CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER R5-2015-0705

FOR

CALIFORNIA DEPARTMENT OF CORRECTIONS & REHABILITATION
DEUEL VOCATIONAL INSTITUTE DAIRY

SAN JOAQUIN COUNTY

This Order is issued to the California Department of Corrections & Rehabilitation, operator of the Deuel Vocational Institute Dairy (Discharger), based on provisions of California Water Code (Water Code) section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or Board) to issue a Cleanup and Abatement Order (CAO), and Water Code section 13267, which authorizes the Central Valley Water Board to require the submittal of technical reports.

The Assistant Executive Officer of the Central Valley Water Board finds, with respect to the Discharger's acts or failure to act, the following:

1. Deuel Vocational Institute Dairy (DVI Dairy or Dairy) (WDID 5B395016001) is located at 23500 Kasson Road, Tracy, San Joaquin County. The property is owned by the State of California and operated by the California Department of Corrections & Rehabilitation.

2. The DVI Dairy is covered by the Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2013-0122 (Reissued Dairy General Order), a set of general waste discharge requirements that apply to owners and operators of existing milk cow dairies that (1) submitted a Report of Waste Discharge in response to the Central Valley Water Board's 8 August 2005 request and (2) have not expanded operations since 17 October 2005. A Report of Waste Discharge was filed for the Deuel Vocational Institute Dairy on 23 September 2005 and the Dairy has not expanded beyond 15 percent; the DVI Dairy is therefore covered by the Reissued Dairy General Order.

3. The DVI Dairy was in operation on the property prior to filing a Report of Waste Discharge on 23 September 2005. The Dairy is permitted under the Reissued Dairy General Order to house up to 805 mature dairy cows, and currently houses approximately 650 mature cows. The Dairy's production area occupies approximately 15 acres, with milk cows housed in one freestall barn with flush lanes and adjoining corrals. There are seven wastewater storage lagoons at the Dairy and one solid manure separator. Wastewater and manure in the freestall barn are flushed into a collection pit and then pumped through the solid manure separator into the first lagoon. The depth to groundwater in the production area is

approximately 11 feet below ground surface, based on well data (State Well Number: 02S06E27E001M) from the CA Dept. of Water Resources located one mile from the Dairy site.

4. The Dairy production area is surrounded by cropland on the west and south sides. The cropland totals approximately 405 acres to which manure (process wastewater or solid manure) can be applied. Manure (liquid and solids) land application areas under the Discharger's control are considered to be part of the Dairy facility for purposes of the Reissued Dairy General Order. The Dairy production area is bordered on the west by Kasson Road and bordered on the south by West Lorenzen Road.

5. The Dairy has been inspected on multiple occasions by Central Valley Water Board staff (Staff). An inspection of the Dairy was conducted 13 September 2011 at which time many operational documents required by the Reissued General Order were not found onsite, and the Nutrient Management Plan and Waste Management Plan located onsite were found to be incomplete. Regional Board staff observed manure storage areas that lacked the necessary features, such as drains, to convey manure leachate to the wastewater lagoons, and wastewater ponding was observed. Subsequently, a Notice of Violation (NOV) was issued on 23 September 2011 for the aforementioned violations.

6. Staff again inspected the Dairy on 17 July 2014 and found (1) no operational documents, (2) an uncontained manure stacking area with wastewater ponding, (3) a one-acre area north of the manure separator where manure (liquid & solids) had been discharged, (4) wastewater runoff into a return ditch in the institution's eastern perimeter which may have off-property nexuses, (5) wastewater storage lagoons with excessive vegetation on their embankments, (6) no evidence that the Nutrient Management Plan was being implemented onsite, (7) tailwater return ditches that were filled to capacity with wastewater, and (8) a small number of dead animal remains located near the feed storage area. A second NOV was issued on 26 September 2014.

   The 23 September 2011 NOV and the corresponding 13 September 2011 inspection report is included as Attachment 1. The 26 September 2014 NOV and the corresponding 17 July 2014 inspection report is included as Attachment 2.

