Specific Factors Considered in Calculating Proposed Administrative Civil Liability For Klein Foods, Inc., Rodney Strong Winery Spill on January 22, 2020

The State Water Board's *Water Quality Enforcement Policy* (Enforcement Policy) establishes a methodology for determining administrative civil liability by addressing the factors that are required to be considered under California Water Code section 13385(e). Each factor of the multi-step approach is discussed below, as is the basis for assessing the corresponding score and final liability amount. The Enforcement Policy can be found at:

2017 Water Quality Enforcement Policy

Klein Foods, Inc. (Discharger) owns the Rodney Strong Vineyards (Facility) located at 11455 Old Redwood Highway, in Sonoma County. The Facility is subject to individual Waste Discharge Requirements Order No. 88-54, adopted by the Regional Water Board on April 28, 1988. In addition, the Facility is enrolled for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial General Permit). Process wastewater, and stormwater and non-stormwater discharges that come into contact with pollutant sources related to industrial activities at the Facility are directed to onsite ponds for treatment, settling, and percolation. Both permits under which the Facility is enrolled prohibit discharge of waste and/or non-stormwater to receiving waters.

On January 22, 2020, the racking door on a large wine storage tank in the blending building at the Facility catastrophically failed, releasing approximately 97,000 gallons of wine. The volume of spilled wine overwhelmed the French drain system inside the building, and wine flowed out of doors on both sides of the building and drained into nearby Reiman Creek, tributary to Sotoyome Creek, a tributary to the Russian River. All are waters of the United States. Discharger representatives reportedly took steps to capture and recover the spilled wine, including placing a makeshift dam in Reiman Creek, setting up a portable "trash pump" to capture and convey wine to the Facility's wastewater collection system, and engaging a local wastewater maintenance and repair company to supply vactor trucks to assist with pumping wine from the creek and into one of the onsite ponds. Discharger representatives reported recovering an estimated 20 to 50 percent of the spilled wine. (Regional Water Board Inspection Report, January 23, 2020; Discharger's Supplemental Report, February 26, 2020.)

On January 23, 2020, Regional Water Board staff visited the Facility, in the company of a warden from California Department of Fish and Wildlife (CDFW), to inspect the scene of the spill and the affected receiving waters, and to discuss with Discharger representatives the details of the incident and subsequent spill response. During the inspection, staff observed wine staining through an approximately 700-foot segment of Reiman Creek, leading to Sotoyome Creek, and extending approximately 600 feet down

Sotoyome Creek. Staff observed, and CDFW confirmed, a few dozen dead earthworms in Reiman Creek just upstream of Sotoyome Creek. Staff observed no other apparent signs of in-stream impacts, and analytical results for samples collected by the Discharger following the January 23, 2020 inspection showed slightly, but not significantly, elevated levels of various parameters in downstream samples. The parameters analyzed included Total Suspended Solids (TSS), pH, and Oil and Grease which are standard requirements of the Industrial General Permit, as well as Biochemical Oxygen Demand (BOD) and Total Dissolved Solids (TDS) due to the nature of the spilled material (Enthalpy Analytical, LLC lab report 424117, February 5, 2020). Additional photographs and video of the spill impacts were made by local news outlets and demonstrate that the discharge reached the Russian River on January 22, 2020.[1]

This methodology discusses factors considered by staff in determining a proposed administrative civil liability for the Discharger's unauthorized discharge of waste into a water of the United States, violating its waste discharge requirements, the Industrial General Permit, and the federal Clean Water Act.

Violation: Discharge of approximately 53,000 gallons of wine into Reiman Creek, a water of the United States

As mentioned above, the total volume of wine released from the storage tank was approximately 97,000 gallons. Discharger representatives initially reported to the Office of Emergency Services (OES) that they had recovered 20 to 25 percent of the spilled wine. During the Regional Water Board inspection the following day, Discharger representatives reported recovering 20 to 50 percent of the spilled wine.

