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Comments— Tentative WDRs for Steve Gikas, California Nuggets, Inc., and Golden Gate Nut Company, San Joaquin County

This letter presents my comments on the subject tentative order issued 24 March 2023. I am a California registered civil engineer and worked in the Central Valley Regional Water Quality Control Board's Fresno office (1998-2010), mostly in the WDR Program (aka Non-15 Discharges to Land Program). The Notice of Public Hearing cites a comment deadline of 24 April, but the tentative order's transmittal letter to the Discharge cites a deadline of 26 April. I offer my comment letter one day late in the hope that you will include it in the public record for this item.

The tentative order proposes to update Waste Discharge Requirements (WDRs) Order R5-2014-005 (current order) for the discharge to 5.2 acres of up to 2 million gallons (MG) monthly of the combined wastewater from two snack food processing facilities situated on a 14.77-acre parcel (APN 228-130-21). The Board adopted the current order with an accompanying Cease and Desist Order R5-2014-0057 (CDO). The CDO cites unreasonable groundwater degradation caused by deficiencies in the discharge, including operating the 5.2-acre land application area (LAA) as a rapid infiltration basin with "little or no resting period between wastewater applications" (Finding 7).

The current order and CDO identify the Discharger as Steve Gikas and the Facility, two corporations, California Nuggets, Inc. and Golden Gate Nut Company. The tentative order does likewise. In 2007, the Executive Officer issued Cleanup and Abatement Order R5-2007-0715 (CAO) for Steve Gikas and Family, California Nuggets, Inc. The CAO identifies the Discharger as "Steve Gikas and Family doing business as California Nuggets, Inc."

The current order states, "The Discharger [Steve Gikas] owns and operates the facilities that generate the waste and the land discharge areas and is responsible for compliance with these Waste Discharge Requirements (WDRs)." According to information available from the California Secretary of State Business Search website¹ (company name, initial filing date, status):

¹ <https://bizfileonline.sos.ca.gov/search/business>

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- California Nuggets, Inc., 8/3/1998, Active
- Golden Gate Nut Company, Inc., 7/1/2009, Suspended – FTB
- Golden Gate Nuts, Inc., 5/28/2008, Active

Documents filed by the two active-status companies identify Steve Gikas and Lori Gikas Chief Executive Officer and Chief Financial Officer, respectively.

Who or what owns APN 228-130-21 and APN 228-120-20? Steve Gikas and/or Lori Gikas as individuals or as a trust? A corporation they created and manage or another one formed for that purpose? Please explain or otherwise justify why the tentative order identifies an individual, Steve Gikas, as Discharger when it appears that entities actually generating the discharge and responsible for complying with the WDRs are the two companies he and Lori Gikas created and manage.

It would appear that the legal entities responsible for complying with the WDRs are California Nuggets, Inc., Golden Gate Nuts, Inc., and the legal name of the owner(s) of APN 228-130-21 and APN 228-120-20. Ideally, the facility names reflect the product made by the facility (Snack Food Facilities) or its location (e.g., Fredrick Road Facilities). Please revise the tentative order to identify the legal name of the entity that owns the parcels identified on its title page, to designate that entity, along with the two corporations, as Co-Dischargers, and refer to the discharging facilities as recommended.

The current order authorizes a discharge of wastewater generated by the year-round production of corn nuts and seasonal processing of almonds. Wastewater is discharged to a lined wastewater pond then to a sprinkler-irrigated 5.2-acre land application area (LAA). The current order establishes two discharge flow limitations, a maximum monthly total of 2.0 MG and a maximum annual total of 16 MG.

Finding 12 states the wastewater pond is “aerated...and lined with 24-mil reinforced polyethylene geomembrane.” It also states, “The Discharger regularly empties the lined pond to remove accumulated sludge and visually inspect the liner. Sludge is transported off-site for disposal.”

Please revise the tentative order to identify the pond liner’s age and condition, date of post-construction report (if submitted), and methods used (if any) to monitor liner seepage besides periodic visual inspection. Also, please specify the estimated hydraulic conductivity of the pond’s liner.

The tentative order, Provision I.1, requires the Discharger to submit a Sludge Cleanout Plan to describe the removal, treatment (drying) and disposal of pond sludge. This implies that the Discharger has, in the past, discharged pond sludge to land to dry prior off-site disposal.

The Sludge Cleanout Plan will address future pond sludge discharges. If possible, please include a description of past onsite handling and offsite disposal of wastewater pond sludge. Has pond sludge been characterized for its suitability as a compost feed and/or soil

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amendment? And, please identify the off-site disposal method (e.g., Landfill? Composting? Regulated facility?)

