

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2020-0029  
FOR

JOE SILVA, TONY SILVA, AND JAMES SILVA  
SILVA BROTHERS DAIRY #1  
SAN JOAQUIN COUNTY

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

1. Joe Silva and Tony Silva are the owners, and Joe Silva, Tony Silva, and James Silva are the operators, of the Silva Brothers Dairy #1 which is located at 12997 E. Peltier Road in Acampo, San Joaquin County. Joe Silva, Tony Silva, and James Silva are hereafter referred to as "Discharger." The Silva Brothers Dairy is hereafter referred to as "Dairy."
2. The Discharger is regulated by the *Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies*, Order R5-2013-0122 (Reissued General Order) which was adopted by the Central Valley Water Board on 3 October 2013. As an enrolled facility, the Discharger is subject to the requirements of the Reissued General Order and its associated Monitoring and Reporting Program.

**DESCRIPTION OF FACILITY**

3. Based on the 2005 Report of Waste Discharge, the Dairy is authorized to house a maximum of 1,265 milk and dry cows. According to information submitted in the 23 September 2019 Nutrient Management Plan, the Dairy currently houses between 1,150 and 1,265 milk and dry cows, and 260 younger cows of varying sizes.
4. Between 10 and 12 million gallons of process wastewater is generated yearly at the Dairy and applied to 108 acres of cropland owned and operated by the Discharger. Almost 27,000 tons of solid manure is generated each year at the Dairy, of which 5,825 tons is to be exported off-site yearly. (According to the 2019 Nutrient Management Plan, this solid manure is estimated to be at 30% moisture and contain 216,100 pounds of nitrogen.) The remaining solid manure is used for bedding or applied to 53 acres of additional cropland, which is also owned and operated by the Discharger. In total, dairy waste is applied to 161 acres of cropland. (Source: 2017 and 2018 Annual Reports, 2019 Nutrient Management Plan, and 2019 Waste Management Plan).
5. Dairy wastewater is discharged to three ponds and two settling basins. The locations of each are shown on Attachment 1 to this Order. Cows are housed in four freestall barns which are flushed three times per day, using wastewater from Wastewater Pond #2. Flush water flows by gravity to Settling Basin #1, then by gravity to Settling Basin #2, then by gravity to Wastewater Pond #1, and then by gravity to Wastewater Pond #2. During the winter, Wastewater Pond #3 is used as an overflow pond. (Source: Alternative Manure Management Program [AMMP] application).

## HISTORY OF VIOLATIONS

6. The following is a summary of the more notable water quality violations at this Dairy. Information about additional violations is found in the Regional Board's case file.
7. The Discharger began operations at this location in 1979 (source: AMMP application). Water quality violations began that same year. In 1979, the California Department of Fish and Wildlife (CDFW) reported a fish kill in a pond connected to Gill Creek; an investigation found that the Discharger's manured wastewater was the source. Although a Cleanup and Abatement Order was issued in 1980, Central Valley Water Board staff still observed off-property discharges of manure into waterways in 1980, 1982, 1984, 1986, 1987, 1988, and 1989. On 27 October 1989, the Central Valley Water Board assessed Administrative Civil Liability Order 89-213 in the amount of \$12,000 against the Discharger for the continued discharges of wastewater to surface waters. (Source: ACLO 89-213 and the staff report for the Board hearing).
8. On 23 March 1995, a judgement was entered against the Discharger in the Superior Court of California, County of San Joaquin. The Discharger was permanently enjoined from violating section 5650 of the California Fish and Game Code and was to pay penalties and costs of \$2,900.
9. On 26 March 1998, a judgement was entered against the Discharger in the Superior Court of California, County of San Joaquin. The Discharger was permanently enjoined from violating section 5650 of the California Fish and Game Code and was to prevent all off-property discharges of wastewater from the Dairy. In addition, the Discharger was to pay penalties and costs of \$15,000.
10. On 24 October 2000, a judgment was entered against the Discharger in the United States District Court, Eastern District. The case stemmed from the Discharger's 2 March 2000 discharge of wastewater through a pipe into a ditch adjacent to Pearl Road, which then discharged into Gill Creek. The Discharger was sentenced to a 180-day period of home detention, a 36-month probation, ordered to pay restitution of \$1,943 to CDFW, required to improve the Dairy to comply with Water Board requirements, and pay a criminal penalty of \$48,800.
11. On 25 April 2007, a settlement agreement between DeltaKeeper et al. and Joe and Tony Silva was filed in the United States District Court, Eastern District. The parties agreed that the Discharger would submit a National Pollutant Discharge Elimination System (NPDES) permit application to the Water Board, develop a Waste and Nutrient Management Plan, train its employees to follow the Waste and Nutrient Management Plan, develop and implement an action plan for discharges, provide reports, allow site inspections, and develop an enhanced monitoring and reporting program. In addition, the Discharger agreed to pay certain fees.
12. As shown on Attachment 2, there are four locations at which the Discharger has historically allowed wastewater to discharge off-site. The Field #1 tailwater return pond, located in the southwest corner of Field #1 (next to Pearl Road), has a valve that can allow wastewater to discharge off-property to a roadside ditch which conveys water to Gill Creek. The Field #5 tailwater return ditch, located on the southern edge of Field #5 (next to Peltier Road), also

contains a valve that can allow wastewater to discharge off-property to a roadside ditch which conveys water to the Mokelumne River. In addition, the Discharger has allowed wastewater to discharge off-site through rodent holes in (a) the corral berms, with discharge to the Peltier Road ditch and (b) the Field #1 berm, with discharge to the Pearl Road ditch.