Over the course of settlement negotiations and after reviewing Discharger's relevant additional information,[2] the Prosecution Team has estimated that approximately 53,000 gallons of wine entered the surface waters, whereas the Discharger estimates approximately 45,000 gallons entered such waters. In the interest of settlement, the Prosecution Team is using the 53,000-gallon amount for this methodology.

Waste Discharge Requirement (WDR) Order No. 88-54, section A.1, states:

The discharge of waste to the Russian River or its tributaries is prohibited.

Industrial General Permit section III, Discharge Prohibitions, subsection B, states:

[1] California Report, KQED, January 22, 2020: Nearly 100K Gallons of Wine Spill From Healdsburg Vineyard, Reach Russian River | KQED

[2] The determination of 53,000 gallons was reached using the letter to Laura Drabandt from Kevin Mayer dated March 2, 2022, technical discussions on April 12 and 25, 2022 with staff, and Regional Water Board staff site observations on June 1, 2022, along with flow capacity calculations from Trench Flow Capacities I USA I Eric'sons Dura Trench.

Except for non-storm water discharges authorized in Section IV, discharges of liquids or materials other than storm water, either directly or indirectly to waters of the United State are prohibited unless authorized by another National Pollutant Discharge Elimination System (NPDES) permit. Unauthorized non-storm water discharges must be either eliminated or authorized by a separate NPDES permit.

The federal Clean Water Act, section 301 (33 U.S.C. 1311) prohibits the discharge of any pollutant into waters of the United States without a permit.

The Discharger did not have a permit to discharge wine into Reiman Creek.

For the purposes of this Complaint, the Regional Water Board is consolidating these allegations into one violation for one administrative liability amount by alleging one Industrial General Permit violation pursuant to Water Code section 13385.

Step1: Potential for Harm for Discharge Violations

Discussion:
The Enforcement Policy directs staff to calculate Actual Harm or Potential for Harm considering: (1) the degree of toxicity of the discharge; (2) the actual or potential for harm to beneficial uses; and (3) the discharge's susceptibility to cleanup or abatement.

Factor 1: Degree of Toxicity of the Discharge: Degree of toxicity considers the physical, chemical, biological, and/or thermal characteristics of the material involved in the violations and the risk of damage the discharge could cause to the receptors or beneficial uses. A score between 0 and 4 is then assigned, with 0 defined as a material posing a negligible risk, or threat to receptors, and 4 defined as a material posing a significant risk or threat to potential receptors.

In this case, the material discharged was red wine, likely comprised primarily of water, 14 to 16 percent ethanol, and various trace elements, acids, and volatile compounds.[3] The breakdown of ethanol in surface waters through biological and chemical processes potentially results in the consumption of significant quantities of dissolved oxygen in the surface water body which can adversely affect aquatic life, and may cause fish kills.[4] This material would pose an above moderate risk or threat to potential receptors, as such assigning it a **degree of toxicity value of 2 is appropriate**.

[3] Chemical composition of wine at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4973766/'; percent alcohol in Rodney Strong cabernet sauvignon at https://shop.rodneystrong.com/.

[4] See Section 4.5.3 of Large Volume Ethanol Spills – Environmental Impacts and Response Options (mass.gov)

Factor 2: Actual Harm or Potential Harm to Beneficial Uses: The actual harm or potential harm to beneficial uses factor considers the harm to beneficial uses in the affected receiving water body that may result from exposure to the pollutants or contaminants in the discharge. A score between 0 and 5 is then assigned, with 0 defined as no actual harm or potential harm to beneficial uses, and 5 defined as major, high harm or threat of harm to beneficial uses.

