

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. _____

WASTE DISCHARGE REQUIREMENTS
FOR
BELL-CARTER OLIVE COMPANY
SURFACE IMPOUNDMENT CLOSURE & POST-CLOSURE MAINTENANCE
ORANGE COVE
FRESNO COUNTY

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

1. Bell-Carter Olive Company (hereafter Discharger), a California Corporation, owns an inactive surface impoundment near the City of Orange Cove in Fresno County. The Discharger used the impoundment for the disposal of olive processing brine wastewater. The facility is shown on Attachment A, which is incorporated herein and made part of this Order.
2. Waste Discharge Requirements (WDRs) Order No. 77-006 was adopted to regulate the discharge of up to 100,000 gallons per year of olive brine wastewater to the surface impoundment
3. The wastewater discharge began in 1977 and has been inactive since 1985.
4. This Order implements the *Water Quality Control Plan for Tulare Lake Basin, Second Edition - 1995*, (hereafter Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

LOCATION & DESCRIPTION

5. The impoundment is located on the east side of Monson Avenue between East Parlier Avenue and Manning Avenue, approximately one mile southwest of Orange Cove, California.
6. The impoundment encompasses approximately two acres and is approximately 9 feet in depth. The site is illustrated on Attachment B, which is incorporated herein and made part of this Order. The impoundment is located in the SE $\frac{1}{4}$ of Section 23, T15S, R24E, MDB&M (Assessors Parcel No. 378-021-19).
7. The site is generally flat, sloping gently to the east-northeast. Orchards and vineyards surround the site on three sides and the City of Orange Cove's wastewater treatment facility is located to the west across Monson Road.
8. The site receives an average annual precipitation of 10 inches and the 1000-year, 24-hour precipitation event is approximately 3.7 inches as measured at station #3257 in Fresno.

9. The mean pan evaporation rate is 66 inches per year as measured at Station #325715 in Fresno
10. According to Flood Insurance Rate Map Community-Panel 065029 1240 B prepared by the Federal Emergency Management Agency (FEMA), the site lies within the 100-year flood plain.
11. The site is not within a fault hazard zone. The closest known Holocene fault is the Owens Valley Fault approximately 67 miles to the east. In 1872, an earthquake with an estimated 7.6 magnitude occurred on this fault.

WASTE & SITE CLASSIFICATION

12. The wastewater discharged to the impoundment reportedly consisted of saline wastewater brine. A sample taken indicated an EC of 79,000 µmhos/cm.
13. Results of hydrogeologic investigations indicate EC and chloride concentrations in soil and groundwater beneath the impoundment significantly exceed background.
14. Sludge samples collected from the bottom of the impoundment contained a maximum EC value of 27,000 µmhos/cm and a chloride concentration of 100,000 mg/kg.
15. The Discharger was notified in 1985 by Regional Board letter, that the surface impoundment was considered an existing waste management unit as defined by Title 23, Chapter 3, Subchapter 15.
16. Parts of Chapter 15 regulating the disposal of non-hazardous waste are now part of Title 27, CCR, §20005, et seq., (Title 27). Regulations in Title 27 address the closure of surface impoundments.
17. The surface impoundment does not meet the construction standards contained in Title 27.
18. These requirements implement surface impoundment closure/post closure maintenance and evaluation monitoring. The site is classified as a Class II, non-municipal solid waste landfill in accordance with Title 27.

SURFACE & GROUNDWATER CONDITIONS

19. The Alta East Branch Canal is located approximately ¾ of a mile west of the site. A small irrigation canal is present along the northern and western boundaries.
20. According to Department of Water Resources information, the regional groundwater gradient is to the southwest.
21. The soil beneath the site is reported to consist of interbedded sandy silt, silty and clayey sand, and clayey gravel.

