	Calculated ⁴	Monthly	Monthly
Cumulative Nitrogen Loading Rate	lbs/acre•year	Calculated	--	Monthly
Total Dissolved Solids Loading Rate	lbs/acre•year	Calculated	Monthly	Monthly
Runoff	Visual Inspection	Observation	Daily ⁵	Monthly

¹ BOD₅ loading shall be calculated using the daily applied volume of wastewater, estimated daily application area, and the most recent results of effluent BOD₅.

² Wastewater Loading Rate and Supplemental Irrigation shall also be reported in gallons.

³ Mix ratio is the ratio Supplemental Irrigation divided by Wastewater Loading Rate.

⁴ Total nitrogen loading rates shall be calculated using the daily applied volume of wastewater, estimated daily application area, and the most recent results of total nitrogen (sum of Nitrate as Nitrogen and Total Kjeldahl Nitrogen).

⁵ Runoff monitoring shall be performed when irrigation of the areas occurs. Frequency of monitoring during the day shall be sufficient to determine if runoff is occurring.

In addition, the Discharger shall maintain a log of discharges to the land application area. Observations shall be noted and shall record which check is receiving wastewater, observations of ponding water, soil clogging, odors, insects, or other potential nuisance conditions. The notations shall also document any corrective actions taken. A copy of the notations recorded each month shall be submitted along with monthly monitoring reports.

GROUNDWATER MONITORING

The following monitoring requirement is only necessary if the Discharger installs groundwater monitoring wells as a result of the Effluent Evaluation. If wells are installed, then this program shall be effective beginning with the second quarter of 2004. If the Discharger elects to install lysimeters instead of groundwater monitoring wells, then this same program is in effect, with the exception of the first four items in the table below. If lysimeters are installed, then this program is also effective beginning with the second quarter of 2004.

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Depth to Groundwater	0.01 ft	Measurement	Quarterly	Quarterly
Groundwater Elevation ¹	0.01 ft	Calculated	Quarterly	Quarterly
Gradient	ft/ft	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Electrical Conductivity	µmhos/cm	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly
pH	pH units	Grab	Quarterly	Quarterly
Trihalomethanes ²	µg/l	Grab	Quarterly	Quarterly
Standard Minerals ³	mg/L	Grab	Annual ⁴	Annual ⁴

¹ Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

² THMs analysis shall be performed using EPA Method 8010 or equivalent.

³ Standard Minerals shall include, at a minimum, the following elements/compounds: Boron, Calcium, Chloride, Iron, Manganese, Magnesium, Potassium, Sodium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

⁴ Annual samples shall be collected in the fourth quarter (October - December) sampling event.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, groundwater, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required by the Monitoring and Reporting Program shall be reported to the Regional Board.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the direct supervision of a California Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). Reports shall be submitted even if wastewater was not generated during that period. At a minimum, the reports shall include:

1. Results of influent, effluent, pond, and land application area monitoring;
2. 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;

3. If requested by staff, copies of laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Monitoring Reports

If groundwater monitoring wells or lysimeters are installed, then the Discharger shall submit quarterly monitoring reports. The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly reports shall be submitted to the Regional Board on the **1st day of the second month after the quarter** (i.e. the January – March quarterly report is due by 1 May) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater or lysimeter monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any (only applicable if wells are installed);
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the December monthly monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular monthly monitoring report, and if applicable, the groundwater monitoring report for the last sampling event of the year;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. If applicable, an evaluation of the groundwater quality beneath the wastewater treatment facility;
4. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
6. Summary of information on the disposal of septage and vegetable derived solid waste;
7. If applicable, the results from annual monitoring of the groundwater wells; and
8. A forecast of influent flows, as described in Standard Provision No. E4.

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 the penalty of perjury 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: _____
THOMAS R. PINKOS, Executive Officer

5 December 2003
(Date)

TRO: 12/5/2003

INFORMATION SHEET

ORDER NO. R5-2003-0178

MORADA PRODUCE COMPANY
LINDEN PACKING SHED
SAN JOAQUIN COUNTY

Morada Produce Company (MPC) packages freshly harvested onions and is expanding its operations to include packaging of fresh asparagus and cherries. Onions are packaged dry but wastewater will be generated while processing asparagus and cherries. Wastewater will be generated seven days a week from February to April (asparagus season) and May to June (cherry season). The facility is located east of Stockton at 500 N. Jacktone Road.

The expansion of the existing facility will be constructed in two phases. Phase I will be a 27,800 sq. ft. addition to the existing onion packing operation. This addition will consist of a 20,000 sq. ft. asparagus packing operation and a 7,800 sq. ft. cold storage room. Phase II will be the expansion of the 20,000 sq. ft. building for a cherry processing line, a new office, and an attached restroom facility.

Industrial wastewater will consist of rinse water and hydrocooler water. Rinse water is discharged daily during the processing season; hydrocooler water is discharged twice a week as needed. Wastewater is stored in an unlined storage pond into which stormwater will also be discharged. Wastewater in the pond will be used for irrigation of approximately 160 acres of walnut orchards located adjacent to the packing facility

MPC's treatment of process wastewater consists of screening prior to discharge into a 1.46 million gallon wastewater pond. Wastewater in the pond will be further treated through biological activity, settling, and volatilization of organic compounds. Wastewater generated by washing asparagus and cherries contains approximately 50 mg/L of chlorine. Trihalomethanes (THMs) are formed when chlorinated water is brought into contact with organic matter. At MPC, organic matter may be naturally present in the well water supply, may be introduced into the process water during the chilling operation, or may be present in the wastewater pond.

The forecast wastewater generation rate is approximately 140,000 gallons per month. Because industrial wastewater is mixed with stormwater in the pond, all the water collected will be handled and disposed of as industrial wastewater.

Wastewater is discharged to a 160-acre walnut orchard. Based on the RWD's water balance, the pond will go dry in September, even using the 100-year return annual rainfall amount. The pond will likely go dry earlier in the year during normal rainfall amount years. Because the wastewater does not provide enough water for irrigation of the orchard, supplemental irrigation water is mixed with the wastewater and applied to the crops. Mix ratios (the amount of supplemental water divided by the amount of process/stormwater) will vary from a minimum factor of 5 in December, to a maximum of 217 in July.

The September 2002 RWD included an odor control contingency plan for the wastewater storage pond. If the pond generates odors, or if the dissolved oxygen level is less than 1.0 mg/L, then an aerator will be added to the pond

The depth to groundwater is approximately 95 feet below ground surface and flows to the south-southeast, although locally, groundwater depth and flow may be influenced by local pumping and irrigation patterns. A groundwater sample was collected from the on-site well that serves the facility. Nitrate as nitrogen was reported in the sample at a concentration of 4.0 mg/L.

Because the facility is not yet in operation, the wastewater has not been fully characterized and chloroform could be present in the storage pond at concentrations that could degrade the underlying groundwater. However, chloroform could also volatilize from the wastewater stored in the pond. Due to the unknown potential for chloroform impacts, it is appropriate to require the Discharger to reevaluate the discharge after a year of monitoring. If chloroform, or other constituents, are present at concentrations that could degrade the underlying groundwater, then the Discharger will be required to take steps to prevent degradation. These steps could include treating the waste, using different chemicals, or lining the pond. The Discharger may also be required to install lysimeters or groundwater monitoring wells.

These waste discharge requirements contain hydraulic, organic, and nutrient loading limits for the land application areas, and time schedules for preparation of an Industrial Stormwater Permit, an Operation and Maintenance Plan, and a re-evaluation of effluent quality.

TRO: 12/5/2003