The discharge of wine has the potential to impact Biochemical Oxygen Demand (BOD), Total Dissolved Solids, and pH of the receiving water. "BOD directly affects the amount of dissolved oxygen in rivers and streams. The greater the BOD, the more rapidly oxygen is depleted in the stream. This means less oxygen is available to higher forms of aquatic life. The consequences of high BOD are the same as those for low dissolved oxygen: aquatic organisms become stressed, suffocate, and die".[5]

The discharge of wine poses a threat to the beneficial uses of Reiman Creek, which is a tributary to Sotoyome Creek, a tributary to the Lower Russian River Hydraulic Unit within the Guerneville Hydraulic Subarea, especially those related to aquatic species, which include:[6]

- Commercial and sport fishing (COMM);
- Warm freshwater habitat (WARM);
- Cold freshwater habitat (COLD);
- Wildlife habitat (WILD);
- Rare, threatened, or endangered species (RARE);
- Migration of aquatic organisms (MIGR); and,
- Spawning, reproduction, and/or early development (SPAWN).

In this case, staff observed wine staining and the presence of a few dead earthworms. Sampling conducted the day after the spill did not indicate any apparent lasting effects in the water column, and CDFW staff inspecting the site both on January 23 and January 24 reported no evidence of lasting impacts to aquatic receptors. Additionally, once the discharge reached the Russian River, it was diluted by clean river water which was at a flowrate of approximately 1,700 cubic feet per second at the location of the spill.[7] Accordingly, staff have assigned **an actual harm or potential harm to Beneficial Uses value of 2**, below moderate, noting that harm to beneficial uses was likely measurable in the short term, but not appreciable.

[5] https://archive.epa.gov/water/archive/web/html/vms52.html

[6] The Water Quality Control Plan for the North Coast Region (Basin Plan), page 2-11.

[7] USGS Water Data for California at https://nwis.waterdata.usgs.gov/ca/nwis

Factor 3: Susceptibility to Cleanup or Abatement: The Enforcement Policy directs staff to assign a score of 0 for this factor if the discharger cleans up 50 percent or more of the discharge within a reasonable amount of time. Otherwise, a score of 1 should be assigned. In this case, Discharger staff reported recovering up to 50 percent of the spilled wine. **Staff have assigned a value of 1 for this factor.**

Final Score: Potential for Harm: The sum of the values for the three factors above is five (2+2+1 = 5).

Step 2: Assessments for Discharge Violations

Per Gallon Assessment: The Enforcement Policy directs staff to determine an initial liability amount on a per gallon basis by using a table (Table 1) in which the per gallon factor is based on the Potential for Harm score and the extent of Deviation from Requirement of the violation. The Deviation from Requirement reflects the extent to which the violation deviates from the specific requirement that was violated, ranging from a minor to a major deviation. In this case, the discharge of wine into Reiman Creek, a tributary to the Russian River and a water of the United States, directly violates prohibitions in both the WDRs and the Industrial General Permit, and the Discharger had no Clean Water Act permit allowing the discharge of wine into Reiman Creek. The Deviation from Requirement in this case is Major.

Using Table 1 in the Enforcement Policy, a "**Major" Deviation from Requirement** and a **potential for harm score of 5** yield a per gallon factor of **0.15**.

Days of Violation: 1 day x 0.15 x $10,000 = $1,500

Gallons: (53,000-1,000 gallons) x 0.15 x $10 per gallon = $78,000

Initial Liability: $78,000 + $1,500 = $79,500

Step 3: Per day Assessments for Non-Discharge Violations

Not applicable.

Step 4: Adjustment Factors

The Water Boards must consider three additional factors for potential modification of the administrative civil liability amount: the violator's degree of culpability, the violator's prior history of violations, and the violator's voluntary efforts to clean up, or its cooperation with regulatory authorities after the violation.

Adjustment for (1) Degree of Culpability

This factor is the Discharger's degree of culpability prior to the violation, and ranges from 0.75 to 1.5, with a higher multiplier for intentional misconduct and gross negligence, and a lower multiplier for accidental or non-negligent violations. A neutral assessment should be used when a discharger is determined to have acted as a reasonable and prudent person would have; less than 1.0 should only be used when a discharger demonstrates that it has exceeded the standard of care expected of a reasonably prudent person to prevent the violation.