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22. The site is in the Alta Hydrologic Area (No. 51.60) as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
23. Groundwater is first encountered beneath the site between 35 and 40 feet below ground surface. The groundwater gradient beneath the site is generally to the south-southeast at a gradient between 0.004 to 0.017.
24. Background water quality of the shallow groundwater is excellent, with chloride concentrations of 30 mg/L and EC of 550 μ mhos/cm.
25. The designated beneficial uses of groundwater, according to the Basin Plan, include domestic, municipal, agricultural, and industrial service and process supply.
26. Four groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) are monitored semi-annually. Groundwater monitoring analytical results have consistently indicated that chloride concentrations and EC values in groundwater are elevated immediately downgradient of the impoundment. Recent groundwater monitoring results indicate 32 mg/L chloride and 590 μ mhos/cm EC in the upgradient well MW-1 to 490 mg/L chloride and EC of 2,000 μ mhos/cm in well MW-2 adjacent to the former pond in the down gradient direction.
27. Twenty privately owned agricultural and domestic groundwater supply wells are reported to exist within one-half mile of the site. Seven of these wells have been tested and existing data suggests that these water supply wells have not been impacted by past operation of the surface impoundment.
28. Results of site hydrogeologic investigations indicate that brine wastewater migrated from the impoundment, impacting the underlying soil and groundwater, creating or posing a continued threat of pollution or nuisance.
29. As part of what is considered evaluation monitoring, sampling results of four groundwater monitoring wells, nearby water supply wells and temporary groundwater monitoring locations indicate that the extent of the groundwater impacts are not defined.
30. This Order requires the Discharger to complete an Evaluation Monitoring Program, which includes an Engineering Feasibility Study and corrective action measures and a time schedule.

CLOSURE CAP CONSTRUCTION

31. Title 27, Section 20950(a)(2)(A)1 states that the goal of closure for a surface impoundment closed as a landfill is “to minimize the infiltration of water into the waste, thereby minimizing the production of leachate and gas.” Gas or leachate production from the decomposition of organic or municipal solid waste are not concerns at the site.

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32. Title 27, Section 20950(a)(2)(A)2 states that the goal of post-closure maintenance for a surface impoundment closed as a landfill is “to assure that the Unit continues to comply with the performance standard of ¶(a)(2)(A)1 until such time as the waste in the Unit no longer constitutes a potential threat to water quality.”
33. Title 27, Section 20080(b) allows the Regional Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative in accordance with Section 20080(c)(1) and (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in Section 20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Section 20080(b)(2).
34. It has been determined that clean closure is not feasible and the impoundment will be closed in-place as a landfill by construction of a closure cap system.
35. California Water Code, Section 13360(a)(1) allows the Regional Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.
36. The Discharger submitted a closure plan that proposes to backfill the impoundment and construct an engineered alternative cap to close the impoundment. The closure system consists of, from bottom to top, a 2-foot thick compacted foundation layer over the impoundment backfill, overlain by a 60-mil HDPE geomembrane, a minimum 24-inch thick protective soil layer, overlain by a 10-inch thick layer of base rock, and overlain by a three-inch thick asphalt concrete. Differential settlement is considered unlikely to occur with this closure system because the cap will not be underlain by compactable material.
37. The maximum elevation of the upper portion of the closure cap surface (approximately 400 ft. MSL) would have portions just at or below the anticipated maximum elevation (approximately 400 ft. MSL) of the 100-year peak flood event (see Finding No. 10). The 3-inch thick, sloped, asphalt concrete cap, couple with the 60-mil HDPE liner and other components, are designed to extend beyond the maximum dimension of the previous surface impoundment, and would thus limit potential infiltration. The durability of the asphalt concrete construction would prevent washout or erosion.
38. An unsaturated zone monitoring system does not exist at the facility. Based on the concentration of saline constituents present within the soil column to groundwater beneath the facility and that no leachate is present or will be, implementation of an unsaturated zone monitoring program is considered impracticable.

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39. The proposed precipitation and drainage system has been designed for a maximum storm intensity of 2.4 inches per hour which exceeds the 1000-year, 24-hour storm.
40. This Order requires submittal of a final Post Closure Maintenance Plan by the Discharger. This Order also requires submittal of a certified Construction Quality Assurance and Control report that certifies that cap construction complied with the approved project plans and specifications.
41. The cover shall be designed and constructed to prevent to the greatest extent feasible; ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under 1,000 year, 24-hour precipitation conditions.
42. Surface runoff from outside the covered area shall be diverted away from the affected soils and cover system.
43. The cover will be constructed with at least two permanent monuments, installed by a licensed surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the postclosure maintenance period.

