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Tentative Waste Discharge Requirements Order for Lucero Olive Oil LLC And Crane Mills, Lucero Olive Oil, Tehama County

This letter transmits my comments on the Tentative Waste Discharge Requirements Order for Lucero Olive Oil LLC and Crane Mills (Discharger), Lucero Olive Oil (Facility). I am a resident of Fresno County and a California registered civil engineer with 12 years experience working for the Central Valley Water Board in the WDR regulatory program. I have expertise in evaluating the effects to soil and groundwater from discharges of food processing and winery wastewater to land for treatment and disposal. I submit the following recommendations in the hope that Central Valley Water Board staff will revise the tentative Order accordingly, or provide technical justification to the Central Valley Water Board why staff does not concur with my recommendations.

1. Finding 3 states, "In 2008, the Discharger obtained coverage under the Waiver of Waste Discharge Requirements for Small Food Processors, Including Wineries (Resolution No. R5-2003-0106) (Waiver) for discharge of wastewater less than 100,000 gallons." The Lucero Olive Oil website (<http://lucerooliveoil.com/about>) states that in 2005 Mr. Dewey Lucero "pressed large quantities of olive oil and began to market and sell Lucero Olive Oil across California." Finding 3 does not mention the manner in which Lucero Olive Oil disposed of its olive oil processing wastewater from 2005 until it received Board authorization to discharge under the Waiver in 2008. That is, did it tank and haul the wastewater to the City of Corning wastewater treatment facility for treatment and disposal? Or, did it discharge it to land in violation of California Water Code (CWC) Section 13264? Finding 3 also states, "In 2009, the Discharger exceeded the flow criteria for coverage under the Waiver, and submitted a RWD [Report of Waste Discharge] for individual WDRs." Since the Discharger increased discharge flows beginning in 2009 and did not submit an RWD for the increased discharge flow until 5 January 2010 (Finding 1), the Discharger violated CWC Section 13264. CWC Section 13265 establishes a potential civil liability of \$1,000 per day for each day a discharger is in violation of CWC Section 13264. Finding 3 does not identify the number of days the Discharger discharged in 2009 and 2010 in excess of the annual 100,000 gallons limit established in the Waiver.

Tentative WDRs should at least characterize the discharger's compliance history so that Board members can assess the adequacy of the proposed Order's terms and conditions. For example, the Board may require additional monitoring and/or more frequent reporting for a chronically non-compliant discharger until it demonstrates sustained compliance.

Recommendation 1. Revise Finding 3 to describe how Discharger disposed of the Facility's olive oil processing waste prior to receiving Board authorization to discharge it to land in 2008. If the Discharger land applied the Facility's processing waste and waste for treatment and disposal, Finding 3 should identify the land application area(s) that received the discharge. If waste was discharged to the proposed land application area (i.e., the 180-acre almond orchard identified in Finding 7), the finding should describe the manner in which the discharge was conducted. Finding 3 should also identify the number of days the Discharger discharged in 2009 and 2010 in excess of the annual 100,000 gallons limit established in the Waiver.

2. Finding 7 states, "Wastewater is stored at the Facility in aboveground storage tanks until a sufficient quantity is generated for transfer to the 180-acre almond orchard land application area." Finding 10 characterizes the discharge for a suite of waste constituents based on a composite sample taken over a five-hour period on 16 November 2009. Finding 10 indicates the composite sample contained 6,560 mg/L 5-day biochemical oxygen demand (BOD). Storage of this high-BOD wastewater in aboveground tanks at the Facility has the potential to create nuisance conditions. The finding does not describe what measures the Discharger will implement to preclude the creation of offensive odors when wastewater is stored, transferred, and discharged to the land application area.

Recommendation 2. Revise Finding 7 (or include a separate finding) to describe what measures the Discharger will implement to preclude the development of nuisance conditions.

