

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2014-0046  
REQUIRING  
O'NEILL BEVERAGES COMPANY, LLC  
REEDLEY WINERY  
FRESNO COUNTY

TO CEASE AND DESIST FROM  
DISCHARGING WASTE CONTRARY TO REQUIREMENTS

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

1. O'Neill Beverages Company, LLC (O'Neill or Discharger) owns and operates a Winery at 8418 South Lac Jac Avenue near Reedley, in Section 20, Township 15 South, Range 23 East, MDB&M, in Fresno County.
2. Waste Discharge Requirements (WDRs) Order 95-014, adopted on 27 January 1995, prescribes requirements for the discharge of process wastewater to land.
3. In December 2011, O'Neill submitted a Report of Waste Discharge (RWD) to update its WDRs in order to increase flows and expand its land application areas.
4. The Winery has been in operation since prior to the 1950's. O'Neill has owned and operated the Winery since July 2004, and is responsible for compliance with the WDRs. Previous owners include Golden State Vintners, Heublein Wine, and Christian Brothers. Grapes brought in from local growers are crushed and fermented to produce wine and spirits, which are blended, stored, and bottled on-site.
5. The Winery and land application areas lay adjacent to the Kings River and consist of approximately 296 acres that include an administrative office building, wine production and fermentation buildings, warehouses, a distillery, grape receiving/crush areas, and land application areas. The Winery also includes a bottling plant and a Class II surface impoundment that were constructed in 2001.
6. The Winery crushes approximately 100,000 to 156,000 tons of grapes annually to produce wine. The crush occurs annually from mid-August through November. Fermented wine and wine-making byproducts that contain residual alcohol are distilled on-site to produce distilled brandy and spirits. The stills generally operate for approximately 110 days each year between August and November. Recent crush tonnage is presented in Table 1 below. In conjunction with the increased crush, the expansion plans include increases its wine storage and production capacity. No increase in distillation or volume of stillage waste is proposed.

TABLE 1. Production Volumes

<u>Year</u>	<u>Grapes Crushed (tons)</u>	<u>Wine Produced (million gallons)</u>	<u>Brandy and Sprits Produced (million gallons)</u>
2008	88,000	3.5	5.6
2009	114,000	6.0	5.8
2010	117,000	10.0	6.0
2011	125,000	11.9	5.6
2012	136,000	13.6	4.7
2013	156,700	15.5	5.6
Future	200,000	20.0	6.0

**Wastewater Characteristics**

7. The discharge consists primarily of tank and equipment wash water, stillage waste, and general wash water. Starting in 2003, the Discharger began segregating its high-salinity waste streams including, cooling water, boiler blow down, and water softener regenerant and discharging them to the Class II surface impoundment along with the wastewater from the bottling plant constructed in 2001. Discharges to the impoundment are regulated separately under WDRs Order R5-01-141.
8. The Winery operates year-round, with maximum wastewater flows occurring during the crush season from mid-August through November. Currently, the Winery produces an average annual discharge of about 0.16 mgd or about 60 million gallons per year.
9. Wastewater discharged to the land application areas is high in organics, as measured biochemical oxygen demand (BOD). It is also high in nitrogen and salts, particularly potassium. The highest flows and constituent concentrations occur during the crush and stillage season from mid-August through November. Average wastewater concentrations for BOD, total nitrogen, total dissolved solids (TDS), fixed dissolved solids (FDS), and potassium for 2008 through 2012 are presented in Table 2.

TABLE 2. Average Wastewater Characteristics

<u>Yearly Average</u>	<u>BOD (mg/L)</u>	<u>Total Nitrogen (mg/L)</u>	<u>TDS (mg/L)</u>	<u>FDS (mg/L)</u>	<u>Potassium (mg/L)</u>
2008	4,198	64	2,330	936	203
2009	2,563	51	1,855	753	157
2010	3,066	39	1,559	564	180
2011	3,093	51	859	348	86
2012	1,725	54	718	334	55
Average	2,929	52	1,464	587	136

10. Wastewater from the Winery is collected and routed through a screening unit before being discharged to the land application areas. In 2004, O'Neill switched from flood to sprinkler

irrigation to more evenly distribute its wastewater and provide for better management of its land application areas. Prior to 1995, the land application area consisted of approximately 36.8 acres adjacent to the Winery. Starting in 1995 the land application area was expanded in stages to a total of 106 acres. According to the 2011 RWD, the Discharger plans to further expand the land application area by 50 acres bringing the total land available to approximately 156 acres.