13. Central Valley Water Board staff inspected the Dairy on 28 January 2013. As documented in the 3 March 2013 Inspection Report, staff found that dairy wastewater was discharging off-property from a leaky or open valve near the Field #1 tailwater pond. Wastewater flowed into a ditch paralleling Pearl Road and then discharged into Gill Creek. The Discharger subsequently submitted a Priority Reporting of Significant Events (PROSE), as required by the Reissued General Order, which states that the valve was not completely closed. Although a required component of the PROSE, the Discharger did not submit a description of how this problem would be prevented in the future.
14. On 12 June 2015, the Discharger was issued a Notice of Violation in response to an inspection conducted on 9 December 2014 during which Central Valley Water Board staff documented violations of the Reissued General Order. During the inspection, Central Valley Water Board staff found that wastewater was leaking out of Wastewater Storage Pond #3 through a gate valve, and ponding on soil near the pond. Leachate from the solid manure storage area was flowing off the concrete pad and ponding on soil next to the pad. Corrals adjacent to Peltier Road contained excessive manure, were not appropriately graded, and water was ponding in the corrals.
15. On 23 March 2017, the Discharger was issued a Notice of Violation in response to an inspection conducted on 8 February 2017 during which Central Valley Water Board staff documented violations of the Reissued General Order. The inspection was in response to a complaint on 27 January 2017 that wastewater had flowed from the Dairy's production area into the roadside ditch on Peltier Road, then flowed south, ponding in the front yard of a private residence.

During the 8 February 2017 inspection, Central Valley Water Board staff found that wastewater was actively discharging into the ditch along Peltier Road from rodent holes in the corral berms, at a rate of approximately 2 gallons per minute (gpm). Staff also found that Wastewater Pond #3 had one foot of freeboard, and that Wastewater Ponds #1 and #2 had no freeboard and had merged into one pond. Although the valve on the tailwater pond along Peltier Road was closed, it appeared to staff that an off-property discharge had recently occurred. The corrals adjacent to Peltier Road contained a significant amount of ponded wastewater, and in addition, wastewater was backing up from Wastewater Pond #1 into the corrals. Wastewater ponding in the corrals was at the same elevation as the corral's southern embankment. Although not overflowing at the time of the inspection, staff was concerned that if there was additional rain, wastewater could overflow into the Peltier Road ditch.

The Discharger submitted a PROSE, as required by the Reissued General Order and the Notice of Violation. The PROSE states that heavy rain had inundated the corrals and settling basin, causing wastewater to flow through rodent holes into the ditch. The Discharger stated that "ongoing work continues on the corral berms."

16. On 19 May 2017, the Discharger was issued a Notice of Violation in response to an off-property discharge of wastewater to roadside ditch along Pearl Road. It is unknown when the discharge began; however, Central Valley Water Board staff observed the discharge on 28 March 2017 during an inspection in response to a complaint. Staff determined that a rodent hole in the Field #1 berm, along Pearl Road, was allowing wastewater to flow from Field #1 to the roadside ditch at a rate of approximately 5 gpm. The Discharger collapsed the rodent hole and stopped the discharge before staff left the Dairy. The Discharger submitted a PROSE, as required by the Reissued General Order. The PROSE states that "heavy rain over the winter months had the tailwater pond...full from field runoff."

### **2019 VIOLATIONS OF REISSUED GENERAL ORDER**

17. On 18 March 2019, Central Valley Water Board staff inspected the Dairy. Staff found that Wastewater Pond #3 and the adjacent Solids Settling Basin #2 each had at least two feet of freeboard. However, Wastewater Ponds #1 and #2 had no freeboard and had merged into one pond. The corral adjacent to Peltier Road had a significant amount of ponded wastewater; because the adjacent Wastewater Pond #1 was at capacity, corral runoff was not able to flow into the pond and instead ponded in the corral. The oat field east of Pearl Avenue also contained a significant volume of ponded wastewater and the agricultural tailwater pond was being used to store wastewater.

18. In response to conditions at the Dairy observed on 18 March 2019, the Discharger was determined to be in violation of the following requirements of the Reissued General Order:

- a) Prohibition A.9, which states "The land application of manure or process wastewater to cropland for other than nutrient recycling is prohibited."
- b) Pond Specification C.1, which states in part "The level of waste in the process wastewater retention ponds shall be kept a minimum of two (2) feet from the top of each aboveground embankment and a minimum of one (1) foot from the ground surface of each belowground pond..."
- c) Production Area Specification D.6, which states "The animal confinement areas (including corrals), and manure and feed storage areas shall be designed and maintained to convey all water that has contacted animal wastes or feed to the wastewater retention ponds and to minimize standing water as of 72 hours after the last rainfall and the infiltration of water into the underlying soils."
- d) Land Application Specification E.8, which states "All process water applied to land application areas must infiltrate completely within 72 hours after application."
- e) Land Application Specification E.2, which states in part "Land application of all waste from the facility to areas under the Discharger's control shall be conducted in accordance with a certified Nutrient Management Plan...consistent with the technical standards for nutrient management as specified in Attachment C...."