CEQA AND OTHER LEGAL CONSIDERATIONS

44. The Board, acting as lead agency, adopted a Mitigated Negative Declaration addressing potential groundwater quality impacts, threat to wildlife, and potential hazard to human health on _____ 2005 for the proposed project in accordance with provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.).
45. Potential environmental impacts and mitigation measures described in the Mitigated Negative Declaration are as follows:
 - a. The impoundment had leaked high salinity olive brine into the subsurface impacting soil and groundwater. The impoundment will be closed and capped which will reduce the potential of high salinity constituents from leaching out of the soil and further impacting groundwater.
 - b. Water wells are present downgradient from the site. Olive brine constituents present in the groundwater could result in exposure to humans via drinking water. High salinity constituents have not reached domestic wells. Groundwater monitoring will monitor the migration of the salinity constituents.
46. This Order requires the Discharger to submit technical reports as authorized under CWC Section 13267(b)(1), which states in part:

“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,

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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.”

47. The technical reports required by this Order and the attached “Monitoring and Reporting Program No. _____” are necessary to assure compliance with these Waste Discharge Requirements. The Discharger owns the facility subject to this Order.
48. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) general industrial stormwater permit, provided the facility has not experienced a reportable spill since 19 November 1987. It is the responsibility of the Discharger to comply with United States Environmental Protection Agency federal stormwater regulations (40 CFR Parts 122, 123, and 124) should the facility not qualify for exemption.
49. The Regional Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the closure/post closure maintenance, and provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
50. The Regional Board, in a public meeting, heard and considered all comments pertaining to the waste discharge requirements for closure and postclosure.
51. Any person adversely affected by this action of the Regional Board may petition the State Water Resources Control Regional Board to review the action. The petition must be received by the State Board within 30 days of the date of issuance of this Order. Copies of the law and regulations applicable to filing petitions are available at http://www.waterboards.ca.gov/water_laws and will be provided upon request.

IT IS HEREBY ORDERED that Order No. 77-006 is rescinded. It is further ordered, pursuant to Sections 13263 and 13267 of the Water Code, that Bell-Carter Olive Company, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and plans, policies, and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of any waste at the site is prohibited.

2. The discharge of solid or liquid waste to surface waters, surface water drainage courses, or groundwater in a manner which could cause a condition of nuisance, degradation, contamination, or aggravation of the existing groundwater pollution to occur, as indicated by the most appropriate statistical or non-statistical data analysis method, is prohibited.
3. The ponding of liquids on the cover surface is prohibited.

B. FACILITY SPECIFICATIONS

Closure Specifications

1. Facility closure shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
2. Prior to installation of the final cover, the Discharger shall submit a final Construction Quality Assurance (CQA) Plan for review and approval by the Executive Officer. The CQA Plan shall be supervised by a registered civil engineer or certified engineering geologist registered in the State of California. Implementation of the CQA Plan shall be independent of the construction contractor and the Discharger.
3. A final cover shall be constructed over the surface impoundment. The cover shall consist of, from bottom to top, a 2-foot thick compacted foundation layer over the impoundment backfill, overlain by a 60-mil HDPE geomembrane, a minimum 24-inch thick protective soil layer, overlain by a 10-inch thick layer of base rock, and overlain by a three-inch thick asphalt concrete.
4. The final cover shall be graded to at least a one-half of one percent (0.5%) and maintained to prevent ponding.
5. The proposed precipitation and drainage system shall consist of a series of drop inlet structures and collection pipes at the perimeter of the asphalt pavement that will collect runoff from the paved area. The runoff will be conveyed by discharge pipes to the existing irrigation ditch on the western perimeter of the site.
6. The closure cap shall be constructed to limit the effects of inundation and washout by the 100-year flood event.
7. The closed impoundment shall be provided with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes and monitoring facilities can be determined throughout the post-closure maintenance period. However, since differential settlement is not anticipated (Finding 36), the 5-year iso-settlement map will not be required and the monuments will be resurveyed only if

visual inspection indicates distress or ponding in the asphalt pavement as a result of settlement.

Post-Closure Maintenance Specifications

8. The post-closure maintenance period shall continue until the Regional Board determines that the wastes no longer pose a threat to groundwater quality. By **30 September 2005**, the Discharger shall submit a final Post Closure Maintenance Plan for review and approval by the Executive Officer. As part of that Plan, the Discharger will propose a statistical method for evaluating the groundwater sampling data to determine that the closure cap is operating as designed. The Post Closure Maintenance Plan will also include an Asphalt Concrete Cap Integrity Monitoring and Maintenance Program Plan.
9. Throughout the post-closure maintenance period, the Discharger shall:
 - a. Maintain the structural integrity and effectiveness of all containment structures and maintain the covers as necessary to correct the effects of settlement or other adverse factors.
 - b. Maintain the monitoring systems and monitor groundwater in accordance with Monitoring and Reporting Program No. _____.
 - c. Prevent erosion and related damage of the covers due to drainage.
 - d. Protect and maintain surveyed monuments.
10. The cover systems shall be operated and maintained to limit the effects of inundation or washout due to floods with a 100-year return period.
11. The conditions at the facility shall not cause any increase in the concentration of waste constituents in soil-pore liquid, soil, groundwater, or other geologic materials on or off-site.
12. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
13. The Discharger shall immediately notify the Regional Board of any flooding, unpermitted discharge of waste on or off-site, slope failure, or other change in site conditions which could impair the integrity of the cover system, or precipitation and drainage control structures.
14. The Discharger shall incorporate into the post-closure specifications a cover-integrity monitoring and maintenance program, which includes at least a periodic leak search,

