

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2020-0047
FOR

GERMANO AND JACINTA SOARES
GERMANO SOARES DAIRY #1
STANISLAUS COUNTY

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

1. Germano and Jacinta Soares are the owners and operators of the Germano Soares Dairy #1 which is located at 9201 Hilmar Road in Turlock, Stanislaus County. Germano and Jacinta Soares are hereafter referred to as "Discharger." The Germano Soares Dairy #1 is hereafter referred to as "Dairy."
2. On 23 January 2018, Jacinta Soares filed a petition for dissolution of the marriage between Jacinta and Germano Soares (Stanislaus County Superior Court Case No. 8009905). Although the Discharger has not yet submitted formal documents to the Central Valley Water Board, staff understand that on or about 17 June 2020, the Court awarded the Dairy to Jacinta Soares, and that Jacinta Soares intends to operate the Dairy with her son, Luis Soares. However, until a new Report of Waste Discharge (ROWD) is submitted, the Central Valley Water Board will continue to rely on the 2005 ROWD in which Germano and Jacinta Soares are named as owner and Germano Soares is named as the operator of the Germano Soares Dairy #1.
3. 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

4. Based on the 2005 ROWD, the Dairy is authorized to house a maximum of 1,409 milk and dry cows (i.e., mature cows). According to information submitted in the 2019 Waste Management Plan (2019 WMP), the Dairy currently houses between 1,385 and 1,409 mature cows, and 980 younger cows of varying sizes.
5. Between 9 million and 24 million gallons of process wastewater is generated yearly at the Dairy and applied to between 203 and 230 acres of cropland on which corns and oats are

grown. Of the cropland, 150 acres are owned by entities associated with the Discharger and the remainder is leased. Over 40,000 tons of solid manure is generated each year at the Dairy, of which 16,000 tons is to be exported off-site yearly. The remaining solid manure is used for bedding or applied to cropland. (Sources: 2018 and 2019 Annual Reports, 2018 Nutrient Management Plan).

6. The Dairy and associated cropland are shown on Attachments 1 and 2. The 2019 WMP states that Dairy wastewater is discharged to four wastewater ponds, described as Lagoons 1 through 4. Lagoons 1 and 2 are on the west side of the production area, while Lagoons 3 and 4 are 2,400 feet to the east of Lagoons 1 and 2. Central Valley Water Board staff inspections have described two wastewater ponds and two manure settling basins, or three ponds and one settling basin.

HISTORY OF VIOLATIONS

7. Findings 13 through 25, below, describe the results of eight inspections of the Dairy that took place between 2011 and 2019. During these inspections, Central Valley Water Board staff found that the Discharger violated the following requirements of the Reissued General Order (or its predecessor Order, R5-2007-0035):
 - a. Prohibition A.8, which states in part “The application of waste to lands not owned, leased, or controlled by the Discharger...is prohibited.” (Violated in 2019).
 - b. Prohibition A.9, which states “The land application of manure or process wastewater to cropland for other than nutrient recycling is prohibited.” (Violated in 2011, 2012, 2013, 2015, 2019).
 - c. Prohibition A.13, which states in part “The use of manure to construct containment features ...is prohibited.” (Violated in 2019).
 - d. Prohibition A.15, which states “...the expansion of the existing milk cow dairy beyond the level as defined under the term ‘Expansion’ is prohibited.” Attachment E, definition 15, states in part “ ‘Expansion’ is...any increase in the existing herd size (i.e., by more than 15 percent of the maximum number of mature dairy cows filed in response to the 2005 Report of Waste Discharge Request Letter)...” (Violated in 2008, 2010, 2012).
 - e. 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...” (Violated in 2011, 2012, 2013, 2015, twice in 2017, twice in 2019).

- f. Pond Specifications C.5.b., C.5.c, and C.5.d, which state in part “New...pond designs must be reviewed and approved by the Executive Officer prior to construction...”; “Prior to the ...construction of any such new pond...the Discharger shall submit to the Executive Officer...a design report”; “Prior to the placement of waste in any...newly constructed pond, the Discharger shall submit a post construction report...”; and “Waste shall not be placed into the pond until the Executive Officer notifies the Discharger in writing that the post construction report is acceptable.” (Violated in 2019).
- g. Production Area Specification D.1, which states in part “All dirt or unpaved corrals shall be graded to promote drainage....” (Violated in 2011, 2012, 2013, 2015, 2017, 2019).
- h. Production Area Specification D.3, which states in part “All drainage that has contacted feed is a waste...and shall be directed to the wastewater retention ponds.” (Violated in 2011, 2012, 2013, 2015, 2017, 2019).
- i. 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.” (Violated in 2011, 2012, 2013, 2015, 2017, 2019).
- j. Land Application Specification E.2, which states in part “Land application of all waste...shall be conducted in accordance with a certified Nutrient Management Plan...consistent with the technical standards for nutrient management as specified in Attachment C....” (Violated in 2011, 2012, 2013, 2015, 2017, 2019).
- k. Land Application Specification E.8, which states “All process wastewater applied to land application areas must infiltrate completely within 72 hours after application.” (Violated in 2001, 2011, 2012, 2015, 2017, 2019).
- l. Provision G.3, which states in part “The Discharger shall comply with the attached Monitoring and Reporting Program...” (Violated in 2017).
- m. Standard Provisions B.15 and B.16, which state in part “The Discharger shall properly operate and maintain in good working order any facility, unit, system, or monitoring device installed to achieve compliance with the Order...” and “Animal waste storage areas and confinement structures shall be...maintained to limit...erosion, slope failure, washout, overtopping, by-pass, and overflow.” (Violated in 2011, 2017).
- n. Attachment C, Technical Specification V.C.2 which states in part “Wastewater shall not be applied [to cropland] when soils are saturated...” (Violated in 2019).