Finding 14. “Effluent from the pond is filtered to remove remaining solids prior to discharging to 5.2 acres of LAAs for use as irrigation.”

Please revise this finding to identify the filtration method used, its optimum solids removal capacity (% TSS removal), and the design flow rate corresponding to optimum solids removal capacity.

Findings 14, 15 and 17 cite “original 5.12 acres.” Shouldn’t it be 5.2 acres?

Finding 15 indicates annual discharge flows increased from 13 MG in 2019 to 19 MG in 2021, or 3 MG above the current annual discharge flow limitation of 16 MG. Finding 17 presents average monthly loading rates for nitrogen, FDS and BOD. Had the finding also presented annual loading rates for nitrogen and FDS, the resulting loadings would stand out as being excessive (e.g., annual loadings per acre of over 1,500 lbs nitrogen and 26,000 lbs FDS).

Please revise Finding 17 to present annual nitrogen and FDS loading rates for the cited years. Also, please include a discussion of how the monthly loading rates of BOD translate to cycle average BOD. In other words, do the BOD loadings comply with the existing cycle average BOD loading limit of 100 lbs/acre/day?

Finding 24 indicates the Discharger requests to add a new LAA, an adjacent 7.88-acre parcel currently planted in almonds, and to increase annual wastewater discharge flow to 24 MG to “better accommodate processing.” Finding 27 lists the changes made to the discharge in response to the CDO, which include patching “anomalies identified as small tears/holes” in the pond liner and acquiring additional acreage to expand the LAA and reduce waste constituent loading.

Finding 28 states, “Based on an evaluation of the available analytical data for wastewater and groundwater quality, these changes have resulted in improvements to wastewater quality. Concentrations of constituents in groundwater are now stable (see Finding 63), indicating the continued discharge of wastewater to land will not negatively affect beneficial uses of groundwater. The Discharger has met the requirements of the CDO.”

Findings 34 to 40 summarize groundwater monitoring data from the Discharger’s four shallow monitoring wells, and include Tables 8 – 11. All tables identify “Nitrate” as a column header and display the WQO of 10 mg/L, indicating the WQO applies to nitrate as nitrogen (nitrate-nitrogen). Other tables identify the units for constituents displayed as mg/L but the values presented for WQOs are in micrograms/L. In any event, these tables and the values presented should be corrected as appropriate to match values with units.

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Groundwater passing through the upgradient well, MW-1, appears unaffected by organic loading from the discharge due to its elevated nitrate concentrations (over four times the WQO) and non-detect concentrations of iron and manganese. It does, however, contain elevated sodium and chloride compared to the groundwater extracted from the nearby supply well. The tentative order attributes these elevated concentrations to upgradient land use activities beyond the Discharger's control.

Groundwater passing through downgradient wells contains low nitrate (and ammonia and TKN), and iron and manganese exceeding WQOs of 0.3 mg/L and 0.05 mg/L, respectively. This data combination signals organic overloading. Finding 40 characterizes the concentrations of waste constituents in groundwater as either decreasing or stable. It cites reductions in recent years of groundwater concentrations compared to data collected in 2014, which the tentative order does not present. Lower concentrations of waste constituents evident in MW-3 likely is attributable to its proximity to the stormwater disposal pond.

The tentative order provides sufficient groundwater monitoring data to conclude that the discharge's organic loading has already caused groundwater to contain iron and manganese in concentrations exceeding WQOs. The tentative order does not cite the magnitudes of these increases in order for the Board appreciate the severity of the degradation. For example, groundwater passing through MW-2 and MW-4 contains manganese in concentrations about 150 times the WQO and iron in concentrations from 4 to 6 times the WQO.

Finding 63 makes the following unfounded claim: "The continued discharge of wastewater to land from this Facility with respect to iron and manganese will not unreasonably affect beneficial uses of groundwater." Finding 65 makes another unfounded claim that changes made to the discharge itemized in Finding 64 "will minimize the extent of further water quality degradation resulting from the Facility's continued discharge."

Organic overloading from the discharge of almost 20 years has caused concentrations of iron and manganese in groundwater to exceed WQOs. Discharge quality may have improved since 2014, however recent groundwater data indicates these improvements have failed to decrease groundwater iron and manganese concentrations to levels anywhere approaching WQOs. Despite this reality, the tentative order authorizes a 50% increase in the maximum total annual discharge flow, and justifies this increase necessary for the Discharger "to better accommodate processing."

Please provide technical evidence to support the tentative order's assumption that continued BOD loadings to the original 5.2-acre LAA will not contribute to an existing condition of iron and manganese pollution in groundwater at current authorized flow of 16 MG/year, let alone at the increased flow of 24 MG/year.