periodic identification of other problem areas, and prompt cover repair in accordance with §21090(a)(4) of Title 27. The periodic leak search will be conducted by a visual examination of the asphalt layer of the closure system.

C. PROVISIONS

1. The Discharger shall comply with the attached Monitoring and Reporting Program No. _____ and the *Standard Provisions and Reporting Requirements for Title 27 (27 CCR §20005, et seq.) and Subtitle D (40 CFR 258)*, dated April 2000, which are incorporated into and made part of this Order.
2. The Discharger shall maintain a copy of this Order and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
3. The Discharger shall comply with all applicable provisions of Title 27 that are not specifically referred to in this Order.
4. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. _____, as required by §13750 through §13755 of the California Water Code.
5. The Discharger shall submit a Groundwater Sampling and Analysis Plan for review and approval by the Executive Officer by **30 September 2005**.
6. Additional assessment will be performed by the end of 2005 in accordance with the workplan dated 6 December 2002 and with the letter dated 9 January 2003. By **31 December 2006**, the Discharger shall complete an Evaluation Monitoring Program to the satisfaction of the Executive Officer that meets the provisions of Title 27, and a report shall be submitted describing all actions and monitoring taken to determine the extent of groundwater impacts affected by releases from the facility, on- and off-site. The final report describing the impacts shall include an Engineering Feasibility Study for corrective action and a time schedule. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.
7. The Discharger may be required to submit other technical reports as directed by the Executive Officer.
8. Closure construction will be completed by the end of summer 2007. By **31 October 2007**, the Discharger shall submit a closure certification report, signed and certified by a

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civil engineer or certified engineering geologist registered in the state of California, for review and approval by the Executive Officer documenting construction quality assurance (per the approved CQA Plan) and the completion of the grading and final cover installation for surface impoundment closure in accordance with the plans and specifications. Included in the report shall be a copy of the as-built plans.

9. The Discharger shall immediately notify the Regional Board of any flooding, equipment failure, or other change in site conditions that could impair the integrity of the cover system or precipitation and drainage control structures.
10. The Discharger shall maintain financial assurance for corrective action as required by Title 27 California Code of Regulations, Division 2, Chapter 6. The Discharger shall conduct an annual review of the financial assurance for initiating and completing corrective action, and submit a report for Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Board as beneficiary and shall provide that funds for corrective action shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
11. The Discharger shall maintain financial assurance for closure and postclosure maintenance as required by Title 27 California Code of Regulations, Division 2, Chapter 6. The Discharger shall conduct an annual review of the financial assurance for closure and postclosure maintenance, and submit a report for Executive Officer review and approval. The assurances of financial responsibility shall provide that funds for closure and postclosure maintenance shall name the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
12. The Discharger shall notify the Board of any changes in the closure plans. This notification shall be given 90 days prior to the effective date of the change and shall be accompanied by any technical documents that are needed to demonstrate continued compliance with these waste discharge requirements.
13. 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 by letter, a copy of which shall be forwarded to this office, of the existence of this Order at least 14 days in advance of the change in control or ownership.
14. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Regional Board requesting transfer of the Order within 14

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days of assuming ownership or operation of this site. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name, address, and telephone number of the persons responsible for contact with the Regional Board, and a statement that the new owner or operator assumes full responsibility for compliance with this Order. The request must comply with the signatory requirements of this Order. Failure to submit the request shall be considered a discharge without requirements, which is a violation of the California Water Code. Transfer of this Order to a succeeding owner or operator shall be approved or disapproved by the Regional Board.

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

I, THOMAS R. PINKOS, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Regional Board, Central Valley Region, on _____.

THOMAS R. PINKOS, Executive Officer

TAF:taf/rac:7/6/2005