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California Regional Water Quality Control Board Central Valley Region

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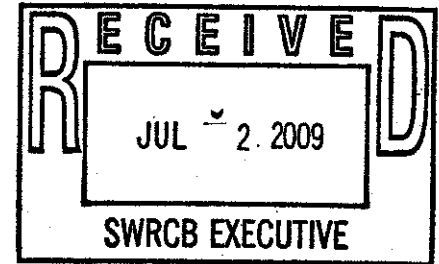
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3 July 2009

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COMMENTS FOR PETITION OF WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2007-0113 FOR THE CITY OF LODI WHITE SLOUGH WASTEWATER TREATMENT PLANT, SWRCB/OCC FILE NO. A-1866 – 7 JULY 2009 STATE WATER RESOURCES CONTROL BOARD MEETING

Thank you for the opportunity to comment on the 12 June 2009 revised draft State Water Board Water Quality Order (Draft Order) referenced above. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) provides the following comments on the revised Draft Order.

We appreciate and thank the State Water Board for the revisions made in the revised Draft Order. We believe the revisions significantly improve the clarity of the Draft Order and provide an understandable logic that led to the proposed conclusions; however, the proposed revisions do not fundamentally change our concerns that we expressed with the initial Draft Order. Our previously submitted comments still apply. We request the State Water Board reject the Draft Order as proposed and affirm the appropriateness of the NPDES Permit as adopted by the Central Valley Water Board. If the State Water Board proceeds with adoption of the Draft Order, we respectfully request the Draft Order be revised as requested below to address the Central Valley Water Board concerns.

Briefly our concerns can be summarized as follows:

- The previous and current Draft Order proposes the State Water Board adopt a precedential Order that will fundamentally change how Regional Boards have defined treatment plants and the application of exemptions provided to sewage under section 20090(a) of Title 27. We believe this change in policy will have far reaching negative impacts to the hundreds of facilities regulated under the State's Non-15¹ Regulatory Program within the Central Valley and throughout the State. This will result in significant increased costs to many communities that we believe is not necessary to implement our laws and protect water quality. We are recommending the State Water Board not adopt the Draft Order as proposed by staff without significant changes to the staff report and interpretation to the T27 exemptions for treatment facilities and its discharge.

¹ The term "Non-15 WDRs" refers to WDRs that are not subject to Cal. Code of Regs., title 23, division 3, chapter 15 or title 27, division 2.

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- As written, the revised Draft Order appears to provide policy direction on how and where compliance with water quality objectives are to be determined for Non-15 facilities that we do not believe is appropriate. We request the State Water Board modify the Draft Order to state explicitly that nothing in the order is intended to address where compliance with Non-15 requirements should be measured.
- The revised Draft Order appears to provide policy direction regarding the use and application of secondary MCLs for salinity that has resulted in conclusive statements in the Draft Order that are inappropriate and not consistent with our Basin Plan. The Order concludes that objectives have been exceeded yet the Water Board has not been able to fully establish the appropriate and applicable objective for the underlying groundwater at the facility. The Basin Plan implements narrative and numeric objectives that apply to all groundwater basins in the Sacramento/San Joaquin River Basins; however, the Basin Plan clearly states that these objectives do not require improvement over naturally occurring background concentrations. While water quality data contained in the record is not sufficient for the Discharger to fully define background conditions, the data does suggest that the concentrations of constituents outside the mound under the storage pond are greater than the water quality limitations used by State Water Board staff in their technical evaluation. While we agree with the staff report that the evaluation required by the Discharger has taken too long, the NPDES permit has established a timeline that the Discharger will meet to provide the Central Valley Water Board the data needed to make its determination. It is inappropriate for the State Water Board to conclude that groundwater objectives for salt have been exceeded at this time.

The following provides a detailed discussion of our concerns and proposed changes to the revised Draft Order.

