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TENTATIVE WASTE DISCHARGE REQUIREMENTS ORDER AND TENTATIVE CEASE AND DESIST ORDER FOR O'NEILL BEVERAGES CO. LLC, REEDLEY WINERY, FRESNO COUNTY

This letter transmits my comments on the subject tentative orders for the discharge of waste to land from the winery at 8418 South Lac Jac Avenue near Reedley. O'Neill Beverages Co. LLC, a privately held company founded by Mr. Jeff O'Neill in 2004, owns the winery and associated existing and proposed waste discharge areas. The Tentative Waste Discharge Requirements (WDRs) Order proposes to rescind and replace WDRs Order 95-014. This Order currently regulates the winery's discharge of commingled wine production wastewater and stillage to an onsite 36.8-acre discharge area, in part, by implementing the decades-old and scientifically-unproven Stillage Guidelines contained in both of the Central Valley Region's Water Quality Control Plans. The Tentative Cease and Desist Order (CDO) proposes to require the Discharger to: (1) implement corrective measures to achieve and maintain compliance with various discharge specifications in the Tentative WDRs Order regarding waste constituent loading, and (2) assess the horizontal and vertical extent of groundwater polluted or otherwise unreasonably degraded by the winery's waste disposal practices.

I am a Fresno County resident and a California registered civil engineer with experience in evaluating the effects to soil and groundwater from discharges of winery waste to land for treatment and disposal. I gained this experience during my employment as a Senior Water Resources Control Engineer in the Fresno Office of the Central Valley Water Board (Regional Board). Before my retirement in December 2010, I supervised the Fresno Office's Enforcement Unit. I was personally involved in the issuance of informal enforcement actions in 2000 and 2003 for violations of WDRs Order 95-014 concerning, in part, discharging in excess of permitted limits, degrading groundwater, and creating a condition of pollution. At that time, Golden State Vintners (GSV) owned the winery and Mr. O'Neill was the company's chief executive officer. While GSV initiated some corrective measures to address the violations, the violations were not resolved and the discharge continued (and continues) to pollute groundwater. In 2004, O'Neill Beverages Co. LLC (Discharger) bought the winery. The Discharger also owns and operates an adjacent bottling plant.

I reviewed the proposed orders and the Discharger's WDRs Order 95-014 case file, including the Discharger's submissions in 2006 and 2007 proposing an increase in discharge flow and construction of two single-lined surface impoundments for wastewater equalization. I also reviewed the Discharger's WDRs Order 5-01-141 case file, which concerns the discharge of designated waste from its bottling plant to an onsite Title 27-compliant surface impoundment, which since 2003, has also received the winery's cooling tower blow down, boiler blow down, and water softener regenerant.

Finding 3 of the tentative WDRs states that the winery "has been in operation since prior to the 1950's." This statement underemphasizes the actual historical duration of the discharge. A winery has

operated at this site since the 1890's, according to a 1995 technical report in the Discharger's case file.ⁱ The current WDRs Order specifies the size of the disposal area as 36.8 acres, states the Discharger (then Heublein Wine) does not propose to increase the size of its disposal area, and establishes seasonal discharge flow limits in accordance with the Stillage Guidelines and disposal area of 36.8 acres. Since 2000, the area receiving wine wastewater and stillage discharges was expanded to 106 acres. The Tentative WDRs Order does not, but should, explain how the expansion of discharge area was authorized in the absence of revised waste discharge requirements.

Groundwater in the discharge area is generally of excellent quality and exhibits EC ranging from 200 to 600 umhos/cm.ⁱⁱ The winery's long-term discharge of high-strength wastewater and stillage to its currently authorized 36.8-acre discharge area has caused groundwater flowing under and beyond to contain waste constituents in concentrations exceeding applicable water quality objectives.ⁱⁱⁱ In other words, the unreasonable degradation attributable to the winery's discharge has created a condition of pollution and caused the long-term loss of the affected groundwater's designated beneficial uses.

The Tentative WDRs Order proposes the Regional Board accept scientifically untested assumptions about waste constituent loading rates (i.e., the decades-old EPA-recommended BOD loading rate of 100 lbs/acre/day) to find the proposed discharge will not contribute to the ongoing condition of pollution let alone unreasonably degrade groundwater. This magical thinking appears in many recently issued WDRs Orders for food processing and winery waste discharges, and is particularly dangerous in situations like this one in which past discharges have already polluted groundwater. This is because distinguishing the affects to groundwater from newly permitted loading rates from the legacy of pollution resulting from past discharges will be technically challenging if not impossible by groundwater monitoring data alone. The consultants of dischargers with such recently issued WDRs Orders will most assuredly explain evidence of continued groundwater pollution as due to legacy impacts and not to current, supposedly improved, discharge practices. During my many years of employment with the Regional Board, I have personally voiced this concern countless times with consultants hired by food processors and wineries and, without exception, the consultants have always acknowledged this conundrum.