3. Finding 7 also states, "Wastewater is transported to the land application site via a 4,000 gallon water truck; wastewater is either immediately applied via a nurse trailer or stored within poly tanks at the land application area depending upon soil and weather conditions." Finding 9 indicates that the annual wastewater application rates at current and proposed future flows are 0.05 inch and 0.17 inch, respectively. These exceedingly low rates appear to be based on the assumption that wastewater is applied uniformly over the entire 180-acre land application area. Nurse trailers are trailer-mounted tanks equipped with pumps and hoses that can discharge over 100 gallons per minute, depending on the size of the pump motor and hose. To achieve the low application rates identified in Finding 9, the discharge would have to be delivered by sprayer, sprinkler irrigation, or by blending with fresh irrigation water, not just "via a nurse trailer."

Recommendation 3. Revise Finding 7 to clarify exactly how wastewater will be applied to the soil and, if spraying or sprinkling or blending is not used, revise Finding 9 to identify actual daily application rates at current and projected discharge flows.

4. Finding 13 indicates that the RWD included an analysis of loading rates for BOD, nitrogen and total dissolved solids, and that the analysis was performed in accordance with the Manual of Good Practice for Land Application of Food Processing/Rinse Water (Manual), published by the California League of Food Processors (CLFP). While CLFP consulted Central Valley Water Board staff during its preparation of its Manual, Central Valley Water Board public records include staff correspondence to CLFP describing the Manual's positive aspects as well as its deficiencies, including its reliance on a theoretical model of land treatment based on untested assumptions on the rate of oxygen transfer into soil following applications of high-BOD wastewater. The Manual describes how to use the theoretical model to design a land application system, including its maximum BOD loading rates and minimum drying intervals. It has not, however, been subjected to a scientific peer review and has not, to date, been proposed by management for consideration by the Central Valley Water Board to approve its use by staff as a technical guidance document.

Recommendation 4. The Tentative Order should delete all references to the CLFP Manual. This includes references to the Manual in Findings 13, 14, 15, 18, and 32, and the tentative Order's Information Sheet. Alternatively, the findings and Information Sheet should be revised to state the Manual has not been subject to a scientific peer review and has not been approved by the Board for use as technical guidance for Board staff.

5. Finding 14 states, "BOD loading was calculated based on a hydraulic loading rate of 128 gallons per acre per day; the BOD load would not exceed 7.0 pounds per acre per day." Average daily discharge flows at current and future capacity are 3,700 and 12,300 gallons per day (gpd) (Finding 8). The cited hydraulic loading rate of 128 gallons per acre per day means that the daily areas used for wastewater application at current and future capacities are 29 and 96 acres, respectively. The use of a truck-driven nurse trailer and fertilizer sprayer to apply wastewater at the proposed hydraulic loading rate will likely prove cost-prohibitive. The tentative Order should clarify how the projected hydraulic loading rate was determined. The tentative Order should also identify anticipated instantaneous BOD loading rates (i.e., BOD loading rate on the day of application). This is necessary to identify the actual shock loading of BOD to the soil. Excessive instantaneous BOD loading has the potential for creating nuisance and, if chronic, may adversely impact groundwater from organic overloading.

Recommendation 5. Revise Finding 14 to provide additional information on how the hydraulic loading value of 128 gallons per acre per day was calculated and to present BOD loading in terms of instantaneous BOD loading, as well as average BOD loading over the processing season.

6. Finding 20 states, "The RWD stated that groundwater at the land application area is flowing northeast at an approximate gradient of 0.00126 ft/ft." Information on the depth of the unsaturated zone is necessary to evaluate the extent to which waste constituent attenuation may occur at the land application site.

Recommendation 6. Revise Finding 20 to identify the depth at which first-encountered groundwater occurs at the land application area, along with any information regarding seasonality of groundwater depth.