Applicability of Title 27 20090(a) Exemptions to the Facility

Our primary disagreement with the initial and revised Draft Order is over the applicable and appropriate exemption to Title 27 requirements. The Draft Order proposes the exemption is provided under Section 20090(b). We strongly disagree with the use of this Section and propose that Section 20090(a) is the appropriate exemption and is consistent with how Regional Water Boards have applied the exemption under Title 27 to municipal treatment plants since Title 27 was implemented. Both Sections require compliance with water quality objectives; however, the key difference in the sections is when the Regional Water Board must establish compliance with water quality objectives. In 20090(a) the Regional Water Board exempts the site and develops requirements that maintains compliance or will bring the facility into compliance. If it finds that meeting the requirements of the WDRs will not result in compliance with objectives then the Regional Water Boards respond with more stringent requirements that may include removing the exemption from Title 27 requirements. Under 20090(a) the determination is made prospectively. Under 20090(b) compliance with objectives must be established before an exemption may be provided. If compliance cannot be determined then an enforcement order must be used to provide time to the Discharger to determine if compliance is achieved and an exemption may be given. To justify its use of Section 20090(b) the Draft Order has created a definition of treatment plants that is not consistent with how treatment plants have been defined by the Regional Water Boards or U.S. EPA regulations for years. We do not agree with the proposed definition.

Establishing and Determining Compliance with Groundwater Objectives

If the Draft Order is adopted as proposed, the regulatory approach that has historically been followed by the Central Valley Water Board for its Non-15 facilities will change considerably and will significantly increase the cost for dischargers throughout the Central Valley without significant benefit to water quality.

Establishing and determining compliance with groundwater quality objectives can be technically difficult to achieve. Subsurface geology, hydrology and soil conditions can vary considerably within groundwater basins. Conditions may change vertically and horizontally within a basin and also temporally. Soils are typically not homogeneous and soil types and conditions greatly influence the characterization of mineral concentrations. Groundwater flow and direction can be highly variable and is significantly influenced by natural conditions and man's activities. In the case of Lodi, the groundwater gradient is shallow and the flow of the groundwater is highly variable, is influenced by Delta water intrusion into the subbasin and groundwater pumping around the Lodi area. These site conditions and characteristics of the Lodi facility have made it extremely difficult to fully establish the subsurface conditions of the site and, therefore, has complicated the Central Valley Water Board's ability to establish the appropriate and applicable groundwater quality objectives at the facility. The installation and sampling of groundwater monitoring wells often leads to questions requiring installation of additional wells, as has been the case with Lodi.

In many cases, water quality impacts from discharges to groundwaters can be evaluated by simply evaluating upgradient and downgradient monitoring wells. However, for many Valley floor dischargers like Lodi, the groundwater gradient is essentially flat and using a simple model of upgradient/downgradient well evaluation is not appropriate or sufficient to make the necessary determinations by the Central Valley Water Board. This is further complicated in areas such as Lodi where legacy activities not extensively regulated by the Board in the past have contributed constituents of concern to the groundwater basin. In addition, naturally occurring background conditions can also be a source of constituents of concern. This is particularly problematic for salt.

In terms of the Lodi facility, the change in policy direction on applicability of the Title 27 exemption as proposed in the Draft Order will not change the regulatory outcome or approach. The Central Valley Water Board shares the frustration expressed in the Draft Order's staff report regarding the lack of adequate data to establish the background and naturally occurring groundwater quality in the area of the Lodi plant. However, given the discussion above, the Central Valley Water Board does not believe it is appropriate to establish values without adequate data given the complexity of this site. We believe the cost of the monitoring that has been and is required through the NPDES permit is necessary and required due to the site conditions. However, the Central Valley Water Board does not agree that such an extensive review and demonstration of compliance before an exemption is granted is required by Title 27 for municipal treatment plants, nor is it needed at all sites throughout the Central Valley for the Board to establish that groundwater objectives are met. Unfortunately, the current revised Draft Order as it reads today revises the long standing implementation of the Title 27 for sewage exemption would require such to be done.