8. In response to off-property discharges of wastewater at the Dairy observed by Central Valley Water Board staff, on 13 June 2001 the California Dairy Campaign submitted a “Nutrient and Irrigation Management Plan” for the Dairy. The Plan was developed after a determination that the “current waste handling system is inferior” and was intended to allow the Discharger to contain all dairy waste on-site. The Discharger proposed to remove the “current [western] uncertified settling ponds since they are poor in design, are overloaded and inferior” and construct a new wastewater retention pond and a new settling pond on the east side of the Dairy by December 2001. Subsequent inspections (see Findings 13-25) show that the western ponds are still in use today, and that the Discharger constructed two new ponds on the east side of the Dairy.
9. On 24 August 2001, Central Valley Water Board staff found that the Discharger’s western wastewater lagoon was “at full capacity with only a few inches of freeboard remaining.”
10. During inspections on 27, 28, and 29 August 2001, Central Valley Water Board staff found manured wastewater in the Turlock Irrigation District (TID)’s Dymond Ditch and traced the source to the Dairy. The Discharger’s neighbor stated that there was an ongoing problem with wastewater from the Dairy flowing through the Dymond Ditch and into his pasture, and that he had asked the Discharger to correct the problem numerous times to no avail. The neighbor also stated that the berm along the Dairy’s Field #1 has not been maintained and that wastewater has leaked through the berm and into his pasture and corral areas. (This same issue was expressed in 2019; see Finding 22). Water Board staff also noted that the Discharger continued to overapply wastewater and solid manure to the north end of the Dairy’s Field #1, at levels that exceed agronomic rates. (Source: Central Valley Water Board staff inspection reports dated 31 August 2001, 10 September 2001, and 11 September 2001).
11. On 18 September 2001, Central Valley Water Board staff issued the Discharger a Notice of Violation (NOV) for the lack of freeboard in the wastewater pond, the off-property discharges of wastewater, and the overapplication of waste onto land. The 2001 NOV described the Water Board’s expectation that the implementation of the Plan submitted in June 2001 (Finding 8) should result in the cessation of off-property discharges of wastewater and disposal of wastewater at unreasonable agronomic rates. In addition, in a letter dated 11 September 2001, the Turlock Irrigation District revoked the agreement that allowed the Discharger to transport manured wastewater through the portion of the Dymond Ditch that is on the Discharger’s property.
12. On 27 September 2002, the Stanislaus County District Attorney filed a Complaint against the Discharger for the off-property discharges of wastewater into waters of the state. The matter was settled through a Stipulated Judgment and Permanent Injunction filed on 4 October 2002. The Discharger agreed to a \$60,000 civil penalty, of which \$30,000 was stayed and \$2,500 was to be used to make water quality improvements at the Dairy. In

addition, the Discharger agreed to a number of actions, including installing a wastewater distribution system independent of the TID lines, ensuring agronomic application of wastewater, collecting samples and keeping records to demonstrate that wastewater was applied at agronomic rates, providing a method to measure the flow of wastewater from the lagoon, and enrolling in a dairy operator training course.

13. Central Valley Water Board staff inspected the Dairy on 5 May 2011 and issued a NOV on 28 June 2011. The Inspection Report states that Central Valley Water Board “staff met with Germano and Luis Soares (operators)” and their consultants. Staff found that two of the wastewater ponds were serving as manure storage basins and these had adequate freeboard. However, the two other wastewater ponds had less than the required two feet of freeboard. In addition, the pond berms were not maintained and were damaged (including cracking, slumping, erosion, animal burrows, and seepage), there was excessive manure in the corrals, neither the manure storage area nor the feed storage area was constructed to divert leachate to a pond, and manure removed from the settling basins was placed on native soil with leachate ponding in the cropland. In addition, staff’s review of the most recent Nutrient Management Plan (NMP) and WMP found that they were developed with a higher number of mature cows than that permitted for the Dairy. The 2011 NOV documented these violations and directed the Discharger to correct the violations by 19 August 2011.
14. On 28 July 2011, the Discharger responded to the 2011 NOV, in a letter signed by Germano Soares. The Discharger’s response states that (a) the excessive manure in the corrals had been removed, (b) the feed storage areas would be modified by 30 November 2011 so that runoff and leachate would be diverted to a pond, (c) the wastewater ponds had been pumped down and would be cleaned out by 30 November 2011, and (d) the manure piles would remain in the cropland for five months, with a berm built around the piles so that any runoff or drainage could be collected and pumped into the pond. Water Board staff note that item (d) did not meet the requirements of the Reissued General Order as described in the 2011 NOV, which stated that the manure stored on the cropland must be removed and applied on cropland at agronomic rates. In addition, the Discharger’s response did not address the 2011 NOV’s requirement to revise the NMP and WMP by using the permitted number of cows.
15. Central Valley Water Board staff inspected the Dairy on 14 February 2012 and issued a NOV on 2 March 2012. The inspection report states that the Dairy contact was Luis Soares. The goal of the inspection was to verify that the Discharger had made the improvements required by the June 2011 NOV. Staff found that of the four main items listed in the 2011 NOV, only one (removal of manure from the corrals) was completed. The feed storage area had not been modified so that leachate could be pumped to a pond, the eastern pond and settling basin both had less than two feet of freeboard, and manure was still stored on the cropland with no means to divert leachate to a pond. In addition,

both the 2008 and 2010 Annual Reports indicated that the Dairy contained 1,600 mature cows, which is well over the permitted maximum of 1,409 mature cows. According to the 2012 NOV, the Dairy had 1,601 mature cows at the time of the inspection, as compared to the permitted maximum of 1,409 mature cows. The 2012 NOV directed the Discharger to correct the violations by 13 April 2012, including either reducing the number of cows to the permitted limit or applying for individual WDRs.

16. On 19 March 2012, the Turlock Irrigation District (TID) notified Central Valley Water Board staff of an unauthorized discharge from the Dairy into the Kephart Drain, which is east of the Dairy. Board staff met with TID staff and Luis Soares at the Dairy on 21 May 2012, and found that the Discharger had made two unauthorized connections into the Kephart Drain, one conveying milk barn wash water and the other conveying leachate from the manure storage area. The Discharger had made a similar unauthorized connection several months earlier. The discharge points were blocked and/or disconnected by TID. (Source: 19 March 2012 TID Unauthorized Discharge Incident Report and 21 May 2012 Central Valley Water Board staff inspection report).
17. Central Valley Water Board staff inspected the Dairy on 22 January 2013 and issued a NOV on 1 March 2013. The inspection report states that staff met with Germano Soares and his consultants. The goal of the inspection was to verify that the Discharger had made the improvements required by the June 2011 NOV. Of the three remaining issues, none had been completed. Leachate from the feed storage area and manure storage areas was not captured and conveyed to the wastewater pond, the ponds and settling basins had less than two feet of freeboard, and the corrals contained standing water more than 72 hours after the last rain. In addition, although the 2012 inspection found that manure had been removed from the corrals, this inspection found that manure had once again built up to excessive levels. The revised NMP had been prepared. Staff also noted that the Discharger used a gravity flow system to release manure water from the lagoon into cropland for irrigation. Such a system does not provide an accurate measurement of the volume of wastewater applied and therefore could result in inaccurate nitrogen loading calculations.
18. The Discharger's consultant responded to the NOV on 15 April 2013, stating that "Luis Soares has requested that we reply to the following violations on his behalf." The response to the 2013 NOV states that (a) the excessive manure in the corrals will be scraped and applied to cropland after the winter crop is harvested, (b) a pump will be installed by approximately June 2013 to pump leachate from the feed storage areas to the wastewater pond, (c) the pond is currently being pumped down, and (d) a pump will be installed by approximately June 2013 to pump leachate from the manure storage area to the wastewater pond.