11. Historically, the Discharger states it grows alfalfa within the land application areas from mid-January or February through August prior to the start of the crush/stillage season. After the final harvest is cut in August, the fields are disked and lie fallow until the next year's planting.
12. Annual loading rates for nitrogen, TDS, and FDS to individual fields within the 106-acre land application area between 2010 and 2012 ranged from about 220 to 550 lbs/acre/year (nitrogen), 7,500 to 18,000 lbs/acre/year (TDS), and 2,000 to 6,000 lbs/acre/year (FDS). Potassium loading rates to individual fields were not calculated. However, using the average potassium concentrations in the discharge the potassium load to the total 106 acres between 2010 and 2012 ranged from about 400 to 800 lbs/acre/year.
13. According to the Western Fertilizer Handbook (9<sup>th</sup> edition), alfalfa can take up about 480 lbs/acre/year of nitrogen and about 600 lbs/acre/year of potassium. However, given the Discharger's shortened crop schedule, actual uptake of nitrogen and potassium within the land application areas could be significantly lower than referenced values.
14. Self-monitoring reports from 2012 report cycle average BOD loading rates to the land application areas ranging from less than 10 to approximately 200 lbs/acre/day, with instantaneous loads as high as 8,000 or 9,000 lbs/acre/day during the crush/stillage season.

#### **Waste Discharge Requirements Order 95-014**

15. Order 95-014 allows for a maximum daily discharge of up to 0.526 million gallons per day (mgd) from 1 May to 30 September, up to 0.299 mgd from 1 October to 30 November, and up to 0.179 mgd from 1 December to 30 April.
16. WDRs Order 95-014 includes the following Specifications and Groundwater Limitations:

- a. Discharge Specification B.1, states:

The maximum daily discharge to the 36.8-acre disposal site shall not exceed the following limits:

<u>Period of Year</u>	<u>Maximum Discharge</u>
1 May to 30 Sept	0.526 mgd
1 Oct to 30 Nov	0.299 mgd
<u>1 Dec to 30 Apr</u>	0.179 mgd

- b. Discharge Specification B.4, states:

The depth of each waste application shall not exceed the following:

<u>Period of Year</u>	<u>Depth (inches)</u>
1 May to 30 Sept	3.7
1 Oct to 30 Nov	3.0
1 Dec to 30 Apr	2.5

c. Discharge Specification B.7, states:

Land area used for stillage disposal shall equal or exceed the following:

<u>Period of Year</u>	<u>Land Area Required (acres per 100,000 gpd of stillage waste)</u>
1 May to 30 Sept	7
1 Oct to 30 Nov	12.3
1 Dec to 30 Apr	20.6

d. The Groundwater Limitations C.1 through C.7, state in part:

The discharge, in combination with other sources, shall not cause underlying groundwater to:

- (1) Contain waste Constituents in concentrations statistically greater than receiving water limits, where specified below or background water quality where not specified.
- (2) Exceed an annual average incremental increase in specific electrical conductivity greater than 3 umhos/cm, based on the most recent five-year period, or a maximum of 900 umhos/cm, whichever is less.
- (3) Contain chemicals, heavy metals, or trace elements in concentrations that adversely affect beneficial uses or exceed maximum contaminant levels specified in the California Code of Regulations, Title 22, Division 4, Chapter 15.

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- (6) Contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- (7) Contain concentrations of chemical constituents in amounts that adversely affect agricultural use.

16. In addition, WDRs Order No. 95-014, Provision D. 2 of states in part that:

The Discharger shall comply with "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991.

1 March 1991, Standard Provisions, General Provisions A.11 states that:

Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.