7. Finding 37 states, “State Water Board Resolution No. 77-1, Policy with Respect to Water Recycling in California, encourages recycling projects that replace or supplement the use of fresh water, and the Water Recycling Law (California Water Code Section 13500-13259.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.” CWC Section 13050(n) defines recycled water as “water which, **as a result of treatment of waste**, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefor considered a valuable resource” (emphasis added). Because the Discharger is not proposing to treat the wastewater to reduce its BOD content, the Facility’s high-strength processing wastewater is not recycled water and the proposed discharge operation is not a water recycling operation, but a wastewater disposal operation.

Recommendation 7. Delete finding 37.

8. The tentative Order does not include a finding that identifies the discharge’s threat to water quality and complexity as defined in Title 23, California Code of Regulations, Section 2200, which pertains to the annual fees dischargers pay to the State Water Resources Control Board. Several tentative WDRs recently posted for public comment include such a finding, which is useful for the public to evaluate whether staff made the correct assessment of the discharge’s threat to water quality and complexity.

The Discharger does not propose to install and operate a waste treatment system. Rather, it proposes to rely on passive soil treatment for waste constituent attenuation. The tentative Order requires the Discharger to comply with best management practices. The Discharger proposes to store wastewater either in aboveground tanks at the Facility site until a sufficient quantity is produced to truck to the land application area or in poly tanks “at the land application area depending upon soil and weather conditions” (Finding 7). The tentative Order does not indicate whether the Discharger will aerate stored wastewater to keep its dissolved oxygen levels sufficiently elevated to prevent odoriferous septic conditions. The handling, transfer, and land application of high-strength food processing waste that has gone septic during storage has the potential to create offensive odors that may affect a considerable number of persons (e.g., Facility workers, neighbors). In short, the disposal of this waste has the potential to create nuisance as defined in CWC Section 13050(m).

Title 23, CCR, Section 2200 defines Category 2 Threat to Water Quality as: “Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, **or cause a nuisance** (emphasis added).” It defines Category 3 Threat to Water Quality as: “Those discharges of waste that could degrade water quality without violating water quality objectives, or could cause a minor impairment of designated beneficial uses as compared with Category 1 and Category 2.”

Section 2200 defines Category C Complexity as: “Any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code not included in Category A or Category B as described above. Included are dischargers having no waste treatment systems or that must comply with best management practices, dischargers having passive treatment and disposal systems, or dischargers having waste storage systems with land disposal.”

In accordance with the definitions above, the discharge’s correct annual fee rating is Category 2 for Threat to Water Quality and Category C for Complexity, which is associated with an annual discharge fee of \$6,006.

Recommendation 8. Include a finding that identifies the discharge’s classification of Category 2 Threat to Water Quality and Category C Complexity. If Board management proposes to classify the discharge as Category 3 Threat to Water Quality, which would lower the annual fee to \$1,120, then the tentative Order should provide technical justification why the Discharger’s handling, storage, transfer, and land discharge of high-BOD waste will not threaten nuisance.

9. Discharge Prohibition A.5 states, “Application of treated wastewater in a manner or location other than that described herein is prohibited.” The Discharger does not propose to treat the Facility’s olive oil processing wastewater (e.g., for BOD reduction).

Recommendation 9. Revise Discharge Prohibition A.5 to remove the word, “treated.”

10. Land Application Area Specification C.5 states, “The irrigation system shall be designed and managed to ensure even application of wastewater over each irrigation field and prevent the discharge of tailwater and overspray outside of the land application area.” Neither the tentative Order’s findings nor Information Sheet identifies the type of irrigation system at the land application area. Information provided in Finding 7 about the manner in which wastewater is applied is insufficient to assess whether the Discharger can uniformly apply wastewater at the projected hydraulic and BOD loading rates.

Recommendation 10. Revise Finding 7 to provide information on the land application area’s irrigation delivery system(s), along with information demonstrating that the Discharger is capable uniformly applying wastewater at the projected hydraulic and BOD loading rates.