One would think that food processing and winery waste dischargers would be eager to demonstrate that their proposed waste constituent loading rates are effective at protecting water quality and reflect the implementation of best practicable treatment or control (BPTC). Indeed, following issuance almost 15 years ago of a tentative WDRs Order for E. & J. Gallo Winery's Fresno Winery that identified the discharge of winery waste and stillage as a discharge of designated waste, there was a brief flurry of activity by the Wine Institute to scientifically evaluate waste constituent loading rates for their potential to release waste constituents to soil-pore liquid at depths below the root zone. I participated in the technical aspects of this effort by reviewing technical submittals and providing commentary for consideration by Regional Board management. The end result was a technical report published by the Wine Institute that contained proposed loading rates that failed to receive a positive review by Regional Board staff and later by a panel of technical experts convened by State Board at the request of the Wine Institute. This was followed by an attempt by State Board and the Wine Institute to articulate three proposed scenarios for addressing the "controversy" of winery waste land application. This effort faded away quietly following the departure of key State Board and Regional Board technical staff due to promotion, interagency transfer, or, like myself and others, reassignment.

It is my understanding that little, if anything, has been done recently by State Board and Regional Board staff to identify winery waste constituent loadings that are effective at protecting groundwater. While Regional Board staff may correctly argue that such work is specific to the character of the waste and nature of the discharge site, staff has not proposed the Regional Board require dischargers to monitor soils and soil-pore liquid in an effort to obtain this vital information, in part, because staff has apparently bought in to the often-cited falsehood by discharger consultants that such monitoring is tantamount to conducting research and not appropriate for determining compliance with WDRs issued by the Regional Board. As the saying goes, "If you repeat a lie often enough, people will believe it, and you will even come to believe it yourself." It is not rocket science to monitor soils and soil-pore liquid. Without this monitoring and resulting data assessment, the soil profile will always be, in effect, the zone where miracles happen and applied waste constituents magically disappear. And, meanwhile, groundwater continues to suffer as a result of the apparent technical incompetence of Regional Board staff or, worse, of the apparent duplicity by Regional Board management in its direction to highly-competent staff to require dischargers to do as little as possible, at great cost savings, to protect groundwater. Because this can and does result in irretrievable damage to this vital public resource, it verges on malfeasance. The Regional Board should be aware of this. If, after considering my comments on the tentative Orders, it adopts them as proposed, a strong case can be made that the Regional Board itself is guilty of malfeasance.

In the absence of evidence to demonstrate otherwise, the Regional Board must assume that additional discharges of winery waste, especially to the long-used 36.8-acre discharge area, will continue to cause groundwater to violate water quality objectives. Accordingly, the Regional Board cannot exempt the proposed discharge from Title 27 prescriptive standards as allowed by Title 27, section 20090. No citing of magical thinking by staff regarding presumed improvements in groundwater quality from reduced and presumed safe waste loading rates can wish this stark reality away.

The Tentative WDRs Order acknowledges that the winery's past and current discharges have polluted groundwater, and proposes the Regional Board accept a decades-old yet scientifically untested assumption that a BOD loading rate of 100 lbs/day/acre is adequately protective of groundwater. However, because groundwater is already polluted under and beyond the winery's long-used 36.8-acre discharge area, the Regional Board must assume, in the absence of evidence to the contrary, that affected soils do not have sufficient assimilative capacity to attenuate future applied waste constituents and decomposition byproducts to levels that, when released to groundwater, will not continue to result in violations of numerical water quality objectives for salinity (EC and TDS), nitrate, iron, and manganese, as well as narrative objectives concerning taste and odor (i.e., for ammonia) or agricultural use (e.g., hardness and bicarbonate alkalinity). In particular, the excessive concentrations in polluted groundwater of potassium, a salinity constituent that appears in very high concentrations in the crush season discharge, should be more than enough justification for the Regional Board to prohibit winery waste discharges to the winery's long-used 36.8-acre discharge area. As such, if the Regional Board adopts the Tentative WDRs Order in its current form, which authorizes winery waste discharges to the 36.8-acre discharge area, it will authorize the Discharger to continue to pollute groundwater in violation of the Basin Plan and the State Antidegradation Policy.