### Waste Discharge Requirements Order R5-2014-0045

17. O'Neill submitted a RWD in April 2006 that attempted to address its ongoing violations, which included discharging in excess of permitted limits and degrading groundwater. In the RWD, O'Neill proposed that the Central Valley Water Board increase flow limits to 0.526 mgd (May to November) and 0.36 mgd (December to April), and proposed construction of two equalization basins to consolidate the wastewater and allow for better management of the existing 106-acre land application area. According to the 2006 RWD, the equalization basins would be lined with a single 45-mil polypropylene liner. Following discussions with Central Valley Water Board staff, O'Neill withdrew the RWD due to concerns with the cost of constructing the equalization basins in accordance with Title 27 standards.
18. In February 2007, O'Neill submitted a new RWD to replace the 2006 RWD. The 2007 RWD proposed that the Central Valley Water Board increase flow limits in a manner similar to that proposed in the 2006 RWD, and proposed the addition of an additional 50 acres to the existing land application area to reduce loadings and better manage the land application areas. The 2007 RWD did not include an antidegradation analysis. After several reviews and addenda, O'Neill hired a new consultant to prepare an antidegradation analysis and revised RWD.
19. On 16 December 2011, O'Neill submitted a new RWD, as described in Finding 3. The 2011 RWD contained an antidegradation analysis and replaced the 2007 RWD. The 2011 RWD proposes that the Central Valley Water Board increase wastewater flow limits to 80 million gallons annually, and that O'Neill expand the available land application areas to approximately 156 acres to compensate for the increased flows. The RWD also proposes changes to O'Neill's wastewater and land management procedures including identifying several crop plans to improve nutrient and salt uptakes. The antidegradation analysis is based on a vadose zone groundwater model. The model focuses on salinity management and general salt uptake by crops, but does not account for existing groundwater degradation or legacy conditions in soil. The model also does not evaluate whether the estimated nutrient and organic loading rates at the proposed flow of 80 million gallons per year would be sufficiently protective of groundwater.
20. On 28 March 2014, the Central Valley Water Board adopted WDRs Order R5-2014-0045. WDRs Order R5-2014-0045 includes the following Specifications and Groundwater Limitations:
  - a. Discharge Specification C.1, states:

No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.
  - b. Discharge Specification C.2, states:

Wastewater, treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
  - c. Land Application Area Specification D.2, states:

The weekly average BOD loading rate to fields A West Block, A East Block, and B Block, shall not exceed 100 lbs/acre/day. The weekly average BOD loading rate on the remaining land application areas shall not exceed 150 lbs/acre/day.

d. Land Application Area Specification D.5, states:

Application of waste constituents shall be at reasonable agronomic rates to preclude creation of a nuisance or cause or contribute to exceedances of the Groundwater Limitations in this Order, considering crop, soil, climate, and irrigation management.

e. Land Application Area Specification D.8, states:

The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.

f. Groundwater Limitations F.1, states in part:

Release of waste constituents from any treatment, reuse, or storage component associated with the discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or background quality, whichever is greater:

- (a) Nitrate as nitrogen of 10 mg/L,
- (b) EC of 900 umhos/cm, and
- (c) For constituents identified in Title 22, the MCLs quantified therein.

### **Groundwater Degradation / Pollution**

21. The Winery and land application areas are underlain by river channel and alluvial fan deposits. Soil boring logs show predominantly fine to medium grained sand with interbedded silts and clays down to about 65 feet below ground surface (bgs). Some borings show a dense layer of silt (or hardpan) at about 10 to 15 feet bgs.
22. There are seventeen monitoring wells used to monitor groundwater beneath the Winery and land application areas. Four monitoring wells (MW-1 through MW-4) were installed in 1995 to monitor the original 36.8 acre land application area and are currently inside of the expanded land application area. Ten additional monitoring wells (MW-5 through MW-14) were installed in 2001. Monitoring wells MW-5 and MW-6 were installed east and up-gradient between the Kings River and land application areas. The remaining monitoring wells MW-7 through MW-14 were installed around the perimeter of the site to the north, south, and east of the land application areas. Three additional monitoring wells SI-1, SI-2, and SI-3 were also installed in 2001, south of the land application area to monitor groundwater around the Class II surface impoundment.
23. From monitoring well data at the site, groundwater is first encountered at approximately 45 to 60 feet bgs. Groundwater flow beneath the site is predominantly to the west-southwest away from the Kings River. Infiltration from the Kings River provides a source of high quality groundwater up-gradient of the site.

24. Average groundwater quality for selected constituents calculated using quarterly sampling data from 2008 through 2012 is presented in Table 3 below. Items in bold indicate exceedances of state Primary or Secondary drinking water Maximum Contaminant Levels (MCLs).