- f) Attachment C, Technical Specification V.C.1, which states in part "...Process wastewater application scheduling should be based on the nutrient needs of the crop, the daily water use of the crop, the water holding capacity of the soil, and the lower limit of soil moisture for each crop and soil."
  - g) Attachment C, Technical Specification V.C.2, which states in part "Wastewater shall not be applied when soils are saturated... However, the application of wastewater is allowable if tests show that there is an agronomic need and current conditions indicate that the threat of nitrate leaching is minimal."
19. On 29 April 2019, a Notice of Violation was issued to the Discharger, requiring submittal of a plan to address the violations described above. The Discharger responded timely, stating that as of 19 June 2019, the ponds had "been lowered to obtain the necessary freeboard level." To avoid future freeboard violations, the Discharger pledged to better manage the ponds by lowering them as much as possible prior to 1 November 2019 and by removing solids to increase pond capacity. The Discharger also stated that by 15 October 2019, the corrals would be graded to drain to the storage pond. And finally, as of 19 June 2019, wastewater had been removed from the tailwater pond and it was operating as designed. To avoid future violations, the Discharger's consultant stated, in the 19 June 2019 response, that "the dairy must do a better job managing their existing storage ponds."
20. On 16 August 2019, the Central Valley Water Board's Executive Officer issued a California Water Code (Water Code) section 13267 Order (Investigative Order) to the Discharger. The Investigative Order required the submittal of three technical reports. The first technical report was a PROSE for the violations identified during the 18 March 2019 inspection, describing the violations in detail, and explaining how they would be prevented in the future. The second technical report was to include the Discharger's Nutrient Management Plan (NMP), the dates and volume of wastewater application to specific cropland, information regarding the removal of manure solids, and the dimensions of all wastewater storage ponds and settling basins. The third technical report was a Containment Capacity Report, containing engineering calculations to determine whether the existing wastewater storage ponds had enough capacity to meet the requirements of the Reissued General Order. The Discharger appropriately submitted the three technical reports; each are described below.

### **PROSE**

21. The PROSE documented that on 6 February 2019, the Discharger applied 598,500 gallons of wastewater to Fields #1 and #2, even though there had been 2.95" of rain in the five days preceding the application. There was no indication in the PROSE that there had been an evaluation of whether there was an agronomic need to apply wastewater. Therefore, the Discharger's 6 February 2019 irrigation event was in violation of Land Application Specification E.2, Attachment C, Technical Specification V.C.1, and Attachment C, Technical Specification V.C.2 of the Reissued General Order.

### **23 September 2019 Nutrient Management Plan**

22. As described in the Reissued General Order, the purpose of a NMP is to budget and manage the nutrients applied to the land application areas, considering all sources of nutrients, crop requirements, soil types, climate, and local conditions in order to prevent adverse impacts to surface water and groundwater quality. The NMP must take site-specific conditions into consideration in identifying steps that will minimize nutrient movement through surface runoff or leaching past the root zone. The Central Valley Water Board considers the implementation of an effective NMP to be best practicable treatment or control (BPTC) for land application areas.
23. The Discharger submitted its updated NMP on 23 September 2019. The NMP states that 216,100 pounds of nitrogen in solid manure will be exported yearly. However, a review of the 2017 and 2018 Annual Reports shows that only 22% of that amount (i.e., 47,400 pounds nitrogen) was exported in 2017 and only 33% of that amount (i.e., 72,200 pounds nitrogen) was exported in 2018.
24. The Discharger's NMP shows that wastewater will only be applied to 108 acres of land (Fields 1, 2, 3, 4, 5, and 7), and that solid manure will only be applied to a different 53 acres of land (Fields 6 and 8). Although solid manure is not to be applied to Field 7, the Discharger's response to the Investigative Order states that 220 tons of solid manure was applied to this field in October 2018.
25. The Discharger's NMP shows that Fields 1 through 7 will be double-cropped and Field 8 will have a single crop of grapes. The Reissued General Order requires that the ratio of nitrogen applied to nitrogen removed not exceed 1.4 unless the Discharger completes additional testing and provides an explanation. The ratio may not exceed 1.65 under any circumstances. If the Discharger's cropland is managed as described in the NMP, then the ratio of applied nitrogen to nitrogen potentially removed by crops is predicted to range from 1.37 to 1.40 for all eight fields.
26. The Discharger's 2017 Annual Report shows that six fields were double cropped. The nitrogen applied to removed ratio ranged from 0.81 to 2.03, with six of the 12 crops exceeding the 1.4 value established by the Reissued General Order. The Discharger's 2018 Annual Report shows that the same six fields were double cropped. The nitrogen applied to removed ratio ranged from 1.13 to 1.82, with two of the 12 crops exceeding the 1.4 value established by the Reissued General Order.