Staff have assigned a score of 0.75 for this factor. The Discharger was not negligent and could not have foreseen the equipment failure.

Discussion: There is no evidence that the wine release resulted from the Discharger's negligence or misconduct. The Discharger did not fail to take any action nor fail to take any additional action prior to the release outside of the standard of care expected of a reasonably prudent discharger. There is no evidence that the spill was caused by any failure on the part of the Discharger. There is no evidence that the failure of the racking door on the storage tank resulted from the Discharger's actions or delay or failure to maintain the equipment.

The racking arm on the tank appears to have had a product design failure. Prior to this release the Discharger had a Spill Response plan as part of its Storm Water Pollution Prevention Plan (SWPPP). The Discharger utilized and followed this plan and took immediate response actions including constructing a makeshift dam in Reiman Creek, setting up a trash pump to capture and convey released wine into a manhole leading to a lift station to the wastewater treatment system, and engaging a local wastewater maintenance and repair company to bring out vactor trucks to assist with pumping wine from both sides of the dam and conveying wine to one of the wastewater process ponds (Pond No. 1).

Adjustment for (2): History of Violations

This factor pertains to the discharger's prior history of violations. **Staff have assigned a value of 1.0 to this factor**.

Discussion: There are no known similar adjudicated violations against the Discharger.

Adjustment for (3) Cleanup and Cooperation

This factor pertains to the discharger's voluntary efforts to clean up and/or cooperate with regulatory authorities in returning to compliance after the violation. This value ranges from 0.75 to 1.5, using the lower multiplier where there is exceptional cleanup and cooperation compared to what can reasonably be expected, and higher multiplier

where there is not. A reasonable or prudent response should receive a neutral value of 1. Adjustments above that amount should be applied where the Discharger's response to a violation falls below the normally expected response.

In this case, staff have assigned a value of 0.75 for this factor. The Discharger's response to this discharge was above and beyond what would have been expected by a reasonable and prudent person.

Discussion: As discussed above, Discharger representatives reported taking prompt action following the release, placing a makeshift dam into Reiman Creek, pumping wine from the creek with a trash pump, and engaging a vactor truck company to assist with pumping wine from the creek, as well. Discharger representatives reported the release promptly, were forthcoming in showing agency inspectors the following day the scene of the incident and in discussing the details of the incident and actions taken in response to the incident, complied with their Contingency Plan, and have been cooperative with CDFW in implementing recommended follow-up mitigation measures.

Per Regional Water Board direction, the Discharger submitted an updated Contingency Plan on September 4, 2020 that includes eight specific improvements and two additional Best Management Practices to mitigate damage from any future wine spills. These are all actions one would expect of a reasonable and prudent discharger.

In addition, the Discharger took further action following the discharge to prevent a spill like this from happening in the future. After the spill, the Discharger emptied all of its 100,000-gallon tanks in the blending building and worked with the tank manufacturer on improvements to the tank doors, support arms and gaskets. The Discharger replaced all of the 100,000-gallon tanks' racking doors with thicker doors and support arms with reinforced support arms. The tank door gaskets were also replaced with a new beaded gasket that allows the operator to visually determine that the tank door is centered when in the closed position. The Discharger also developed protocols for routine inspection, maintenance, and door closing. The Discharger also made physical improvements including a containment curb, a containment wall, rerouting of a portion of the onsite storm drain system using a diversion structure, and modifications to the existing lift station pumps to ensure adequate capacity to reroute any future spill to the onsite wastewater treatment. These efforts by the Discharger and the fact that they undertook a study of a theoretical future 100,000-gallon wine spill to develop the improvements demonstrate that the Discharger's response to this discharge was above and beyond what would have been expected by a reasonable and prudent person.