19. Central Valley Water Board staff inspected the Dairy on 14 January 2015 and issued a NOV on 4 March 2015. The inspection report states that Luis Soares and his consultants were present at the inspection. Staff found that the Discharger had not made the improvements required by the March 2013 NOV. Pumps had not been installed in either the manure storage area or the feed storage area. The settling basins had less than two feet of freeboard. Most of the corrals did not have a system to convey runoff to a wastewater pond; instead, the runoff flowed to cropland. There was standing water in the corrals more than 72 hours after the last storm. A review of the Nutrient Management Plan (prepared in response to the 2011 NOV) found that it used “book values” as compared to facility-specific data for soil nitrogen content and therefore needed to be revised. The 2013 Annual Report contained unrealistic nitrogen application and removal rates, and laboratory analytical results for manure and wastewater were missing.
20. Central Valley Water Board staff inspected the Dairy on 7 February 2017. The inspection report states that Germano Soares was present. The following violations were noted: (a) the eastern wastewater pond had zero feet of freeboard and wastewater was flowing over the berm, (b) the eastern settling basin had zero feet of freeboard and wastewater was flowing over the berm, (c) there was severe erosion, cracking, and rodent holes on the pond berms and settling basin berms, and (d) wastewater was ponding in the manure storage area instead of being directed to a pond. Staff contacted the Discharger to discuss the serious situation.
21. Central Valley Water Board staff inspected the Dairy on 9 March 2017. The inspection report states that Germano Soares and his consultants were present. The following violations were noted: all wastewater ponds and settling basins had less than two feet of freeboard; the berms around the ponds were severely impacted by erosion and rodent holes; corral runoff drained to cropland instead of a pond; and wastewater had ponded in the corrals, manure storage areas, and feed storage areas instead of being collected and pumped to a pond. In addition, a review of the Discharger’s records found that production area inspections were missing and that wastewater application records were incomplete. For example, Water Board staff were onsite on 7 February 2017 and witnessed the Discharger opening the irrigation valve on Lagoon #3 to irrigate the fields. However, this irrigation event was not included in the land application records. Staff also noted that wastewater application to cropland is estimated using the assumed pump capacity and time of pumping which can lead to inaccurate nitrogen loading values.
22. Central Valley Water Board staff inspected the Dairy on 25 February 2019 and issued a NOV on 2 May 2019. The inspection report states that Germano Soares and his consultants were present. Multiple violations were noted. The two western ponds had zero feet of freeboard. Manure from these ponds had been placed into a new, unpermitted pond which had been constructed in the cropland adjacent to the western ponds. The berm of the unpermitted pond was not continuous; wastewater overflowed from the pond

to cropland. Although the eastern pond had two feet of freeboard, the eastern settling basin had less than two feet of freeboard. A second new, unpermitted pond had been constructed next to the eastern settling basin and appeared to contain manure removed from the settling basin. The berms were constructed with a mixture of sand and manure (see Finding 24).

There was significant ponding in the corrals that was not being conveyed to a pond. Staff found that there was a notch in the berm around the eastern cropland and another notch in the berm around the western cropland; therefore, it was possible for wastewater to flow from the Dairy into Ables Drain. Staff also interviewed a worker employed by the horse boarding facility immediately adjacent to the west side of the Dairy. The worker stated that when the Discharger applies wastewater to Field #1, wastewater flows off the Dairy onto Hilmar Road, and sometimes inundates the horse boarding facility's corrals. (This same issue was expressed in 2001; see Finding 10).

In addition to the above violations, the 2019 NOV stated that the overflow of manure from the unauthorized ponds is a violation of Prohibition A.9 of the Reissued General Order. To evaluate the impact of wastewater discharges on the cropland, the NOV required the Discharger to collect soil samples from five different locations within the cropland. Each location was to be sampled at three depths, and the samples analyzed for total nitrogen and nitrate-nitrogen.

23. In an email dated 6 August 2019, the Discharger responded to the 2019 NOV with a document signed by Jacinta Soares. With respect to the two new impoundments not being designed or designated to store waste, the Discharger stated that "[t]he goal is to clean/haul all waste out by the end of August 2019," and that the impoundments would no longer be used after that point. The Discharger also stated that the ponds would be cleaned out and the corrals would be properly graded to prevent ponding. No timeline was provided for either of the last two actions. The Discharger did not comply with the 2019 NOV's soil sampling requirements. Instead of submitting the total nitrogen and nitrate results from five locations at three depths per location, the Discharger submitted the result for one sample which had been analyzed for phosphorus.
24. On 30 July 2019, the Executive Officer of the Central Valley Water Board issued Water Code Section 13267 Order R5-2019-0902, directing the Discharger to submit technical information relating to the February 2019 violations. The Discharger responded timely, including a cover letter signed by Jacinta Soares. With respect to the two unpermitted ponds, the Discharger stated that they were constructed in late November or early December 2018 when Lagoon #1 and the eastern settling basin had been cleaned out and the unpermitted ponds would remain in place until the manure was dry enough to haul off-site. The unpermitted pond by the settling basin was constructed of 75% sand and 25% manure. The unpermitted pond next to Lagoon #1 was cleaned out in May 2019, and the

other would be cleaned out after the 2019 corn harvest (this is a later date than provided in the 6 August NOV response). Based on measurements provided by Discharger, the western unpermitted pond held 576,000 gallons of waste and the eastern unpermitted pond held 471,000 gallons of waste.

Weekly freeboard records were submitted for the months of July through September 2018, and from 8 January to 8 July 2019. The four wastewater ponds had the required two feet of freeboard for only 30% of that time. For the other 70% of the time, one or more ponds had less than two feet of freeboard.

25. Central Valley Water Board staff inspected the Dairy on 2 September 2019. The inspection report states that Germano Soares and his consultants were present. Although the two western ponds had two feet of freeboard or more, both the eastern pond and the eastern settling basin had less than two feet of freeboard. The unpermitted storage pond on the west had been cleaned to native soil. However, manure was still being stored in the unpermitted pond next to the eastern settling basin.
26. On 8 November 2019, the Assistant Executive Officer issued an "Offer to Settle Administrative Civil Liability R5-2019-0540" (Compressed ACL) to the Discharger. The Compressed ACL was issued due to the severity of the violations observed during the February 2019 inspection. To allow for early settlement, the Prosecution Team elected to base the penalty only on the construction and use of two unauthorized wastewater ponds for at least 154 days. A penalty of \$102,487 was proposed. The Discharger responded that "ponds" were not constructed, instead, manure was temporarily stored. After a full review of the Discharger's history of violations, the Prosecution Team has elected to prioritize issuance of this Cease and Desist Order containing timelines by which the Discharger must make improvements to the Dairy, rather than pursue the monetary penalty. If the Discharger does not comply with this Order's terms, then the Discharger could be subject to additional enforcement including the outstanding Compressed ACL, a broader ACL, or injunctive relief requiring the Dairy to shut down.

REVIEW OF DISCHARGER'S REPORTS

27. Among other items, the Reissued General Order requires that the Discharger prepare and implement a Waste Management Plan and a Nutrient Management Plan and prepare and submit Annual Reports. The Reissued General Order lays out various requirements for the content and utilization of these documents. The Discharger's submittals are reviewed below.

Waste Management Plan

28. 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.