7. The Dairy was re-inspected on 15 December 2014. The 15 December 2014 inspection report is included as Attachment 3. During the inspection, Staff determined some of the issues identified in the 26 September 2014 NOV had been resolved. On 26 January 2015, the Discharger submitted a timeline by email identifying actions and tasks required to achieve compliance with the remaining NOV directives; the timeline is included as Attachment 4.

VIOLATIONS OF REISSUED DAIRY GENERAL ORDER

8. The Reissued Dairy General Order places restrictions on the discharge of wastes from dairy facilities that are intended to prevent pollution and nuisance conditions from occurring or persisting, and will limit the amount of degradation that will occur, so that discharges from dairy facilities will not cause long-term impacts to beneficial uses. This CAO focuses on violations of the Reissued Dairy General Order which represent a threatened discharge to waters of the state, as documented in the Central Valley Water Board's 26 September 2014 NOV, and which have not been corrected as of the 15 December 2014 Staff inspection:

    a. Ponded wastewater in the production area, including the area adjacent to the "Solid Manure Stacking" area of the Dairy – At the time of each inspection (13 September 2011, 17 July 2014, and 15 December 2014) the "Solid Manure Stacking" area, located mostly on native soil, contained abundant piles of manure solids (including some soil) and a very large area (approximately one-acre) of ponded wastewater. The ponded wastewater was caused in part by a broken manure solid separator that was discharging a significant amount of wastewater within the production area.

    At the time of the December 2014 inspection, large portions of the production area were also flooded with wastewater, including the feed storage area, the area north of the freestall barn, corrals, and the solid manure stacking area.

    The collection, treatment, storage, discharge or disposal of wastes at an existing milk cow dairy that results in the creation of a condition of pollution or nuisance is a violation of Prohibition A4 of the Reissued Dairy General Order. Lack of grading and conveyance to the lagoon(s) of water that has contacted animal wastes is a violation of Production Area Specifications 1 and 6 of the Reissued Dairy General Order.

    b. Poorly managed solid manure stacking area and manure located outside designated manure storage areas - Manure in the manure stacking area north of the manure separator was not consolidated. In addition, during the December 2014 inspection, uncontained manure was noted north of the freestall barn. Manure should only be placed in designated manure stacking areas identified in the certified Waste Management Plan.

    The failure to manage manure in accordance with the requirements of the Reissued Dairy General Order, can potentially result in the creation of a condition of pollution or nuisance, a violation of Prohibition 4 of the Reissued Dairy General Order.

c. Dairy lagoons had less than the two feet of freeboard required for above-grade lagoons under the Reissued Dairy General Order.

The failure to maintain the required minimum amount of freeboard is a violation of Pond Specification 1 of the Reissued Dairy General Order.

d. Land application of waste to cropland not done in conformance with a certified Nutrient Management Plan – There are no mechanisms in place to quantify nutrient loading on Dairy cropland (e.g., no measurement of the volume of wastewater applied, quantity of nitrogen applied, or evaluation of the quantity of nitrogen removed in the harvested portion of the crops).

Land applications 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 of the Reissued Dairy General Order. Failure to do so is a violation of Land Application Specifications 2, 5, and 6 of the Reissued Dairy General Order.

e. Improper disposal of dead animals - Dead animal remains were observed strewn onsite near the feed storage area at the time of the July 2014 inspection. Although the animal remains had been removed, steps to ensure that all dead animals are properly disposed of had not been implemented as of the December 2014 inspection.

Not disposing properly of all dead animals is a violation of Prohibition 6 of the Reissued Dairy General Order.