### **22 October 2019 Waste Management Plan/Containment Capacity Report**

27. As described in the Reissued General Order, the purpose of the Waste Management Plan (WMP) is to ensure that the production area of the Dairy is designed, constructed, operated, and maintained so that dairy wastes are managed to prevent adverse impacts to groundwater and surface water quality.
28. The Discharger's WMP shows that the Dairy has three ponds and two settling basins. The WMP shows that the capacity of these structures was calculated using the dead storage loss (also known as the minimum operating level), which is the lowest level that each pond can be drawn

down to. Using these values, the five structures have a capacity of 13.7 million gallons of wastewater, which is a greater than the 120-day storage volume of 9.8 million gallons (calculated as wastewater generated from all sources, including a 25-year, 24-hour storm and 1.5 times the normal rainfall, for the maximum allowed number of cows). However, the Discharger informed Central Valley Water Board staff that (a) they would prefer to use the “critical solids level” as the point to which the lagoons should be drawn down, and (b) the two settling basins should not be included in capacity calculations. Staff re-ran the capacity calculations using the same data as in the 2019 WMP and find that the three wastewater ponds, when drawn down to the critical solids level, have about 11 million gallons of storage, which is about 1 million gallons more than the required 120-day storage capacity. Regardless of whether the minimum operating level or critical solids level is used in the water balance, each pond must be empty or nearly empty of wastewater and solids no later than 1 November each year, as shown in the following table and on Attachment 1. However, Central Valley Water Board staff note that the Discharger did not sufficiently empty the ponds in 2017, 2018, or 2019, as described in Finding 29.

<b>Structure</b>	<b>Depth (Feet)</b>	<b>Freeboard Necessary to Comply with Reissued General Order as of 1 November (feet)</b>	<b>Notes (Capacity using the Critical Solids Level)</b>
Wastewater Storage Pond #1	16'	13'	3' of solids in the bottom of the pond
Wastewater Storage Pond #2	16'	12'	4' of solids in the bottom of the pond
Wastewater Storage Pond #3	16'	11'	5' of solids in the bottom of the pond

It is unknown whether it is physically possible to empty the ponds and basins as proposed by the Discharger. For example, to operate properly, pond pumps must sit above the bottom of a pond. In addition, wastewater is recirculated three times per day from Pond #2 to flush the freestalls, and wastewater flows from the freestalls into Settling Basin #1 three times per day.

29. The Revised General Order’s Monitoring and Reporting Program (MRP) requires that the Discharger inspect the wastewater ponds and settling basins on a weekly basis from 1 October to 30 April, and monthly from 1 May to 30 September. The Discharger is required to note whether the freeboard for each pond and basin is “less than, equal to, or greater than the minimum required (two feet for above ground ponds and one foot for below ground ponds).” In addition, on the first day of each month, the Discharger is to “photograph each pond showing the height of wastewater relative to the depth marker and current freeboard on that date. All photos shall be dated...”

a. The Discharger submitted monitoring records for 2017, 2018, and 2019. In general, the Discharger inspected the ponds and settling basins at the required frequency. However, for each structure, the records only state “adequate freeboard, yes or no” which is less information than is required by the MRP. Pictures were taken of each structure on a monthly basis, but the Discharger did not comply with the MRP in that (a) the pictures are not dated, (b) there are no

visible depth markers, and (c) there is no written indication of the freeboard on the day the pictures were taken.

- b. *2017 Freeboard Records:* The documents state that there was NOT adequate capacity in one or more of the ponds and basins from January through June, and in October. The pictures show that while Wastewater Pond #3 was empty of liquids (but not solids) in October, the other ponds and basins were NOT empty, or almost empty in October or November. Although the 2019 WMP was not in effect, Central Valley Water Board staff note that the Discharger did not empty the ponds and basins as proposed in the WMP. It also appears from the photographs that Wastewater Pond #3 may not be 16 feet deep (as stated in the WMP). The documents state that rodent activity was visible in the berm of each pond and settling basin every time an inspection took place.
- c. *2018 Freeboard Records:* The documents state that there was NOT adequate capacity in one or more of the ponds and basins in April and for two weeks in December. The pictures show that while Wastewater Pond #3 was empty of liquids (but not solids) in October, the other ponds and basins were NOT empty, or almost empty, in October or November. Although the 2019 WMP was not in effect, staff note that the Discharger did not empty the ponds and basins as proposed in the WMP. It also appears from the photographs that Wastewater Pond #3 may not be 16 feet deep (as stated in the WMP). The documents state that rodent activity was visible in the berm of each pond and settling basin every time an inspection took place.
- d. *2019 Freeboard Records:* The documents state that there was NOT adequate capacity in one or more of the ponds and basins from January through April. The pictures show that while Wastewater Pond #3 was empty of liquids (but not solids) in October, the other ponds and basins were NOT empty, or almost empty, in October or November. The Discharger did not empty the ponds and basins as proposed in the WMP. It also appears from the photographs that Wastewater Pond #3 may not be 16 feet deep (as stated in the WMP).

30. Rainfall runoff from numerous roofed structures (freestall barn #3, east hay barn, milk barn, three shade barns, and the shop) is currently directed to the wastewater ponds. Rainfall runoff from the commodity barn, freestall barn #1, and the west hay barn flows to the cropland. This water, estimated to be 1.1 million gallons per year, has not contacted manure. The Discharger has stated that it will redirect these water sources to the roadside ditch, in order to obtain additional capacity in the wastewater ponds.