The cost of well installation, sampling and the technical expertise to interpret the data can be extensive. There are over 1000 facilities in the Central Valley Region that have Non-15 WDRs

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for discharging wastes to land. The Central Valley Water Board requires all of its regulated dischargers to protect groundwater quality and establishes groundwater monitoring where we determined it is needed and necessary, but we are concerned that the Draft Order will significantly increase the data needs even in areas that may not need such extensive monitoring to more affirmatively conclude that groundwater is being protected. The increased need for technical studies will result in considerable cost increases to Central Valley communities that is not needed to demonstrate water quality objectives are met.

Treatment Plant Definition

A critical point of contention between the proposed Draft Order and the Central Valley Water Board is the definition of "treatment plant" that is used in the Draft Order to justify its application of Section 20090(b) of Title 27 for the storage pond. The Central Valley Water Board strongly disagrees with the policy direction that is proposed by the Draft Order and respectfully requests the State Water Board reject this proposed definition in the Draft Order.

Sewage treatment plants consisting of a treatment facility or a series of treatment ponds followed by land disposal through ponds or reclamation on agricultural fields are very common in the Central Valley. This relatively low technology, low energy consumption form of treatment and disposal works well for small Central Valley towns that use the treated wastewater for crop irrigation or percolation. The Central Valley Water Board has historically considered the storage and reclamation as part of the "treatment plant". We believe this is consistent with all other Regional Boards throughout the State, is consistent with the Water Code and with U.S. EPA's definition of "treatment plant".²³

The Draft Order proposes to change how a treatment plant is defined as it relates to the applicability of exemptions to Title 27. The Draft Order parses "treatment," segregating the first ponds in the treatment system where physical settling and biological treatment occurs from the storage and reclamation areas of the plant. Under this scenario, the "treatment" is exempt under Section 20090(a) of the Draft Order and the non-"treatment" is not. This is very problematic. Besides the fact that the Central Valley Water Board simply does not agree with the proposed parsing, it can be difficult to clearly define some ponds as either treatment or storage exclusively, because they can simultaneously serve both purposes. Recognize that these storage ponds contain treated effluent or waste water that is of sufficient quality for land application.

The Draft Order appears to justify this parsing because of the industrial waste line that directs wastes to the storage ponds as opposed to the headworks of the treatment plant. The Draft Order misrepresents the character and regulatory status of this flow. The discharge of the industrial flow is regulated by the City of Lodi through its pretreatment program and is therefore "treated" to acceptable standards before being discharged to the City's facility to ensure compliance with the Waste Discharge Requirements. The industrial waste discharges

² "§ 13625, California Water Code, Definitions

As used in this chapter unless the context otherwise requires, the following definitions apply:

(b) "Wastewater treatment plant" means any of the following: (1) Any facility owned by a state, local, or federal agency and used in the treatment or reclamation of sewage or industrial wastes.

³ CFR, §403.3(r), states "The term POTW Treatment Plant means that portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste."

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are either dilute industrial flows containing few constituents of concern, or food processing wastes high in organic matter. It is appropriate to handle organic matter from food processing wastes differently than the organic matter contained in domestic sewage. Holding ponds and land application are a common and appropriate treatment and disposal methods for this type of waste. Salts are the primary constituent of concern for this waste stream which would not be removed even if the industrial line was directed to the headworks of the Lodi facility.

During wintertime operating conditions (i.e., non-irrigation season) the City stores wastewater in the Storage Ponds with the sources being the industrial waste line (no food processing wastewater), stormwater from some areas within the City, stormwater from the agriculture fields (762 acres), and stormwater from 118 acres of City owned land. The majority of the flow stored in the ponds is stormwater. The industries discharging to the industrial line during the winter include Holz Rubber Company (categorical metal finisher), Valley Industries (categorical metal finisher), M&R Packing, Lodi Iron Works, Chevron, and Van Ruiten Winery. Central Valley Water Board staff has determined, based on extensive monitoring by the City, that the metal concentrations of the influent industrial line are well below human health water quality objectives and are, therefore, not a water quality concern.