11. Effluent Limitation D.1 is not an effluent limitation that applies to discharge quality as it leaves the Facility site (e.g., monthly average and daily maximum wastewater BOD concentrations). It specifies the maximum rate at which discharge BOD may be applied to the land application area. As such, it is similar to Land Application Area Specification C.4 regarding loading of waste constituents to the land application area.

Recommendation 11. Change Effluent Limitation D.1 to a Land Application Area Specification, or include information (either in a finding or in the Information Sheet)

explaining why Board management proposes to classify a specification related to the management of the land application area as an “effluent limitation.”

12. The tentative Monitoring and Reporting Program (MRP) has a section titled, “EFFLUENT MONITORING.” Effluent is a term that applies to the discharge of waste following treatment. Because the Discharger does not propose to treat the wastewater prior to discharge, the term “EFFLUENT MONITORING” is technically inaccurate. Also, the tentative MRP requires the discharge be monitored twice monthly for various waste constituents. To increase the representativeness of the monitoring, the tentative MRP should specify that twice monthly monitoring is to occur in non-consecutive weeks. Also, since the wastewater will be applied to almond trees during a period that is partially coincident with the almond harvesting season, the wastewater should be monitored for fecal coliform to determine whether there are any cross connections between the collection systems for the Facility’s processing wastewater and domestic sewage.

Recommendation 12. Change “EFFLUENT MONITORING” to “DISCHARGE MONITORING” and include a footnote for waste constituents monitored twice monthly that the monitoring is to occur in non-consecutive weeks. Include twice monthly monitoring for fecal coliform for at least two years to ensure there is no cross connection contamination with the Facility’s domestic sewage.

13. The tentative MRP section, “LAND APPLICATION AREA MONITORING” requires BOD loading to be calculated and reported on a monthly basis. In my experience, dischargers frequently report incorrect BOD loading rates in self-monitoring reports submitted pursuant to MRPs that do not specify exactly how to calculate BOD loading. The tentative MRP also requires self-monitoring reports to include information on daily observations of the land application area, and lists several items to be checked. In my experience, MRPs that require self-monitoring reports to present information on daily observations of land application areas result in dischargers submitting overly detailed self-monitoring reports filled with pages of minutiae that hamper staff review. The Discharger’s submittal of a *summary* of monthly land application area monitoring observations should be sufficient to satisfy the intent of this monitoring and reporting requirement. During periodic inspections, Board staff should review the Discharger’s daily land application area inspection records to determine the Discharger’s compliance with the MRP.

Recommendation 13. Include a footnote for BOD loading that describes precisely how to calculate BOD loading rate. Specify that the Discharger shall submit a summary of land application area observation monitoring information for the reporting period.

14. The tentative MRP section, “REPORTING”, requires the Discharger to submit monthly monitoring reports. The olive oil processing season is only about 90 days long. It is unlikely that Board staff will review the submitted monthly reports until well after the processing season ends. Submittal of an annual report with all the required monitoring data should be adequate for Board staff to perform a timely evaluation of the Discharger’s compliance with the Order’s terms and conditions. However, since Lucero Olive Oil LLC

has a history of non-compliance with the Waiver conditions and with CWC Section 13264, the Board should require more frequent monitoring until the Discharger has demonstrated it is in full compliance with the Order's terms and conditions, including its monitoring and reporting requirements.

Recommendation 14. Revise the reporting requirement to allow the Executive Officer to reduce the reporting frequency from monthly to annually once the Discharger demonstrates it is capable of sustained compliance with the Order. Then, require submission of all monitoring data for the processing year by 1 February of the year following the processing season.

I appreciate the opportunity to submit these comments. I request that Board staff establish comment deadline dates that do not fall on a weekend, especially on a major holiday weekend.

A handwritten signature in black ink that reads "Jo Anne Kipps". The signature is written in a cursive style with a large initial "J".

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