29. The Discharger's most recent WMP is dated 20 November 2019 and signed by Jacinta Soares. The engineer who prepared the WMP certified that the four wastewater ponds have more than enough capacity to meet the Reissued General Order's required 120-days of storage including 1.5 times the normal precipitation. The WMP indicates that the ponds have 13 million gallons of capacity as compared to the required capacity of 10.5 million gallons.
30. According to the 2019 WMP, the wastewater ponds have the following dimensions: Lagoon 1 is 485' x 165' with a depth of 13'; Lagoon 2 is 505' x 100' with a depth of 13'; Lagoon 3 is 540' x 170' with a depth of 14'; and Lagoon 4 is 630' x 55' with a depth of 7'. (Central Valley Water Board staff note that the 2007 and 2009 Annual Reports each contain a listing of the dimensions of the four lagoons that differs from the dimensions found in the 2019 WMP. The Annual Reports show that the length and width of each lagoon are about 5'-20' different from that in the 2019 WMP. Of particular concern is that the depth of each of lagoon in 2008 is 18', while the lagoon depths in 2019 range from 7' to 14'). Although maps are a required component of WMPs, the Discharger did not include any maps, which are to include the features of the production area, the locations and naming conventions of the wastewater ponds, and the cropland to which dairy waste is applied.
31. The 2019 WMP includes an Operation and Maintenance (O&M) Plan which states that each of the four ponds will be lowered to the minimum operating level of 1.0 feet beginning in October of each year. The O&M Plan also states that when solids in the ponds accumulate to a thickness of 2.0 feet, then the sludge will be agitated and pumped out. With regard to corral maintenance, the O&M Plan states that the corrals will be inspected monthly during the dry season and weekly during the wet season to ensure that all water that contacts waste is collected and diverted to the wastewater pond(s). The need to remove manure will be dictated by the inspections, but regardless, solid manure removal and regrading of the corrals will occur before November 1st each year.
32. Assuming that the 2019 WMP is accurate and the Discharger is following the O&M Plan, then the Discharger should be able to comply with the Reissued General Order's requirement to maintain two feet of freeboard in the wastewater ponds. However, Findings 9-25 document that the Discharger violated this requirement in 2001 and consistently from 2011 through 2019. Central Valley Water Board staff have identified possible reasons for these ongoing violations, including: failure to remove solid manure from the ponds, failure to draw down the ponds to the minimum operating level before the rainy season, lack of sufficient cropland for the volume of wastewater produced, an inaccurate size of the ponds, inaccurate calculations as to the volume of wastewater

produced yearly, inability to irrigate all fields from the ponds, and/or the pond bottoms intersect high groundwater. This Order address these concerns, and the need for the Discharger to prepare an accurate WMP and to follow the O&M Plan in order to maintain compliance with the Reissued General Order.

Nutrient Management Plan

33. As described in Attachment C of 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 minimize 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.
34. Among other items, the NMP must propose nitrogen loading rates that meet the criteria in the Reissued General Order. The amount of nitrogen applied to cropland versus the amount of nitrogen removed by the crop (the “applied-to-removed ratio”) is not to exceed the Reissued General Order’s limit of 1.4 unless certain conditions are met (i.e., plant tissue testing shows that additional nitrogen is needed and that the amount applied is consistent with written recommendations by a professional). The Reissued General Order states that in no case shall the applied-to-removed ratio exceed 1.65.
35. The most recent NMP was prepared in 2018 and signed by Jacinta Soares. The maximum permitted number of mature cows (1,409) is used to determine the volume of manure and wastewater that will be generated. The 2019 WMP states that 15,149 tons of solid manure, representing 235,937 pounds of nitrogen, will be exported each year and no process wastewater will be exported. The Discharger’s nitrogen balance assumes double-cropping of corn and oats on 235 acres of cropland (Fields #1-11). It is assumed that there is no residual nitrogen in the soil, that corn will remove 240 pounds of nitrogen/crop, and that oats will remove 160 pounds of nitrogen/crop. The nitrogen applied-to-removed ratio for each field and each crop is 1.39. Although a required component, maps were not included.
36. According to the 2007 Annual Report, the Discharger owns Fields #1, #2, #3, #5, and #11, a total of 109.2 acres. The remaining fields (#4, #6, #7, #8, #9, and #10), a total of 124.4 acres, are rented from two different parties. However, a search of County tax assessor records in 2020 identifies the owners of Fields #1 through #6 (150.5 acres) as either Soares Ranches LP or the Soares Living Trust. It is not known who owns the remaining 83 acres leased for wastewater disposal.

Annual Reports

37. The Reissued General Order requires the Discharger to submit Annual Reports describing, among other items: the number of cows; the estimated volume of solid manure and wastewater produced; the amount of solid manure and wastewater applied to the land application areas or removed from the dairy; and crops grown, their yield, and their nitrogen removal. Nitrogen applied-to-removed ratios are to be calculated for each crop.
38. The Discharger's 2016 Annual Report was signed by Jacinta Soares. It shows that 1,385 mature cows were housed at the Dairy during the year. Manifests show that 10,000 tons of solid manure was removed from the Dairy. The Dairy generated over 10 million gallons of process wastewater, of which 780,000 gallons was sent off-site. The remaining wastewater was applied to 188 acres of cropland on which oats and corn were grown. Seventeen of the 20 nitrogen applied-to-removed ratios ranged from 0.35 to 0.79, which is unusual because if the values are accurate, then the crops removed more nitrogen than was applied.
39. The Discharger's 2017 Annual Report was signed by Jacinta Soares. It shows that the Discharger housed 1,385 mature cows during the year. Although required manifests were not submitted, the Discharger stated that 6,000 tons of solid manure was removed from the Dairy. The Dairy generated over 14 million gallons of process wastewater which was applied to 203 acres of cropland on which oats and corn were grown. Seventeen of the 18 nitrogen applied-to-removed ratios ranged from 0.16 to 0.66, which is unusual because if the values are accurate, then the crops removed more nitrogen than was applied.
40. The Discharger's 2018 Annual Report was signed by Jacinta Soares. It shows that the Discharger housed 1,385 mature cows during the year. Although required manifests were not submitted, the Discharger stated that 8,000 tons of solid manure was removed from the Dairy. The Dairy generated over 23 million gallons of process wastewater which was applied to 230 acres of cropland on which oats and corn were grown. Thirteen of the 20 nitrogen applied-to-removed ratios ranged from 0.24 to 0.97, which is unusual because if the values are accurate, then the crops removed more nitrogen than was applied.
41. The Discharger's 2019 Annual Report was signed by Jacinta Soares. It shows that the Discharger housed 1,409 mature cows during the year. Although required manifests were not submitted, the Discharger stated that 6,000 tons of solid manure was removed from the Dairy. The Dairy generated approximately 9.6 million gallons of process wastewater which was applied to 203 acres of cropland on which oats and corn were grown. Ten of the 15 nitrogen applied-to-removed ratios ranged from 0.19 to 0.96, which is unusual because if the values are accurate, then the crops removed more nitrogen than was applied.