31. In late 2019, the California Department of Food and Agriculture awarded the Discharger a grant through the Alternative Manure Management Program (AMMP). The grant funding, totaling \$764,800, will be used to install a dual screen mechanical manure separator, processing pit with sump, and concrete pad at the Dairy. The Discharger will finance the remaining \$30,000 cost of the project. According to the project application package, the manure separator will remove 55% of the manure solids that currently enter the wastewater ponds, allowing for better nutrient management and additional capacity in the wastewater storage ponds. The project will be constructed as follows:



- March 2020 (weather permitting): construct sand trap and processing pit
- March 2020: purchase separator equipment and begin installation
- March 2020-July 2020: construct concrete receiving pit
- October 2020: project completed and operational

32. The AMMP application prepared by the Discharger describes the length, width, and depth of each of the three wastewater ponds and two settling basins. The dimensions are different than those listed in the October 2019 WMP. For example, the AMMP document states that each settling basin is 10 feet deep, while the WMP states that each basin is 15 feet deep. Given the uncertainty of the size of each basin, the fact that it appears that the ponds and the basins have never been emptied as described in the WMP, and the need for an accurate water balance, this Order requires the Discharger provide an engineered determination of the length, width, and depth of each of the ponds and basins.

### **REGULATORY CONSIDERATIONS**

33. Soils within the Dairy property consist of loams or sandy loams (source: 2019 Nutrient Management Plan). Groundwater beneath the Dairy is encountered at approximately 125 to 145 feet below ground surface (source: Department of Water Resources' Groundwater Information Center Interactive Map). The age of the Dairy, as well as lack of information indicating otherwise, suggest that the wastewater ponds and settling basins were not constructed in a manner intended to prevent or minimize wastewater infiltration, consistent with the minimum retention pond design requirements of the California Code of Regulations, title 27, section 22562, subdivision (d). The NMP and Annual Reports indicate that more nitrogen is being applied to the cropland than is being removed by crops. Together, these facts demonstrate that the Dairy poses a risk to water quality in the Central Valley Region.

34. The beneficial uses of the groundwater are defined the Water Quality Control Plan for the California Regional Water Quality Control Board, Central Valley Region ([Basin Plan](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf)) ([https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/sacsjr\\_201805.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf)). The beneficial uses of groundwater beneath the Dairy are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply. The failure to comply fully with the requirements of the Reissued General Order threatens these beneficial uses.

35. Water Code section 13301 states: "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 preventive action."

36. The Central Valley Water Board finds that a discharge of waste is taking place in violation of the requirements and discharge prohibitions of the Reissued General Order (Order R5-2013-0122), as described in the Findings of this Order. This Order requires the Discharger to take appropriate remedial action and to comply in accordance with the time schedule set forth below.

37. Water Code section 13267, subdivision (b) states, in part: "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."
38. The Discharger owns and operates the Silva Brothers Dairy which is subject to the Reissued General Order and this Cease and Desist Order. The technical and monitoring reports required by this Order are necessary to determine compliance with the requirements in Order R5-2013-0122 and with this Order to ensure prevention of degradation to groundwater. Therefore, the burden of production of these reports is reasonable.
39. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).
40. After due 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 this Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

**IT IS HEREBY ORDERED** that, pursuant to sections 13301 and 13267 of the Water Code, Joe Silva, Tony Silva, and James Silva (Discharger) shall implement the following measures to comply with the Reissued General Order:

1. The Discharger shall comply with all aspects of the Reissued General Order, or subsequent revisions, including the Prohibition against discharges of wastewater to surface waters, the Prohibition against applying solid manure or wastewater to land for any purpose other than nutrient recycling, and the requirement that all process wastewater applied to land application areas infiltrate completely within 72 hours after application.
2. If the Discharger does not comply with the terms of this Cease and Desist Order, then pursuant to the Reissued General Order, Section I, Paragraph I, the Executive Officer may revoke coverage under the Reissued General Order at any time, and require the Discharger to submit a Report of Waste Discharge and obtain individual waste discharge requirements. In addition, the Executive Officer or his delegee may refer this matter to the Attorney General for judicial enforcement, including injunctive relief which may require the Discharger to cease

discharge, may issue a complaint for administrative civil liability, or may take other enforcement action as authorized by law.

3. Implementing the Nutrient Management Plan

- a. Consistent with the Reissued General Order, wastewater and solids shall only be applied to cropland in conformance with a Nutrient Management Plan that incorporates the technical requirements of Attachment C of the Reissued General Order. In addition, applications shall be in conformance with Attachment C, Technical Specification V.C.1, which states in part “...*Process wastewater application scheduling should be based on the nutrient needs of the crop, the daily water use of the crop, the water holding capacity of the soil, and the lower limit of soil moisture for each crop and soil*” and with Attachment C, Technical Specification V.C.2, which states in part “*Wastewater shall not be applied when soils are saturated... However, the application of wastewater is allowable if tests show that there is an agronomic need and current conditions indicate that the threat of nitrate leaching is minimal.*”
- b. If the Discharger determines that wastewater must be applied to the cropland when it is saturated, then a specialist (as described in Attachment C of the Reissued General Order) must first conduct tissue and/or soil tests to show that there is an agronomic need for such application and that the threat of nitrate leaching is minimal. If such an application occurs, then within **30 days of application**, the Discharger shall submit an *Agronomic Need Report*, prepared by the specialist, documenting the tests, the volume of wastewater applied, and the amount of nitrogen applied.
- c. On an annual basis, the Discharger shall export at least the pounds of nitrogen in manure solids described in its 2019 NMP (or subsequent revision to the NMP). In addition, the Discharger shall only apply solid manure to the fields for which the NMP states it will be applied. For example, the 2019 NMP states that solid manure will only be applied to Fields 6 and 8.
- d. By **1 July 2020, and each subsequent 1 July (as long as this Order is in effect)**, the Discharger shall submit an *Enhanced Annual Report*. In addition to the information required by the Reissued General Order for an Annual Report, the *Enhanced Annual Report* shall contain:
  1. The volume of wastewater discharged to each field for each irrigation event, measured by flowmeter(s) (after 1 October 2020).
  2. For any crop in any field, include in the nutrient application portion of the annual report any wastewater that was discharged to the field that was not part of an agronomic application (including the date, an estimated volume of wastewater discharged, and the reason the discharge occurred).
  3. For any crop in any field that has a nitrogen applied-to-removed ratio above 1.4, include the documentation described in Attachment C, Technical Standards V. B. 2. A (i-iv). If

the plant tissue sampling and related information described in Attachment C, Technical Standards V. B, 2. A (i-iv) is not available, then an explanation shall be provided as to why it is not available and how it will be obtained in the future if the nitrogen applied-to-removed ratio exceeds 1.4.