Step 5: Total Base Liability for Violation: $44,718

Discussion: The total base liability is calculated as the initial liability multiplied by each of the above three factors: (Initial Liability) x (Degree of Culpability) x (History of Violations) x (Cleanup and Cooperation)

Initial Liability: = ($79,500)x(0.75)x(1.0)x(0.75)=$44,718

Step 6: Ability to pay and continue in business

The Discharger, Klein Foods, Inc., is an independent corporation, owner of Rodney Strong Vineyards, with 14 estate vineyards in Sonoma County (Wikipedia), with an annual wine production of about 830,000 cases, making it the 20th largest U.S. wine company (usawineratings.com). Dun and Bradstreet reports an annual revenue of more than $19,000,000. Staff do not anticipate that the proposed initial liability is beyond the Discharger's ability to pay, nor likely to adversely affect its ability to continue in business.

Step 7: Economic Benefit

The Economic Benefit is any savings or monetary gain derived from the act or omission that constitutes the violation. There is no evidence that the failure of the racking door on the storage tank resulted from the Discharger's actions or delay or failure to take appropriate actions. There is no evidence that the Discharger gained an economic benefit from this incident.

Step 8: Other factors as justice may require

The final proposed liability of $44,718 is consistent with other settlements and does not need to be adjusted for these other factors.

On April 20, 2021, the Sonoma County district attorney filed civil complaint SCV-268224 against the Discharger. It alleges a violation of Fish and Game Code section 5650, unlawful to place any deleterious substance where it can pass into the waters of the state. A second cause of action alleges the Discharger violated Business and Professions Code section 17200 for engaging in unlawful business practices by violating Fish and Game Code section 5650. The complaint seeks a civil penalty up to $25,000 and up to $10 per gallon of the wine discharged.

On May 3, 2021, the parties involved in the District Attorney's action entered into a stipulation for entry of judgment where the Discharger agreed to pay a civil penalty of $56,041.84. This amount included investigative costs of $6,041.84 and $10,000 in restitution to the National Fish and Wildlife Fund for restoration of Russian River habitat.

The Discharger also resolved alleged violations of federal and state regulatory requirements with California Riverwatch. The Discharger agreed to pay $40,000 in costs and fees and agreed to comply fully with the Industrial General Permit's requirements.

In addition, the Discharger will (1) implement additional sampling and monitoring, and BMPs, (2) implement additional pond management, (3) install a rain gauge, and (4) update its SWPPP to comply with receiving water limitations, discharge prohibitions, and total maximum daily load requirements. (Kevin C. Mayer, October 13, 2021.)

The $44,718 final liability amount is less than the combined settlements with the District Attorney and California Riverwatch.

Step 9: Maximum and Minimum Liabilities

The Enforcement Policy directs the Regional Water Board to consider maximum and minimum liability amounts set forth in the applicable statutes.

a. Statutory Maximum penalty: Pursuant to Water Code section 13385(c)(1) and (2), civil liability may be imposed in an amount not to exceed the sum of both of the following:

(1) Ten thousand dollars ($10,000) for each day in which the violation occurs.

(2) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars ($10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

Accordingly, the maximum liability for this case would be:

(1 day)($10,000) + (53,000-1,000)($10) = $530,000

b. Minimum Penalty: Water Code section 13385, subdivision (e), requires that at least the economic benefit derived from the violation be recovered. The Enforcement Policy states that Regional Water Board should strive to impose civil liabilities that are at least 10 percent more than the economic benefit to the violator.

As discussed above, there is no benefit the Discharger realized as a result of this violation. Accordingly, the minimum liability for this case would be zero.

Step 10: Final Liability Amount

Value: $44,718

Discussion: The final liability amount is the total liability after application of any adjustments for the ability to pay, economic benefit, and other factors as justice may require. The final liability must be more than the minimum liability and less than the maximum liability. Here, the initial liability of $44,718 is less than the statutory maximum liability for a waste discharge of this volume over a single day. Therefore, the final liability amount is $44,718