42. The 2019 WMP states that 98,524 gallons of wastewater is generated each day. This equates to 35 million gallons of wastewater annually. However, the 2016 through 2019 Annual Reports state that only 9.6 million to 23 million gallons of wastewater is produced annually. It is unknown why there is such a discrepancy in the values. This Order requires that a California Registered Engineer accurately determine the volume of wastewater produced, that this value be used in revised WMPs and NMPs, and that if this value changes, then subsequent Annual Reports shall describe the reason for the change.
43. The 2018 NMP states that dairy waste will be applied to 235 acres (of which 125 acres are leased). However, the 2016 through 2019 Annual Reports show that waste was applied to 188 acres in 2016, 203 acres in 2017, 230 acres in 2018, and 203 acres in 2019. The Discharger should have prepared revised NMPs each time the acreage changed, but apparently did not do so. The revised NMPs would be expected to describe how the Discharger would balance nutrient applications and exports in compliance with the nutrient loading requirements of the Reissued General Order.
44. Central Valley Water Board staff has identified the following additional concerns based on a review of the Annual Reports: (a) it is not clear why the volume of process wastewater more than doubled between 2016 and 2018, even though the number of mature cows remained the same, (b) the lack of solids removal manifests in 2017 and 2018 is troubling, (c) although the NMP states that 15,000 tons of solid manure will be removed from the Dairy annually, only about half of that was removed each year, and (d) the consistent reporting of nitrogen applied-to-removed ratios of less than 1.0 is unusual and reflects different conditions than the 2018 NMP. These data may indicate that the cropland had been consistently overloaded with nitrogen in past years; that nutrient applications may not have been recorded; that plant tissue samples were allowed to dry out before analysis; and/or that inaccurate data were used to calculate the ratios. A 27 February 2018 letter from Central Valley Water Board staff to the Discharger raises some of these concerns and states that the nitrogen removal value for some of the crops is unrealistic. The 2018 Annual Report contains the statement “negative N balance could be due to faulty irrigation records.” This Order requires that the Discharger install a flow meter, collect soil samples and analyze for nitrogen content, and provide additional records such that Central Valley Water Board staff have confidence in the data provided in future Annual Reports.

REGULATORY CONSIDERATIONS

45. Soils within the area of the Dairy consist of sandy loams. Groundwater beneath the Dairy is encountered at 10 to 20 feet below ground surface (sources: National Soil Conservation Service web soil survey and 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 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 depth of the wastewater ponds (up to 18' deep) when compared to the estimated depth to groundwater (10-20' below ground surface) demonstrate that the Dairy poses a risk to water quality in the Central Valley Region.

46. The beneficial uses of the groundwater are defined in 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). 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.
47. 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."
48. 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.
49. 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."
50. According to the 2005 Report of Waste Discharge and subsequent Annual Reports, the Discharger owns and operates the Germano Soares Dairy #1 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 Cease and Desist Order to minimize degradation to groundwater. Therefore, the burden of production of these reports is reasonable.

51. 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).

52. 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, Germano and Jacinta Soares (Discharger) shall implement the following measures to comply with the Reissued General Order at the Germano Soares Dairy #1:

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 application of waste to lands not owned, leased, or controlled by the Discharger; the Prohibition against applying solid manure or wastewater to land for any purpose other than nutrient recycling; the Prohibition against expanding the Dairy beyond the permitted number of cows (i.e., 1,409 mature cows at this Dairy) and the Prohibition against using manure to construct containment features.
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, or may issue a complaint for administrative civil liability, or may take other enforcement action as authorized by law.

3. Corrals

- a. The Discharger shall comply with the O&M Plan found in the Dairy's 2019 WMP (or subsequent revisions). In particular, by **1 November of each year**, excess solid manure shall be removed from the corrals, and the corrals shall be graded to promote drainage to a point(s) at which leachate may be collected and pumped to a wastewater pond.

- b. By **1 November 2020**, the Discharger shall complete the work first promised in 2013 (see Finding 18), namely, installing a pump and piping such that leachate from all corrals is collected and transferred to a wastewater pond. The pump(s) shall be operated whenever necessary to minimize standing water within 72 hours after a rainfall.
- c. The October Enhanced Report (due by **10 November each year**; see Item 10 below) shall include text and photographs documenting that Items 3.a and 3.b have been completed. The report shall also describe where the removed manure was stored.
- d. The drainage of leachate from the corrals onto cropland is prohibited.

4. Feed Storage Area

- a. By **1 November 2020**, the Discharger shall complete the work first promised in 2011 (see Findings 14 and 18), namely, installing a pump and piping such that leachate from the feed storage area is collected and transferred to a wastewater pond. The pump(s) shall operate whenever necessary to minimize standing water within 72 hours after a rainfall.
- b. The October Enhanced Report (due by **10 November each year**; see Item 10 below) shall include text and photographs documenting that Item 4.a has been completed.
- c. The drainage of leachate from the feed storage areas onto cropland is prohibited.

5. Wastewater Ponds

- a. The Discharger shall comply with the O&M Plan found in the Dairy's 2019 WMP (or subsequent revisions). In particular, by **1 November 2020**, all four ponds shall be drawn down to the minimum operating level of 1.0 feet and sludge shall be agitated and pumped out when it accumulates to a thickness of 2.0 feet. By **1 November of subsequent years**, the Discharger shall comply with the revised O&M Plan's minimum operating level and sludge removal levels. For any year, if the Discharger fails to draw the ponds down to the freeboard listed in the O&M Plan, then the Discharger shall submit the *Contingency Plan* listed in Item 5.e.
- b. Manure removed from the ponds shall be handled in accordance with the conditions of the Reissued General Order, including the requirement that leachate is collected and diverted to a retention pond, and that infiltration of leachate is minimized (Attachment B, Item V.H). Manure may only be stored on a low permeability pad; storage on cropland or within temporary ponds is prohibited.
- c. By **1 November 2020**, any solid manure currently stored in cropland or any area other than a low permeability pad (including the manure stored in and/or used to construct the

unpermitted ponds in late 2018) shall be removed and either hauled off-site, applied to cropland, or moved to a low permeability pad.

- d. The October Enhanced Report (due by **10 November each year**; see Item 10 below) shall include text and photographs documenting that Item 5.a and 5.c have been completed and describing where the solid manure is stored.
- e. A *Contingency Plan* shall be submitted by **10 November each year** if either of the following occur: (a) the wastewater ponds were not drawn down to the minimum operating level of 1.0 feet and if more than 2.0 feet of solids remain in any pond as of 1 November 2020, or (b) by 1 November of subsequent years, if the wastewater ponds were not drawn down to the minimum operating level or solids were not removed as described in an O&M Plan included in a revised WMP. The *Contingency Plan* shall describe how the Discharger will manage 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.

6. Flow Meter

- a. By **1 March 2021**, the Discharger shall submit a *Flow Meter Installation Workplan* to complete the work agreed to by the 2002 Stipulated Judgment (see Finding 11). The document shall be prepared by a California Registered Civil Engineer and shall propose the installation of a flow meter on each pond from which wastewater is pumped to the cropland. The flow meter shall be a type specific for dairy waste and be used to accurately determine the volume of wastewater applied to cropland. Upon approval of the Executive Officer, the Discharger shall install the flow meter.
- b. By **1 September 2021**, the Discharger shall submit a *Flow Meter Installation Report*, prepared by an appropriate professional, documenting that the approved flow meter was installed, calibrated, and is operational.