4. If any crop in any field has a nitrogen applied-to-removed ratio above 1.65, the *Enhanced Annual Report* shall include an explanation as to why the 1.65 ratio was exceeded and shall include an *Updated Nutrient Management Plan* that describes how practices will be changed to prevent such exceedances in the future.

#### 4. Mechanical Manure Separator

By **1 October 2020**, the Discharger shall submit a *Mechanical Manure Separator Completion Report*, certified by a Project Engineer, documenting that the mechanical manure separator system (described in the awarded AMMP application) has been constructed and installed as proposed, and is in use. The report shall document that manure leachate and stormwater runoff from the manure storage area is directed to a wastewater pond, and that manure will be stored in manner that minimizes surface water or groundwater impacts.

#### 5. Implementing and Updating the Waste Management Plan

- a. By **1 August 2020**, the Discharger shall submit a *Pond Cleanout Plan*, describing how each pond and settling basin will be cleaned out to meet the 1 November freeboard levels described in the WMP and summarized in Finding 28, above. The plan shall describe how the work will be completed in accordance with the conditions of the Reissued General Order, in particular, the requirement to ensure that leachate is collected and diverted to a retention pond, and that infiltration of leachate is minimized (Attachment B, Item V.H). The plan shall also include information about how the semi-solid manure will be removed from the ponds, where it will be staged and dried, and where/when the solid manure will be ultimately recycled or disposed of.
- b. By **1 October 2020**, the Discharger shall submit a *Pond Sizing and Freeboard Marker Report*, prepared by an appropriate professional and containing the following five items:
  1. A California licensed surveyor or civil engineer shall document the length, width and depth (from the lowest point of the berm to native soil at the bottom) of each of the three wastewater ponds and the two settling basins. The report shall clearly describe the methods used to measure each dimension; these methods must be defensible and reproducible.
  2. The report shall document that freeboard markers have been installed into each pond and settling basin. The freeboard markers shall have one-foot measurements from the lowest point on the berm to native soil at the bottom of the pond and shall be placed in a location and be large enough that they are visible in the monitoring photographs.

3. The report shall document the practical minimum freeboard (also known as the minimum operating level or dead storage loss) for each pond (i.e., depth to which each pond and basin can be emptied, given physical constraints such as pump elevations and recirculation of wastewater to flush the freestalls).
  4. The report shall provide monthly target freeboards in order to ensure that the ponds are sufficiently emptied by 1 November of each year (i.e., to the levels found in the WMP and Finding 28).
  5. Finally, the report shall document that a flow meter was added to the pump on Wastewater Pond #2, such that the wastewater flow to each field can be documented and used to support the calculations in the *Enhanced Annual Reports*.
- c. By **15 November 2020, and each subsequent 15 November (as long as this Order is in effect)**, the Discharger shall submit an *Implementation of Operations and Maintenance Plan Report*. The report shall document that each wastewater pond was drawn down to the level shown in the WMP by 1 November. It shall also document that excess solid manure was removed from the corrals, that the corrals were re-graded to drain to Wastewater Pond #1, and that the southern berms were inspected and reinforced to address rodent holes. The report shall include text and dated photographs as documentation.

If (a) the wastewater ponds did not have the freeboard levels listed in Finding No. 28 as of 1 November 2020, or (b) for subsequent years, if the wastewater ponds did not have the freeboard levels used for the “dead storage loss” factor in the WMP by 1 November, then the report shall include a *Contingency Plan* describing how the Discharger will manage its wastewater during the upcoming winter in conformance with the Reissued General Order. The *Contingency Plan* shall include a temporary reduction of the herd size and hauling of wastewater off-site as options.

- d. By **30 September 2021**, the Discharger shall submit an *Updated Waste Management Plan* and associated *Operations and Maintenance Plan* that contains the information listed in Attachment B to the Reissued General Order. The document shall be prepared by an appropriate professional, as described in Attachment B of the Reissued General Order. In particular, the Updated WMP shall consider wastewater flows for the maximum allowed herd (1,265 milk and dry cows), the volume of the three wastewater storage ponds as documented in the *Pond Sizing and Freeboard Marker Report*, the practical minimum freeboard for each pond, the diversion of clean rainfall runoff from roofs, removal of solids by the mechanical separator, and constraints placed by the Nutrient Management Plan (e.g., solids may only be applied to fields #5 and #7) and the Reissued General Order’s requirements regarding the application of dairy waste to cropland for nutrient recycling. The solids settling basins can either be used for separation or counted towards storage capacity, but not both. The *Operation and Maintenance Plan* must specify the minimum freeboard necessary for each storage pond and settling basin (if used for storage) on 1 November and provide information as to how that freeboard will be achieved.