TABLE 3. Groundwater Quality

Wells	EC umhos/cm	TDS mg/L	HCO <sub>3</sub> <sup>-</sup> mg/L	NO <sub>3</sub> -N mg/L	Ammonia mg/L	Na mg/L	Cl mg/L	K mg/L	Fe mg/L	Mn mg/L	TOC mg/L
Interior and down-gradient monitoring wells											
MW-1	<b>1714</b>	<b>1116</b>	681	6.0	27	53	26	286	<0.1	<b>0.77</b>	9.1
MW-2	<b>1040</b>	<b>641</b>	506	<1	20	33	17	108	0.23	<b>0.83</b>	8.0
MW-3	<b>1277</b>	<b>938</b>	656	1.2	2.9	57	28	233	<b>0.35</b>	<b>1.71</b>	6.2
MW-4	<b>1686</b>	<b>1156</b>	614	<b>17</b>	25	49	25	259	0.13	<b>0.33</b>	7.0
MW-14	<b>1530</b>	<b>870</b>	613	4.4	28	55	32	171	<b>1.45</b>	<b>0.33</b>	11
Up-gradient and perimeter wells											
MW-5	435	321	165	6.9	<0.5	53	17	4.1	<0.1	<0.01	<1
MW-6	<b>1044</b>	<b>749</b>	639	4.2	0.6	55	25	5.2	0.19	<b>2.45</b>	5.1
MW-7	<b>996</b>	459	444	4.9	4.6	41	19	87	<0.1	<b>0.38</b>	3.1
MW-8	<b>1240</b>	<b>889</b>	457	<b>33</b>	0.6	146	64	6.1	<0.1	<b>0.06</b>	1.9
MW-9 <sup>1</sup>	658	459	134	<b>29</b>	<0.5	36	10	2.6	<0.1	<0.01	1.2
MW-10	<b>1608</b>	<b>1183</b>	406	<b>68</b>	0.6	155	44	5.6	<0.1	<0.01	2.1
MW-11 <sup>2</sup>	<b>1156</b>	<b>1118</b>	399	<b>39</b>	<0.5	103	58	5.9	<0.1	<0.01	2.2
MW-12	794	<b>867</b>	260	<b>37</b>	0.7	111	15	4.8	<0.1	<0.01	1.1
MW-13	<b>1163</b>	<b>1018</b>	401	<b>17</b>	0.6	121	92	3.7	<0.1	0.01	1.6
Wells around Class II surface impoundment											
SI-1	<b>1097</b>	<b>752</b>	347	<b>35</b>	0.6	148	31	5.1	0.1	<0.01	1.1
SI-2 <sup>3</sup>	712	449	267	<b>13</b>	1.1	21	13	29	0.1	0.05	1.4
SI-3	875	<b>616</b>	292	<b>31</b>	3.9	82	20	15	0.15	0.02	1.9
MCL <sup>4</sup>	900/1,600 <sup>6</sup>	500/ 1,000 <sup>6</sup>		10 <sup>5</sup>			250/ 500 <sup>6</sup>		0.3 <sup>6</sup>	0.05 <sup>6</sup>	

EC =Electrical Conductivity, TDS=Total Dissolved Solids, HCO<sub>3</sub><sup>-</sup> = bicarbonate as CaCO<sub>3</sub>, NO<sub>3</sub>-N=Nitrate as nitrogen, Ammonia=ammonia as nitrogen, Na=Sodium, Cl=Chloride, K=Potassium, Fe=Iron, Mn=Manganese, and TOC=Total Organic Carbon

1. Well periodically dry. Average based on 10 samples.
2. Well dry from 2008 through most of 2011. Average based on 3 samples.
3. Well periodically dry. Average based on 13 samples.
4. MCLs = Maximum Contaminant Levels. Concentrations that exceed these water quality objectives are bolded.
5. Primary MCL for NO<sub>3</sub>-N + NO<sub>2</sub>-N.
6. Secondary MCLs. Recommended/Upper.

25. In May 2007, O'Neill installed two additional up-gradient monitoring wells (MW-15 and MW-16) along the eastern boundary of the expanded land application area to evaluate groundwater conditions prior to the application of wastewater to this area. These wells were sampled three times in 2007 following their installation and twice in 2011. Analytical results from the limited sampling of MW-15 and MW-16 are presented in Table 4 below. Items in bold indicate exceedances of state Primary or Secondary drinking water MCLs.