7. Implementing and Updating the Waste Management Plan (WMP)

- a. By **1 July 2021**, the Discharger shall submit a *Pond Sizing and Freeboard Marker Report*, prepared by an appropriate professional and containing the following three items:
 1. A California licensed surveyor or civil engineer shall document the length, width, total depth (from the lowest point of the berm to native soil at the bottom of the pond), and depth below ground surface (from land surface adjacent to the pond to native soil at the bottom of the pond) for each of the four wastewater ponds. The surveyor shall also document the elevation of the land surface immediately adjacent to each of the ponds, and the elevation of the top of the berm at each pond. If the top of the berm is not level, then it should be measured at its lowest point. 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. 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 describe and 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).
- b. By **1 September 2021**, the Discharger shall submit an *Updated Waste Management Plan* and associated *Operation 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 (1,409 mature cows), the volume of the four wastewater ponds as documented in the *Pond Sizing and Freeboard Marker Report*, the practical minimum freeboard for each pond, any constraints placed by the NMP, and the Reissued General Order's requirements regarding the application of dairy waste to cropland for nutrient recycling. The WMP must describe and verify how the annual wastewater production value was calculated and explain why this value varied so significantly between the 2019 WMP and the 2016-2019 Annual Reports. The *Operation and Maintenance Plan* must specify the minimum freeboard necessary for each storage pond on 1 November and include monthly target freeboard levels for each pond for each month, such that the minimum freeboard will be met by 1 November.

If the 1 November freeboard targets for the wastewater storage ponds and settling basins specified in the updated *Operation and Maintenance Plan* (a part of the updated WMP) are not achievable, then the *Updated WMP* 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 Pond Specification C.5 and in Attachment B, Part II.B of the Reissued General Order.

8. Implementing the Nutrient Management Plan

- a. Consistent with the Reissued General Order, wastewater and solids shall only be applied to cropland in conformance with an NMP that incorporates the technical requirements of Attachment C of the Reissued General Order.
- b. Item C.2 of Attachment C to the Reissued General Order states that wastewater shall not be applied to cropland when soils are saturated unless certain conditions are met. 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 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. The *Agronomic Need Report* shall be submitted with the *Enhanced Monitoring Report* (Item 10) immediately following the wastewater application to saturated soils.
- c. On an annual basis, the Discharger shall export at least as many pounds of nitrogen in manure solids shown in its NMP. Unless the 2018 NMP is revised, the Discharger shall follow the NMP by applying wastewater to double-cropped corn and oats on 235 acres. If the NMP is revised, the Discharger shall follow the cropping descriptions and acreage in the new document.
- d. The Discharger shall collect soil samples once per year, prior to planting the spring crop. For each field that receives process wastewater (currently fields #1 through #10), samples shall be collected at two locations and from two depths at each location (0-24", and 24-36"). Samples shall be analyzed for total nitrogen. The results shall be recorded in the "existing soil nutrient content" portion of the crop nutrient budget in the Annual Report and shall be used to determine the appropriate amount of nitrogen to add to each crop.

The soil sampling program shall begin in the spring of 2021. If, after three years of sampling (2021, 2022, and 2023), the Annual Reports show that the nitrogen applied-to-removed ratios are reasonably similar to those proposed in the Dairy's most recent NMP, then the Discharger may request that the Executive Officer eliminate the soil sampling program. Soil sampling may only cease upon written approval by the Executive Officer.

- e. By **1 February 2021** the Discharger shall submit and immediately implement a *Plant Tissue Sampling Protocol for the Germano Soares Dairy #1*. The *Protocol* shall be developed by a Professional Soil Scientist, Professional Agronomist, Crop Advisor certified by the American Society of Agronomy, or Technical Services Provider certified

in nutrient management in California by the National Resources Conservation Service. The *Protocol* shall incorporate, and customize for this Dairy, the information found in Parts II and III of the "[Sampling Protocol for Plant Tissue Corn and Winter Forage Silage](https://www.waterboards.ca.gov/centralvalley/water_issues/confined_animal_facilities/general_order_guidance/dairy/sampling_analysis/)" found at (https://www.waterboards.ca.gov/centralvalley/water_issues/confined_animal_facilities/general_order_guidance/dairy/sampling_analysis/).

- f. **By 1 July 2021, 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. After 1 September 2021, the volume of wastewater discharged to each field for each irrigation event, measured by flowmeter(s). Prior to 1 September 2021, the Discharger shall describe in detail how the volume of wastewater discharged to each field for each irrigation event was determined.
 2. For any crop in any field, include in the nutrient application portion of the Enhanced 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. As required by the Reissued General Order, the Enhanced Annual Report shall include copies of *all* manure/process wastewater tracking manifests for material removed from the Dairy during the year. The manifests shall contain the information found in Attachment D of the Reissued General Order.
 4. A detailed explanation of how the volume of process wastewater and solid manure produced during the year was estimated.
 5. Copies of all laboratory analytical reports for all samples taken during the year, including Chain of Custody forms and laboratory quality assurance/quality control results.
 6. 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.
 7. 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 NMP* that describes how practices will be changed to prevent such exceedances in the future.

8. If any crop in any field has a nitrogen-applied-to-removed ratio of less than 1.0, then include an explanation of how this occurred, including an evaluation of whether nutrient applications were not recorded; whether inaccurate data was used to calculate the ratios, and/or whether plant tissue testing was conducted as described in the *Plant Tissue Testing Protocol* (Item 8.e).

9. Depth to Groundwater Monitoring

- a. By **1 March 2021**, the Discharger shall submit a *Piezometer Installation and Sampling Workplan* prepared by a California Registered Civil Engineer or California Registered Geologist with experience in hydrogeology. The *Workplan* shall propose the placement of at least four piezometers (at least two at the western ponds and at least two at the eastern ponds), located such that depth to groundwater beneath the ponds may be determined. The *Workplan* shall contain the information found in Attachment C to this Order. Monitoring shall consist of depth to groundwater measurements and may be performed manually using an electronic sounder or automatically using a dedicated water level transducer. Upon approval by Executive Officer, the piezometers shall be installed, surveyed, and sampled.
- b. By **1 September 2021**, the Discharger shall submit a *Piezometer Installation Completion Report* prepared by a California Registered Civil Engineer or California Registered Geologist with experience in hydrogeology. The *Report* shall document that the piezometers were installed per the approved workplan and include a description of piezometer construction activities, boring logs, construction details, map showing the placement and identification number of piezometer, survey results, and the results of the first depth to groundwater monitoring event.
- c. Depth to groundwater monitoring shall be conducted quarterly in the following months: **March, June, September, and December**. The first monitoring event will be completed as part of the piezometer installation (Item 9.b); therefore, the first monitoring under this paragraph shall begin in September 2021. Results shall be submitted by the 10th day of the following month (i.e., by 10 April, 10 July, 10 October, and 10 January) and may be combined with the monthly reports due under Item 10. The reports shall be prepared by a California Registered Civil Engineer or California Registered Geologist with experience in hydrogeology and shall contain a description of how the monitoring was conducted, tabulated data for the event, historical tabulated data, and a determination as to whether the lowest point of any of the wastewater ponds is within the high groundwater. (The elevation of the lowest point of each pond will be found in the report due under Item 7.a).