The *Updated Waste Management Plan* shall contain an Appendix documenting that rainfall runoff from all roofed structures at the Dairy (including the commodity barn, freestall barns, hay barns, the milk barn, shade barns, and the shop) has been redirected to roadside ditches instead of the wastewater ponds or cropland. The Appendix shall include a written description and map(s) showing the location of all pipes conveying clean rainfall and where they enter roadside ditches. The Appendix shall certify that only clean rainfall enters these pipes. This Appendix does not need to be completed by a registered civil engineer but may be completed by the professional that oversaw the work.

If the 1 November freeboard targets for the wastewater storage ponds and settling basins specified in the updated Operation and Maintenance Plan are not achievable, then the *Updated Waste Management Plan* must also include a contingency plan to reduce wastewater production, (which could include a reduction in herd size or increased wastewater exports) to be immediately implemented until physical improvements can be made such that the Dairy has either reduced its wastewater generation or increased its capacity to store wastewater so that it has adequate capacity (as defined in the Reissued General Order). The contingency plan shall include short-term and long-term improvements. If the Discharger proposes to expand an existing wastewater pond or construct a new wastewater pond, then the Plan must include the information in Attachment B, Part II.B of the Reissued General Order.

#### 6. Enhanced Monitoring and Reporting

Beginning **the first month after adoption of this Order, and continuing until this Order is rescinded**, the Discharger shall complete the following Enhanced Monitoring and Reporting, in addition to that required by the Reissued General Order. The Discharger shall submit monitoring reports according to the following schedule. The reports shall contain the results of all monitoring required by parts 6.a. through 6.f, below. The reports shall contain both tabulated results and, as described in each part below, photographs.

<b>Monitoring Period</b>	<b>Report Due Date</b>
October 1 to 31	November 10
November 1 to 30	December 10
December 1 to 31	January 10
January 1 to 31	February 10
February 1 to 28/29	March 10
March 1 to 31	April 10
April 1 to June 30	July 10
July 1 to September 31	October 10

- a. Each wastewater storage pond and solids settling basin shall be inspected weekly between 1 October and 30 April, and monthly between 1 May and 30 September. The Discharger shall record the freeboard level (in feet and estimated inches) in each pond or basin, using permanent freeboard markers for reference. Photographs shall be taken of each pond or basin during each inspection (i.e., weekly photographs between 1 October and 30 April,

and monthly photographs between 1 May and 30 September). Each photograph shall clearly show the freeboard marker and have the date imprinted on the photograph.

- b. The corrals shall be inspected weekly between 1 October and 30 April, and monthly between 1 May and 30 September. The Discharger shall record whether manure needs to be removed from the corrals or Wastewater Pond #1 in order to allow stormwater to freely drain to Wastewater Pond #1, whether there are depressions in the corral that should be filled to prevent ponding, whether there are rodent holes in the southern berms, and whether the southern berms need to be reinforced. If any of these actions are needed, then the Discharger shall also record when they were completed. If manure was removed, then the Discharger shall document where it was removed to. Photographs shall be taken once per month of the corrals, berms, and Wastewater Pond #1 during the inspections; the date shall be printed on the photographs. If an inspection shows that maintenance work must be completed, then photographs shall also be taken after the work has been completed.
  - c. The Dairy's known discharge points, as described in Paragraph 12 of this Order and as shown on Attachment 2 to this Order, shall be inspected weekly from 1 October to 30 April and monthly between 1 May and 30 September. In addition, the Discharger shall inspect all field and corral berms that are adjacent to Peltier and Pearl Roads. The Discharger shall record whether the two valves shown on Attachment 2 are opened or closed. Prior to opening a valve, the Discharger shall field test the EC (electrical conductivity) of the water that will be released by the valve. This value shall be recorded and submitted with the monthly reports. The Discharger shall also record whether rodent holes were observed, and if so, the date and steps taken to remove the holes. It is not necessary to take photographs of these areas.
  - d. Between 1 October and 30 April each year, the Discharger shall inspect the manure storage and feed storage areas on a weekly basis. The Discharger shall document, through photographs imprinted with the date taken, where the leachate has flowed. During each inspection, photographs shall be taken of the manure storage areas and any leachate that has flowed off the storage pad(s).
  - e. On a continuous basis, the Discharger shall keep records of the volume of solid manure removed from the Dairy and the volume of solid manure applied to each field.
  - f. The report due on 10 July 2020 shall also contain a description of the progress of construction of the manure separator.
7. **At any time after 30 June 2022**, the Discharger may request that Water Board staff review the Discharger's compliance with this Cease and Desist Order and the reissued General Order. If the Discharger has been in significant compliance with both Orders, then Water Board staff will request that the Central Valley Water Board rescind the Cease and Desist Order.
  8. The Central Valley Water Board has transitioned to a paperless office. Therefore, all technical reports required by this Order must be converted to a searchable pdf file and submitted to the

[Geotracker database](https://www.waterboards.ca.gov/ust/electronic_submittal/index.html) ([https://www.waterboards.ca.gov/ust/electronic\\_submittal/index.html](https://www.waterboards.ca.gov/ust/electronic_submittal/index.html) ). In addition, an email shall be sent to Charlene Herbst at [Charlene.Herbst@waterboards.ca.gov](mailto:Charlene.Herbst@waterboards.ca.gov) stating that a document pertaining to this Order has been uploaded into Geotracker.

9. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.
10. Any person signing a document submitted under this Order shall make the following certification:

*"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

The Executive Officer or his delegee may extend the deadlines contained in this Order if the Discharger demonstrates that circumstances beyond the Discharger's control have created delays, provided that the Discharger continues to undertake all appropriate measures to meet the deadlines. The Discharger shall make any deadline extension request in writing at least 30 days prior to the deadline. The Discharger must obtain written approval from the Executive Officer or his delegee for any departure from the time schedule shown above. Failure to obtain written approval for any departure may result in enforcement action.

If, in the opinion of the Executive Officer or his delegee, the Discharger fails to comply with the provisions of this Order, the Executive Officer or his delegee may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order or with the Reissued General Order 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, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final 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 filing petitions](#) may be found on the Internet at: ([https://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/)) or will be provided upon request.

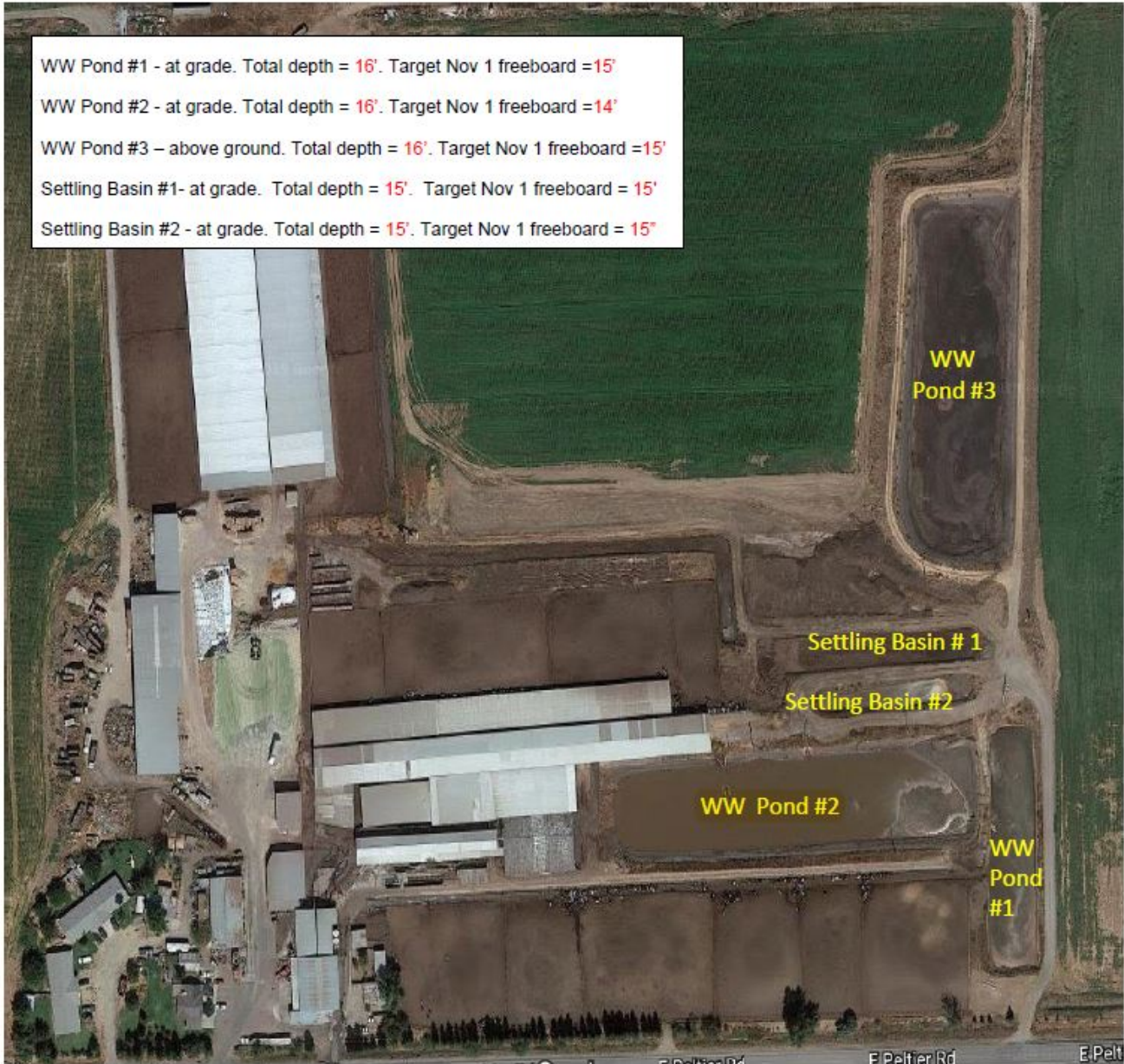
I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, on 4 June 2020.

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PATRICK PULUPA, Executive Officer

**Attachments:**

- Attachment 1: Wastewater Storage Ponds Total Depth and Target Freeboard Map
- Attachment 2: Previous Off-Property Points of Discharge



Silva Brothers Dairy #1 Wastewater Storage Lagoon Total Depth and Target Freeboard Map  
 Based on the Silva Brothers Dairy #1 O&M Plan dated 10/21/2019



Silva Brothers Dairy #1 Previous Off-Property Points of Discharge  
(the red dashed line indicates the property boundary)