TABLE 4. Groundwater data for MW-15 and MW-16

Wells	Date	EC umhos/cm	TDS mg/L	HCO <sub>3</sub> <sup>-</sup> mg/L	NO <sub>3</sub> - N mg/L	Ammonia mg/L	Na mg/L	Cl mg/L	K mg/L	Fe mg/L	Mn mg/L	TOC mg/L
MW-15	6/4/07	<b>1090</b>	<b>740</b>	335	<b>16.8</b>	<0.5	94	84	6.7	<0.1	<0.01	1.9
	7/26/07	<b>1080</b>	<b>720</b>	388	7.7	0.11	108	71	8.6	0.2	<0.01	ns
	8/1/07	<b>1100</b>	<b>762</b>	314	<b>20.9</b>	<0.5	89	69	6.8	<0.1	<0.01	ns
	7/19/11	694	<b>530</b>	229	9.1	<0.5	58	34	4.4	<0.1	<0.01	<1
	8/22/11	772	<b>540</b>	272	10	<0.5	64	39	3.6	<0.1	<0.01	<1
MW-16	6/4/07	772	<b>673</b>	335	7.3	<0.5	79	34	5	<0.1	<0.01	7.7
	7/26/07	716	480	307	5.5	<0.5	89	32	6.5	0.14	<0.01	ns
	8/1/07	783	<b>566</b>	314	7.7	<0.5	78	31	5.7	<0.1	<0.01	ns
	7/19/11	561	425	234	2.6	<0.5	57	16	3.8	<0.1	<0.01	<1
	8/22/11	551	420	245	2.6	<0.5	60	17	3.2	<0.1	<0.01	<1
MCL <sup>1</sup>		900/ 1,600 <sup>3</sup>	500/ 1,000 <sup>3</sup>		10 <sup>2</sup>		250/5 00 <sup>3</sup>			0.3 <sup>3</sup>	0.05 <sup>3</sup>	

EC=Electrical Conductivity, TDS=Total Dissolved Solids, HCO<sub>3</sub><sup>-</sup>=bicarbonate as CaCO<sub>3</sub>, NO<sub>3</sub>-N=Nitrate as nitrogen, ammonia=ammonia as nitrogen, Na=Sodium, Cl=Chloride, K=Potassium, Fe= Iron, Mn=Manganese, and TOC=Total Organic Carbon

1. MCLs = Maximum Contaminant Levels. Concentrations that exceed these water quality objectives are bolded.
2. Primary MCL for NO<sub>3</sub>-N + NO<sub>2</sub>-N.
3. Secondary MCLs. Recommended/Upper.

26. The elevated EC and salinity constituents in MW-15 and MW-16 in 2007 may be the result of inadequate development of the wells. Samples collected in 2011 for EC, TDS, sodium, chloride, and bicarbonate were significantly lower than those in 2007, following installation of the monitoring wells.
27. The groundwater quality data demonstrates the following:
  - a. Up-gradient groundwater quality is best defined by monitoring well MW-5 on the southeast corner of the existing land application areas, MW-15 and MW-16 on the eastern boundary of the expansion area and closer to the Kings River, and MW-9 north and west of the Winery and outside of the influence from the land application areas. The average EC and TDS in these wells ranges from 445 to 772 umhos/cm and 321 to 540 mg/L, respectively.
  - b. The interior, and down-gradient monitoring wells, (MW-1, MW-2, MW-3, MW-4, and MW-14) contain EC and TDS concentrations in excess of the recommended secondary Maximum Contaminant Levels (MCLs) of 900 umhos/cm and 500 mg/L, and in some cases the upper secondary MCLs of 1,600 umhos/cm and 1,000 mg/L, respectively. These wells also contain manganese in excess of the secondary MCL of 0.05 mg/L with average concentrations ranging from 0.33 mg/L in MW-4 and MW-14 to 1.71 mg/L in MW-3. These wells show little or no nitrate but high ammonia confirming reducing conditions beneath the site. Bicarbonate, calcium, magnesium, and total organic carbon (TOC) are also elevated, indicating general organic overloading of the land application areas. These wells also show high potassium at concentrations of 100 to 300 mg/L, indicating overloading for potassium as well.