- d. If a quarterly monitoring report contains the determination that the lowest point of any of the wastewater ponds is at or below the highest anticipated elevation of groundwater (i.e., the bottom of the pond is within groundwater), then **within 90 days of the determination**, the Discharger shall submit a *Groundwater Remediation Workplan*. This *Workplan* shall be prepared by a California Registered Civil Engineer or California Registered Geologist with experience in hydrogeology and shall contain a proposal for action(s) such that the Discharger shall permanently maintain separation between the lowest point of each pond and the highest anticipated elevation of groundwater. The plan shall be implemented upon approval of the Executive Officer.

10. 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 schedule in the table below. The reports shall contain the results of all monitoring required by parts 10.a. through 10.e, below. The reports shall contain both tabulated results and, as described in each part below, photographs.

The October Enhanced Report (due by November 10) shall also include the results of the work and photographs as required by Items 3 (Corrals), 4 (Feed Storage Area), and 5 (Wastewater Ponds).

The March, June, September, and December Enhanced Reports (due by April 10, July 10, October 10, and January 10) shall also include the results of the depth-to-groundwater monitoring required by Item 9.c.

If an Agronomic Need Report is prepared (Item 8.b) then it shall be submitted with the monthly or quarterly report immediately following the wastewater application to saturated soils.

Monitoring Report Submittal Schedule

Monitoring Period	Report Due Date
October 1 to 31	November 10
November 1 to 30	December 10
December 1 to 31	January 10
January 1 to March 31	April 10
April 1 to June 30	July 10
July 1 to September 31	October 10

- a. The freeboard level for each wastewater pond shall be recorded 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 using permanent freeboard markers for reference. Photographs shall be taken of each pond 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. As required by the Reissued General Order, each crop irrigation, whether of wastewater or fresh water, shall be recorded, including the date of irrigation, the volume applied, and the field which was irrigated. This information shall be recorded on the date on which the irrigation took place and submitted in the next report.
- c. The berms of each wastewater pond shall be inspected weekly between 1 October and 30 April, and monthly between 1 May and 30 September. The Discharger shall record whether there is erosion, cracking, or rodent holes. If there is, then the Discharger shall immediately repair the pond berms, and shall record that fact in the inspection report. Photographs shall be taken of each pond berm during each inspection; each photograph shall clearly show the condition of the berms and have the date imprinted on the photograph.
- d. 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, whether there are depressions in the corrals that should be filled to prevent ponding, whether manure needs to be removed, and whether leachate is being pumped to a wastewater pond. If any maintenance is needed, then the Discharger shall also record when it was 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; 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.
- e. The Discharger shall inspect all TID lines, private irrigations lines, and field berms weekly between 1 October and 30 April, and monthly between 1 May and 30 September to ensure that there are no locations at which dairy wastewater could flow off-site. If there are an illegal connections or potential breaches in field berms, then they shall immediately be corrected. It is not necessary to take pictures of these areas; instead, the Discharger shall provide a written description of what was inspected and the results.
- f. 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).

11. **At any time after 1 May 2023**, 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.
12. 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). In addition, an email shall be sent to Sean Walsh at Sean.Walsh@waterboards.ca.gov stating that a document pertaining to this Order has been uploaded into Geotracker.
13. 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.
14. 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/ 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 15 October 2020.

PATRICK PULUPA, Executive Officer

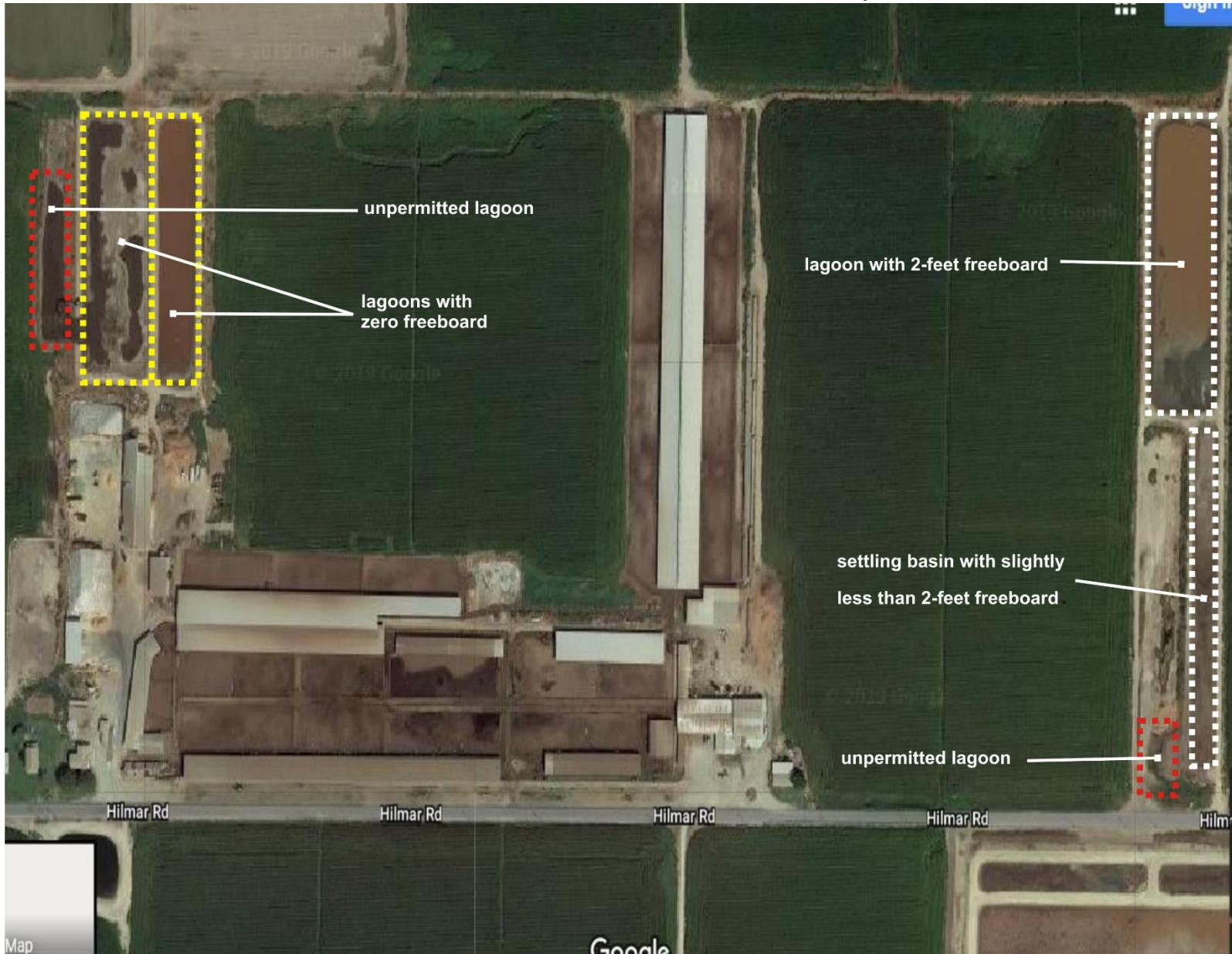
Attachment 1: Map of Fields Receiving Dairy Wastewater and Manure
Attachment 2: Map of Production Area and Wastewater Ponds in February 2019
Attachment 3: Piezometer Installation Requirements