Future discharges to the 36.8-acre discharge area, as well as elsewhere proposed by the Discharger, are subject to better treatment and control measures than that currently practiced and proposed by the Discharger (i.e., screening of wastewater and segregation and discharge of boiler and cooling tower blow down and ion exchange regenerant to a Title 27 surface impoundment).

Other California wineries reduce the concentrations of organic waste constituents in winery wastewater prior to land discharge by implementing primary treatment and/or secondary treatment by aerobic, facultative, or anaerobic processes.^{iv} According to the Discharger's website,^v the winery produces bulk wine and brandy and is the 8th largest winery in the U.S. It can be safely assumed that the Discharger's cost savings by not implementing BPTC has contributed to its prosperity relative to its competitors. Because the discharge threatens to degrade high quality groundwater, the Regional Board must require the Discharger to implement BPTC to minimize degradation to be compliant with the State Antidegradation Policy. Sadly, the Tentative WDRs Order does not require the Discharger to implement BPTC, which, because groundwater is already polluted, should include the use of Title 27 surface impoundments for especially high-strength wastes such as stillage. If the Regional Board adopts the Tentative WDRs Order in its current form, it will not require the Discharger to employ BPTC to minimize degradation and will authorize the Discharger to continue to unreasonably affect present and anticipated beneficial uses of area groundwater in violation of the Basin Plan and the State Antidegradation Policy.

The Tentative WDRs Order proposes the Regional Board accept the degradation (and continued pollution) that will result from the proposed discharge because the Discharger employs many people and contributes to the local and State economies. While the Regional Board should consider these factors, it should also consider the protection of high quality groundwater to be of equal if not greater maximum public benefit. Authorizing degradation from less than the most effective technology or control or degradation greater than the concentration that fully protects all beneficial uses cannot be a maximum benefit to the people of the State. If the Regional Board adopts the Tentative WDRs Order in its current form, it will determine that the economic benefits to the Discharger outweighs the protection of groundwater from unreasonable degradation and pollution. Especially in this period of extreme drought and increased reliance on groundwater, the Regional Board should increase its diligence in protecting high quality groundwater that is recharged by high quality surface water because such groundwater it is a precious public resource that, once damaged, cannot be replaced without huge economic investment (e.g., extraction, treatment, reinjection).

The tentative WDRs Order, Attachment C, shows the winery's disposal area increased by an additional 50 acres adjacent to the historic 36.8-acre discharge area and immediately west of the Kings River. Attachment A of the Tentative WDRs Order identifies an area labeled, "Potential Future Land Application Areas," presumably comprised of the "additional 77 acres of agricultural land" identified in Finding 4. The Tentative WDRs Order should identify the APNs of all parcels proposed for waste discharge (in a finding and in an attachment) and clearly state which parcels the Tentative WDRs Order is authorizing to receive winery waste discharges. Currently, it is not clear whether the additional 77 acres of agricultural land are included in the proposed discharge area, or if they may be used in the future following issuance of revised WDRs.

The Tentative WDRs Order requires the Discharger to submit technical information that it should have already submitted in its Report of Waste Discharge (e.g., nutrient and wastewater management plan, solids management plan, detailed water balance). While staff will most likely justify this deficiency by stating other recently issued WDRs Orders require similar technical submittals (because of deficient reports of waste discharges), this does not justify staff proposing the Regional Board authorize a discharge (especially an increase in discharge flow and area) that has not first been adequately documented and demonstrated to be protective of groundwater and consistent with the State Antidegradation Policy.

An example of the inadequate characterization of the discharge is Attachment B, Process Flow Schematic, which is derived from information contained in the Discharger's Report of Waste Discharge. This process flow schematic does not identify the projected flow rates of contributing waste streams. This characterization is a basic civil engineering task that even the most inexperienced civil engineering consultants have no difficulty in completing. Also, the Report of Waste Discharge does not distinguish between wine production wastewater and stillage in its waste characterization. This information on both waste streams is vital for the Regional Board to appreciate the extremely high concentrations of waste constituents in stillage that should be subjected to BPTC prior to commingling with lower strength wine production wastewater.