- c. Monitoring well MW-6, just inside of the land application areas and north of MW-5, appears to be impacted by the discharge with an average EC and TDS of 1,044 umhos/cm and 749 mg/L, respectively. MW-6 also shows elevated concentrations of TOC and bicarbonate, as well as manganese at 2.45 mg/L, which exceeds the secondary MCL for manganese of 0.05 mg/L. Prior to 2007, however, this well was similar in quality to MW-5. Since 2007 this well has shown a steady increase in constituent concentrations, possibly due to over application of wastewater in this area or damage to the well.
  - d. Monitoring wells MW-10 and MW-11 on the far western boundary of the site have the highest concentration of NO<sub>3</sub>-N at 68 and 39 mg/L, respectively. These monitoring wells also have some of the highest EC and TDS concentrations at 1,608 to 1,156 umhos/cm and 1,183 to 1,118 mg/L, respectively. However, MW-10 and MW-11 do not show elevated bicarbonate, potassium, and TOC typical of groundwater impacted by the discharge. In addition, monitoring wells MW-9 and MW-12, with lower salinity and nitrate, lie between MW-10 and MW-11 and the land application areas. These monitoring wells are likely influenced by surrounding activities or unknown discharges from the Winery.
  - e. Monitoring well MW-13, just south of the Winery buildings, has an average EC and TDS of 1,163 umhos/cm and 1,018 mg/L respectively. This monitoring well also shows high sodium and chloride at 121 mg/L and 92 mg/L, but bicarbonate, potassium, and TOC are low. This monitoring well may be influenced by the Winery's main septic system just up-gradient of MW-13 as well as possible influences from the septic system for Riverview Elementary School to the south.
28. A complaint was filed in 2008 by a nearby property owner on Manning Avenue about 2,000 feet south of the Winery. He alleged that the Winery's discharge had impacted both his domestic and irrigation wells. According to the complainant, water from his domestic well has a white film to it and he has noticed increased clogging and scaling on faucets and irrigation lines over the years. He indicated that the problems were severe enough that he had installed a reverse osmosis water treatment device on his kitchen faucet. An analysis of the irrigation well in 1996 (provided by the complainant) reported an EC of 450 umhos/cm, and bicarbonate of 305 mg/L (or 5 meq/L), and in 2007 the same well had an EC of 1,000 umhos/cm, and bicarbonate of 550 mg/L (or 9 meq/L). Subsequent sampling of the irrigation well by staff in 2008 reported an EC of 940 umhos/cm, TDS of 570 mg/L, bicarbonate of 590 mg/L (or 9.6 meq/L), and potassium of 10 mg/L.

### **Non-Compliance**

29. In November 2000 and September 2003, the Central Valley Water Board issued Golden State Vintners Notices of Violation (NOVs) for discharging flows in excess of permitted limits (Discharge Specification B.1), exceeding waste application depths (Discharge Specification B.4), and for failing to use adequate land areas for application of wastewater and stillage waste (Discharge Specification B.7). The NOVs noted that the over application of wastes appears to have degraded groundwater beneath the site resulting in groundwater EC ranging from 1,250 to 2,100 umhos/cm in samples taken between July 1998 and March 2000 in violation of Groundwater Limitation C.2. Golden State Vintners sold the Winery to O'Neill in 2004 before these issues were resolved.

30. At the proposed annual flow rate of 80 million gallons per year, the 2011 RWD, estimates maximum future loading rates for nitrogen, fixed dissolved solids, and BOD ranging from about 420 to 504 lbs/acre/year (nitrogen), 4,200 to 4,500 lbs/acre/year (FDS), and 160 to 190 lbs/acre/day (BOD). Since these maximum loading rates may still exceed typical crop uptake, Board staff is concerned that, given existing site conditions and groundwater degradation, the proposed applications will not be protective of groundwater quality.
31. The information in Findings 24 through 29 indicate that discharges from the Winery have violated the flow limits, depth of application, and land application area requirements of WDRs Order 95-014 (Discharge Specifications B.1, B.2, and B.3). The information also demonstrates that the discharges have violated Groundwater Limitations C.2, C.3, C.6, and C.7 beneath the central portion of the land application area and in some of the perimeter wells. In this area groundwater exceeds an EC of 900 umhos/cm; contains chemicals, heavy metals, or trace elements in excess of MCLs; contains taste or odor-producing substances in amounts that cause or threaten to cause nuisance or adversely affect beneficial uses; and contains chemical constituents in amounts that could affect agricultural use.
32. The information in Findings 24 through 30 also indicates that the discharge will violate or threaten to violate WDRs Order R5-2014-0045; Discharge Specifications C.1, and C.2 for discharging waste in an amount that causes violation of groundwater limitations or cause pollution or nuisance; Land Application Area Specification D.2, D.5, and D.8 for exceeding a BOD loading rates, exceeding application of nutrients in amounts that exceed crop demand, and causing soil pH to exceed the buffering capacity of the soil profile. In addition, the discharge will violate or threaten to violate the Groundwater Limitations of WDRs Order R5-2014-0045 for causing groundwater to exceed a nitrate as nitrogen of 10 mg/L, an EC of 900 umhos/cm, and MCLs of constituents identified in Title 22.
33. Water Code section 13301, states, in part, that:

When a regional board finds that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action... Cease and desist orders may be issued directly by a board, after notice and hearing.
34. Water Code section 13267(b), states, in part, that:

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, 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.