In regards to nutrients, the primary source of nitrates at the POTW is the domestic sewage and not the industrial wastes. Recent upgrades to the treatment plant will significantly reduce the ammonia and nitrates being discharged from the facility and will bring the facility into compliance with groundwater nitrate objectives. However, the site is located in an area that has been influenced by agriculture and dairies that have also contributed nitrates to groundwater. We cannot at this time determine the appropriate background concentrations of nitrates are specifically determine that the City is the sole cause of the nitrate found in higher concentrations in some monitoring wells at this time.

Regarding salt, the draft Order implies that salt concentrations in industrial waste streams can be handled predominantly through adequate source and treatment controls required through a pretreatment program. The Central Valley Water Board agrees that increased source controls are needed and has established such requirements in the City's NPDES permit. However, the Central Valley Water Board does not agree that this alone will address the salt concentrations in industrial wastestreams, especially in wastestreams from food processing facilities that must use cleaning products required by the Food and Agricultural laws and regulations for public safety. Experience has shown that use of traditional treatment methodologies to remove salts, such as reverse osmosis, are not currently applicable to organic laden wastestreams. The Central Valley is very aware of the impacts of salts to water quality and has embarked on an extensive regulatory program to develop a comprehensive Salt and Nitrate Management Plan. This will address how salts can be managed, controlled, reduced and eliminated from waste streams. The Central Valley Water Board will continue to control salts to the maximum extent practicable in all of its Permits and Orders while the policy is being developed; however, the Central Valley Water Board requests the State Water Board recognize that pretreatment programs and currently available technologies alone may not achieve the ultimate goal of the Water Boards' without additional research and policy decisions.

Determining Points of Compliance with Groundwater Objectives

The Draft Order is primarily based on evaluating water quality data within the groundwater mound directly under the storage pond. As we previously commented, a groundwater mound

directly beneath a Non-15 regulated facility is not an appropriate location for determining compliance with water quality objectives⁴. We therefore suggest the State Water Board modify the Draft Order to state explicitly that nothing in the order is intended to address where compliance with Non-15 requirements should be measured.

Secondary MCLs and Concluding Exceedance of Ground Water Objectives for Salts

We do not agree with the revised arguments on page 16 of the Draft Order regarding the applicability of secondary MCLs as water quality objectives. The Draft Order appears to state that the Regional Water Board must only consider the numeric values contained in the Secondary MCL Tables referenced in the Basin Plan (Tables 64449-A&B) without any regard to the how such MCLs are applied and enforced by the Department of Public Health, the agency charged with development and enforcement of MCLs. We do not believe the approach proposed by the Draft Order is appropriate in implementing the secondary MCLs for salinity. The precedential nature of this Order will result in the Central Valley Water Board strictly enforcing numeric values for electrical conductivity in a manner that is more rigorous than the agency charged with enforcing the MCLs. We do not agree this is appropriate or necessary. The Central Valley Water Board is very concerned regarding the quality of its waters to meet both primary and secondary MCLs. In many cases throughout the Valley the water quality is such that we would not allow basins to be degraded to the recommended consumer level of 900. However, this is not the case for Lodi and for many other sites throughout the region where background concentrations exceed such values. The Central Valley Water Board does not agree that is appropriate at this time to state that water quality objectives for salt have been established to protect the MUN beneficial use based on data from the mound directly below the storage pond. We respectfully request the State Water Board revise its order to remove such statements.