Unless evidence is presented indicating otherwise, the unsaturated soil in the 5.2-acre LAA appears to be depleted with respect to its ability to decompose additional BOD loadings

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without causing reducing conditions in groundwater. The tentative order's authorization of additional BOD loadings will exacerbate an existing condition of iron and manganese pollution in groundwater. Because of this simple fact, it is not consistent with the Antidegradation Policy and does not comply with the Basin Plan. Consequently, the discharge to the 5.2-acre LAA does not qualify for the wastewater exemption from Title 27's prescriptive containment standards (section 20090(b)).

Finding 66 states, "The economic prosperity of Central Valley communities and associated industry is a maximum benefit to the people of the State and provides justification for allowing the limited groundwater degradation that may occur pursuant to this Order."

First, the tentative order does not provide evidence that the groundwater degradation (and pollution) caused by the discharge is "limited." In fact, the evidence suggests otherwise, and warrants investigation through the installation of additional wells to delineate the vertical and lateral extent of iron and manganese pollution in groundwater caused by the discharge.

Second, it does not provide information on the Facility's staffing to inform the Board of the Discharger's direct contribution to the local job market. In other words, how many jobs is the Board protecting while authorizing a discharge that causes groundwater pollution?

Third, it does not discuss, let alone estimate, the cost to remove iron and manganese from impacted groundwater and restore its beneficial use for domestic and municipal supply. The Board should be aware of this cost may exceed that required to treat the wastewater to secondary standards prior to discharge to reduce its organic loading to de minimis levels.

Last, the Discharger has a history of chronic noncompliance, beginning with its initiation of the discharge almost 20 years ago without filing a Report of Waste Discharge pursuant to California Water Code section 13260. In 2007, the Discharger was issued Cleanup and Abatement Order to address unreasonable groundwater degradation caused by its discharge. And, the Board adopted the current order with an accompanying CDO. This poor compliance track record should not give the Board confidence that the Discharger will consistently comply with updated WDRs.

Recommendation Summary. Until the Board amends the Basin Plan to accept degradation and pollution from discharges to land of inadequately treated industrial food processing wastewater as a normal societal and environmental cost of providing "economic prosperity of Central Valley communities and associated industry," the tentative order should:

1. Prohibit discharge to the 5.2-acre LAA until iron and manganese concentrations in groundwater passing through MW-2 and MW-4 decrease to less than WQOs, establish a time schedule not to exceed two years, and require submittal of a Report of Waste Discharge at least 140 days before resuming discharge to this LAA.
2. Establish limitations for the new 7.88-acre LAA reflecting reasonable agronomic rates for annual total discharge flow (MG/year) and annual nitrogen loading (lbs/ac/year).

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3. Establish a limitation for monthly total discharge flow (MG/month) that reflects the treatment and storage capacity provided by the wastewater pond in rainfall years of 100-year frequency.
4. Require the Discharger to submit a Groundwater Monitoring Well Installation Work Plan describing the installation of two additional shallow wells to monitor groundwater upgradient and downgradient of the new 7.88-acre LAA (e.g., at the northeast corner of the new LAA and between the original and new LAA).

Additional Comments. Regarding the tables in Findings 36 and 37, please confirm whether “Nitrate” should read “Nitrate-Nitrogen” or “Nitrate-N” and confirm the values presented for nitrate are as nitrogen. For consistency, all tables should use the same units (preferably mg/L) for iron (Fe) and manganese (Mn). Finding 37 cites incorrect units for the manganese WQO of 0.05 mg/L.

Table 13, Flow Limits. Total Annual Flow should be revised to read: “(As determined by the total flow for the calendar ~~month~~ year)”

Discharge Specification E.3 includes “on-site landscape irrigation areas. Land Application Area Specification G.9 similarly includes “on-site landscaped areas.” The tentative order does not identify such areas. Consider revising these specifications to remove their reference.

Wastewater Flow Schematic, Attachment C, does not include the screw press system or indicate where wastewater pH is adjusted.

Regarding the tentative Monitoring and Reporting Program (MRP), please consider including in Standard Minerals for source water, effluent, and groundwater the following: calcium, magnesium, hardness, bicarbonate alkalinity, sulfate, potassium, sulfate, and dissolved arsenic. And, include the list of constituents monitored in groundwater TKN, Ammonia, and Total Organic Carbon. These constituents are informative in detecting signs of organic overloading. Lastly, please consider requiring the Discharge to monitor the quality of LAA soils in a manner similar to other WDRs with soil monitoring (e.g., uncontested TWDRs for Azteca Milling).

Thank you for your time and consideration.



JO ANNE KIPPS