WSW: 17Sept2020

Attachment 1: Germano and Jacinta Soares Dairy #1
Fields Receiving Dairy Wastewater and Manure (location of Field #10 unknown)



Attachment 2: Germano and Jacinta Soares Dairy #1
Production Area and Wastewater Ponds in February 2019



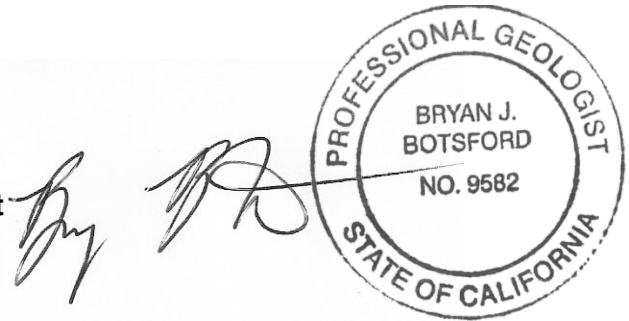
Central Valley Regional Water Quality Control Board

TO: Rob Busby
Supervising Engineering Geologist
Region 5, Sacramento

FROM: Bryan Botsford
Engineering Geologist
Confined Animals Regulatory Unit
Region 5, Sacramento

DATE: 29 September 2020

SUBJECT: Piezometer Installation Recommendations, Germano Soares Dairy #1, 9201 Hilmar Rd, Turlock, Stanislaus County



At your request, I prepared this memo to outline requirements to install piezometers at the Germano Soares Dairy #1. The purpose of the piezometers is to monitor depth to groundwater beneath the four lagoons/settling basins at the site, and are not intended to monitor groundwater gradient. The Regional Board will require the installation of four piezometers adjacent to the ponds to collect site specific depth to groundwater information. Two of the piezometers will be located adjacent to the lagoons in the eastern portion of the facility, and two of the piezometers will be located adjacent to the lagoons in the western portion of the facility. For each pair of piezometers, one will be located at the northern end of the lagoons, and one will be located at the southern end of the lagoons.

Requirements for additional monitoring are outlined in Monitoring and Reporting Program No. R5-2013-0122, Attachment A. The provisions of Attachment A are set out pursuant to the Executive Officer's authority under California Water Code (CWC) Section 13267 to order Dischargers to implement monitoring and reporting programs. The purpose of groundwater monitoring required by these provisions is to confirm that management practices being employed for the wastewater retention system are protective of groundwater quality and comply with Groundwater Limitation F.1 of the Waste Discharge Requirements General Order No. R5-2013-0122.

Prior to installation of piezometers, the Discharger shall submit to the Executive Officer a Piezometer Installation and Sampling Plan (PISP) and a schedule which should be prepared by, or under the direct supervision of, and certified by, a California registered civil engineer or a California registered geologist with experience in hydrogeology.

Installation of the piezometers shall follow the requirements outlined in Attachment A to this letter. Installation of the piezometers shall not begin until the Executive Officer notifies the

KARL E. LONGLEY SCD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

Discharger in writing that the PISP is acceptable. Upon completion of the piezometers, the Discharger shall submit to the Executive Officer a Piezometer Installation Completion Report (PICR). The installation of the piezometers, and preparation of the PICR shall be overseen by, or performed under the direct supervision of, and certified by, a California registered civil engineer or geologist with experience in hydrogeology. The PICR shall include a description of piezometer construction activities, and should include boring logs, construction details, and survey results.

Monitoring shall consist of depth to groundwater measurements and shall be performed at the time of piezometer completion. Then, monitoring shall be completed for a five month period from December 2020 through April 2021 after installation of the piezometers. Monitoring can be performed manually using an electronic sounder, or automatically using a dedicated water level transducer. Upon completion of the 5 month monitoring period, the results of monitoring shall be presented in a summary report. Additional monitoring may be required by the Regional Board pending review of the summary report.

Attachment: Piezometer Installation Requirements

ATTACHMENT A - PIEZOMETER INSTALLATION REQUIREMENTS

To determine depth to first encountered groundwater, the Central Valley Regional Water Quality Control Board (CVRWQCB) will be requiring the installation of piezometers at wastewater storage lagoons where the depth to highest anticipated groundwater is estimated from regional data to be at or less than ten feet, there is currently no way to directly measure the depth to groundwater at the lagoons' location, and the invert of the lagoons are below the ground surface. A minimum of four piezometers will be required at locations immediately adjacent to these wastewater storage lagoons to characterize groundwater levels. The borings associated with these piezometers should be logged by a California Registered Civil Engineer or Geologist. Prior to installation of the piezometers, a work plan should be prepared describing installation procedures and the proposed locations of the piezometers. Installation of piezometers should follow the below guidelines:

- The boreholes will be advanced to five feet below first encountered groundwater or 10 feet below the invert of the deepest lagoon, whichever results in the deepest well. The boreholes will be advanced using a direct push rig. The diameter of the direct push rods should be large enough to build a minimum 1 inch diameter polyvinyl chloride (PVC) piezometer within the rod. The screened portion of these piezometers should have 0.010-inch machined slots.
- After construction and placement of the piezometer casing, the direct push rods will be incrementally withdrawn and #2/12 sand filter pack (or equivalent) will be placed from the bottom of the borehole to approximately 1 foot above the top of the screen.
- A one foot thick bentonite pellet seal will be placed above the filter pack and hydrated, and a cement grout sanitary seal containing 5 percent bentonite by weight will be used to fill the remaining annulus to the ground surface. If water is present, the grout will be installed with a tremie pipe.
- A locking steel riser or a flush-mount traffic-grade vault box will be installed in concrete at the surface of each piezometer.
- The top of casing, ground surface, and location of the piezometers shall be surveyed by a licensed surveyor to within 0.01 foot accuracy for elevation and 0.1 foot for location.
- Installation of these piezometers must meet local County requirements and must be performed under an issued permit from the County Environmental Health Department. Merced County Environmental Health requirements state the following:
 - Piezometers must be installed in accordance with a Regional Board approved work plan.
 - Piezometers must have a minimum setback of 100 feet to intense animal confinement.
 - Piezometers must have a minimum setback of 100 feet to unlined surface water.