Based on the above discussions, the Central Valley Water Board requests the following changes to the Draft Order:

[[page 1, first paragraph]

~~"The Board concludes that the requirements are not consistent with Title 27 and remands the requirements to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for clarification of the basis for Title 27 exemptions appropriate revisions."~~

[page 7, Title 27 Discussion]

This entire discussion should be shortened to a conclusion that the sewage treatment plant exemption applies to wastewater disposal at the entire facility, including storage ponds and wastewater reuse areas, but that Order No. R5-2007-0113 does not contain sufficient findings to clarify the applicability of the sewage treatment plant exemption.

[page 13, title to section 3]

Evidence in Record on ~~Basin Plan Compliance~~ Potential Groundwater Quality Impacts

[page 16, first full paragraph]

The cited MCL Table should be 64444-B.

⁴ See page 3 of the Central Valley Water Board's 23 January 2009 comments on the first draft Order

[page 18, first full paragraph]

...The Board concludes that wastewater releases from the unlined storage ponds have resulted in nitrate and EC concentrations above the applicable Basin Plan objectives at various monitoring points in the underlying groundwater. The Central Valley Water Board has not determined whether these monitoring locations are appropriate for determining compliance or consistency with Basin Plan objectives nor have they established whether naturally occurring background is greater than the objectives contained in the Basin Plan. Therefore, ~~the City's discharge of wastewater to the unlined ponds does not qualify for an exemption from Title 27 at the present time.~~

[page 21, first paragraph, which is the discussion of the Wastewater Characterization discussion beginning on page 20]

Delete paragraph and state that the Sewage Treatment exemption is not conditioned upon wastewater characterization, but that the NPDES Permit does require additional characterization of waste streams.

[page 21, Action on Remand]

The Facility is exempt from Title 27 under Section 20090(a), because the WDRs proscriptively require compliance with the Basin Plan. Therefore, all references relating wastewater quality to compliance with Title 27 should be deleted. In addition, since the background groundwater quality has not been determined it is not possible to determine if the discharge has caused exceedances of the water quality objectives. Therefore, all references related to definitive compliance with water quality objectives should be deleted.

[page 24]

1. The appropriate exemption for the Central Valley Water Board to apply to the wastewater mixture applied by the City to land is subsection (a) ~~(b)~~ of section 20090...

2. Order No. R5-2007-0113 does not contain sufficient findings supporting the conclusion that the City's land disposal activities qualify for an exemption under Title 27 explaining the applicability of exemption 20090(a) to this facility.

4. Evidence in the record indicates that releases of wastewater from the City's unlined storage ponds might have caused the underlying groundwater to contain nitrate and EC levels that exceed Basin Plan objectives at some locations associated with the groundwater mound beneath the facility. On remand, the Central Valley water Board must determine the applicable water quality objectives and whether the current or other monitoring locations are appropriate for determining compliance with the Basin Plan;

[page 25]

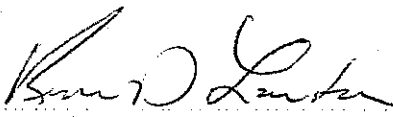
Delete conclusion 8 in its entirety.

In closing the Central Valley Water Board appreciates the State Water Board's thoughtful consideration of our comments and concerns. The Central Valley Water Board believes the NPDES permit as adopted met the applicable requirements of State and Federal laws and regulations and that compliance with the requirements of the Permit as adopted by the Central Valley Water Board will result in compliance with appropriate and applicable water quality

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objectives. In addition, the Central Valley Water Board strongly encourages land disposal as an alternative to discharge to surface waters, and further encourages reclamation of the wastewater whenever feasible. Lodi does reclaim a portion of its wastewater, using it in lieu of surface or groundwater for crop irrigation. If Lodi did not reclaim the wastewater, it would be discharged to the Delta and a new water source would be needed for the crops.

If you have any questions, please contact Kenneth Landau at (916) 464-4726 or klandau@waterboards.ca.gov.


for PAMELA C. CREEDON
Executive Officer

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