35. The technical reports required by this Order are necessary to assure compliance with both this Order and Waste Discharge Requirements Order R5-2014-0045, and to protect groundwater quality. The Discharger owns and operates the facility that discharges the waste subject to these Orders.
36. On 28 March 2014, in Rancho Cordova, California, after notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order.

**IT IS HEREBY ORDERED** that, pursuant to Water Code sections 13301 and 13267, O'Neill Beverages Company, LLC, its agents, successors, and assigns, shall:

1. Cease and desist discharging wastes in violation and threatened violation of Waste Discharge Requirements Order R5-2014-0045.
2. The Discharger shall comply with WDRs R5-2014-0045, Discharge Specifications C.1 and C.2, and Land Application Area Specifications D.2, D.5, and D.8 in accordance with the following compliance schedule:

<u>Task</u>	<u>Task Description</u>	<u>Due Date</u>
a.	Submit a work plan and implementation schedule that identifies the specific control measures O'Neill will employ to ensure compliance with the following requirements of WDRs Order R5-2014-0045: Discharge Specifications C.1 and C.2, and Land Application Area Specifications D. 2, D.5, and D.8. The work plan and implementation schedule shall be subject to the approval of the Executive Officer.	<b>29 September 2014</b>
b.	Begin implementation of the approved work plan.	<b>In accordance with the approved schedule, but by no later than 30 March 2015</b>
c.	Submit a technical report demonstrating complete implementation of the approved work plan and compliance with Discharge Specifications C.1 and C.2, and Land Application Area Specifications D. 2, D.5, and D.8 in WDRs Order R5-2014-0045. Upon receipt of written concurrence by the Executive Officer this task shall be considered complete.	<b>In accordance with the approved schedule but by no later than 28 March 2018</b>

3. The Discharger shall comply with WDRs R5-2014-0045, Groundwater Limitations F.1 in accordance with the following compliance schedule:

<u>Task</u>	<u>Task Description</u>	<u>Due Date</u>
a.	Submit a work plan and implementation schedule that identifies the methods proposed for assessing the horizontal and vertical extent of elevated EC, TDS, NO <sub>3</sub> -N, and ammonia concentrations in groundwater beneath and down-gradient of the land application areas. This work plan shall also identify all water and irrigation supply wells within one mile of the Winery and Land Application areas and shall provide a sampling plan to assess water quality within these wells.	<b>30 March 2015</b>
b.	Submit a technical report that describes the horizontal and vertical extent where concentrations of EC, TDS, NO <sub>3</sub> -N, and ammonia exceed Groundwater Limitations in F.1, or appropriate background concentrations where not included in Groundwater Limitations F.1, in groundwater beneath and down-gradient of the land application areas as a result of historic discharges from the Winery (the Discharger must substantiate claims that elevated concentrations are not due to past discharges from the Winery). The technical report shall also provide an estimate of how long it will take for groundwater to meet applicable water quality objectives after the Discharger implements control measures required under this Order and WDRs Order R5-2014-0045.	<b>In accordance with the approved schedule, but by no later than 28 March 2017</b>
c.	Annually submit, a technical report analyzing groundwater quality and progress towards meeting applicable water quality objectives.	<b>Annual progress report (by 1 February of each year)</b>
d.	If the periodic monitoring required in Subsection c. above, indicates unsatisfactory progress towards meeting water quality objectives, the Discharger shall submit a work plan with a compliance schedule for implementing additional measures to meet applicable water quality objectives. The proposed work plan and compliance schedule shall be subject to Executive Officer approval and may be incorporated into future Board Orders.	<b>As required by the Executive Officer</b>

All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16 of the California Code of Regulations, all technical reports must contain a statement of the qualifications and responsible registered professional(s). As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. The technical reports are subject to the Executive Officer approval.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for Administrative Civil Liability.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filling petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/)

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 28 March 2014.

*Original signed by:*

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PAMELA C. CREEDON, Executive Officer