Additionally, the Tentative CDO requires O'Neill to assess the horizontal and vertical extent of groundwater impacted by the discharge. This task should be included in a cleanup and abatement order issued pursuant to California Water Code section 13304, in part, because the Discharger should be solely responsible for compensating the Regional Board for staff costs associated with reviewing and commenting on technical reports required by the Order.

The WDRs Order 95-014 case file contains a 26 June 2006 staff memorandum from me to my immediate supervisor summarizing evidence showing that the winery's discharge has polluted groundwater and caused the long-term loss of its designated beneficial uses, and proposing that the Executive Officer change the discharge's threat to water quality from Category 2 to Category 1, as defined in Title 23, California Code of Regulations, section 2200. The memorandum displays my supervisor's written comment that summarized the result of his consultation with the Fresno Office's Assistant Executive Officer, who apparently decided that such a change should be made only after the issuance of a formal enforcement order requiring the Discharger to address the pollution. The Tentative WDRs Order proposes the Regional Board rate this discharge as Category 2 threat to water quality.^{vi} Again, no magical thinking by staff regarding presumed future decreases of waste constituents in groundwater from presumed safer waste constituent loadings will wish away the reality that this discharge has caused, and will continue to cause by virtue of inadequate soil attenuation, a condition of pollution and long-term loss of the groundwater's designated beneficial uses.

The following comment is in regards of the lack of soil monitoring in the Tentative WDRs Order, which prescribes Land Application Area Specification D.8, "The resulting effect on the discharge on soil pH shall not exceed the buffering capacity of the soil profile." The Tentative CDO cites this specification as one the Discharger threatens to violate, but does not require the Discharger to do anything to preclude such violations. Because neither the Tentative WDRs Order or Tentative CDO requires the Discharger to do any soil monitoring whatsoever, there is no compelling reason for the Discharger to provide soil data showing compliance with this specification except by issuance by an understaffed and overworked enforcement unit of a request for technical information pursuant to California Water Code section 13267. This is just another example of the technical deficiency of the proposed orders and further justification that the Regional Board should reject them as proposed.

In summary, the Regional Board should reject the tentative Orders and instruct staff (and management) to revise them so that they are technically adequate and compliant with applicable laws, regulations, policies, and plans.

In particular, I urge the Regional Board to instruct staff to revise the Tentative WDRs Order to:

1. Prohibit discharge to the winery's long-used 36.8-acre discharge area (i.e., Fields A East Block, A West Block, and B Block).
2. Identify the discharge as Category 1 threat to water quality for annual billing purposes.
3. Authorize an increase in discharge flow and expansion in discharge area only after the Discharger submits technical documentation demonstrating it has implemented corrective measures to preclude exacerbating an existing condition of pollution and implemented BPTC to minimize degradation of high quality groundwater beneath areas previously not used for waste disposal.
4. Require the Discharger to monitor soils and soil-pore liquid in areas receiving waste discharges as well as in background areas (i.e., areas representative of area soil conditions that the Discharger can reliably demonstrate have not received concentrated discharges of waste constituents). Inclusion of background soils monitoring is essential for interpreting the results of monitoring data collected from areas receiving waste discharges.
5. Clearly identify which parcels are proposed for waste disposal (identify parcel APNs in a finding and on a map attachment).
6. Include flow rate information in Attachment B, Process Flow Schematic.
7. Include waste characterization data for wine production wastewater and for stillage.
8. Justify that the Discharger's existing wastewater screening treatment reflects implementation of BPTC when Google Earth images of the screening area shows what appears to be excessive spillage of waste constituents.

I further urge the Regional Board to instruct staff and management to issue the Discharger a cleanup and abatement order to address the groundwater pollution caused by the winery's long-term discharge or, at a minimum, revise the Tentative CDO to also cite California Water Code section 13304 so that the Discharger is solely responsible for reimbursing the Regional Board for the costs of staff time reviewing and commenting on technical documents that address the cleanup and abatement of pollution caused by the winery's discharge.

I appreciate the opportunity to submit these comments.



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ⁱ Waste Discharge Specification Compliance, Heublein Reedley Winery, prepared by Subsurface Consultants, Inc. March 16, 1995.

ⁱⁱ WDRs Order 5-01-141, Finding 15

ⁱⁱⁱ Tentative WDRs Order, Findings 42 and 45.b

^{iv} Comprehensive Guide to Sustainable Management of Winery Water and Associated Energy, prepared by Kennedy/Jenks Consultants for the Wine Institute (undated)

^v <http://www.oneillwine.com/about.html>

^{vi} Tentative WDRs Order, Finding 70