REGULATORY CONSIDERATIONS

9. This Order conforms to, and implements policies and requirements of, the Porter-Cologne Water Quality Control Act (Division 7, commencing with Water Code section 13000) including: (1) Water Code sections 13267 and 13304; (2) applicable state and federal regulations; (3) the 2013 Central Valley Regional Water Quality Control Board Reissued General Order Waste Discharge Requirements for Existing Milk Cow Dairies, Order No. R5-2013-0122 (Reissued Dairy General Order); (4) all applicable provisions of Statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Board) and the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised October 2011, (hereafter "Basin Plan") adopted by the Regional Board; (5) State Board policies and regulations, including State Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California), and Resolution No. 92-49 (Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304)

("Resolution 92-49"); CCR Title 23, Section 3890 et. seq., and (6) relevant standards, criteria, and advisories adopted by other state and federal agencies.

10. As a result of the events and activities described in this Order, such as the dumping of manure and process wastewater on native soil and the application of manure and process wastewater to cropland without following a certified Nutrient Management Plan, the potential for infiltration of waste constituents to groundwater is increased. Therefore, the Regional Board finds that the Discharger has caused or permitted, or threatens to cause or permit, waste to be discharged in such a manner that it threatens to cause, or has caused, a threat to public health and/or created a condition of pollution or nuisance. These actions subject the Discharger to this Order under Section 13304 of the California Water Code.

11. Water Code section 13304(a) states, in relevant part:

Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or by the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts…Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the regional board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order…

12. Water Code section 13304(c)(1) states, in relevant part:

The *person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of the waste within the meaning of subdivision (a), are liable to that government agency to the extent of the reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial actions.*

13. Water Code section 13267(b)(1) states, in relevant 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.

14. Pursuant to Water Code section 13267, subdivision (b), this Order requires the Discharger to submit technical and monitoring reports, including but not limited to work plans, to Central Valley Water Board Staff. The Central Valley Water Board requires technical and monitoring reports to determine the extent of the impacts of the discharge or threatened discharge of waste and to assess additional cleanup and/or remediation measures at the Dairy.

15. On 23 April 2009, the Central Valley Water Board adopted Resolution R5-2009-0027, which delegates the Central Valley Water Board's authority to issue Cleanup and Abatement Orders to Pamela C. Creedon, its Executive Officer. On 14 February 2014, the Executive Officer designated Andrew Altevogt, Assistant Executive Officer, as the Lead Prosecution Officer for all enforcement matters, including the issuance of Cleanup and Abatement Orders, originating in the Central Valley Region.

16. The Central Valley Water Board has considered the financial and technological resources available to the Discharger, and has determined that the cleanup directives required by this Order are feasible to implement and will be effective and necessary to protect the water quality of waters of the state. Therefore, the Assistant Executive Officer is authorized to issue this Cleanup and Abatement Order in accordance with Water Code sections 13304 and 13267 to the Discharger to cleanup and abate the effects of the discharge of waste.

17. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. The Dairy is located in the Lower San Joaquin River Watershed, East Valley Floor Subarea. Pursuant to Water Code section 13263(a), the Reissued Dairy General Order implements the Basin Plan. The DVI Dairy is subject to the prohibitions and requirements of the Basin Plan.

18. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

19. The DVI Dairy is bordered on the east by a ditch which discharges into Tom Paine Slough, which in turn discharges into the San Joaquin River in the Sacramento San Joaquin Delta, which are waters of the United States. The beneficial uses of the Sacramento-San Joaquin Delta are municipal and domestic supply, agricultural supply, industrial supply, water contact recreation, non-contact water recreation,

warm freshwater habitat, cold freshwater habitat, migration of aquatic organisms, spawning reproduction and/or early development, wildlife habitat, and navigation.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13304 and 13267, the California Department of Corrections and Rehabilitation shall take the necessary remedial action to abate threatened water quality impacts, in accordance with the scope and schedule set forth below, which is based on the scope and schedule provided by the Discharger as Attachment 4.

1. **Beginning with the first quarter 2015,** the Discharger shall submit quarterly progress reports describing the remedial actions completed to date to comply with the Reissued Dairy General Order, as well as what work will be conducted in the next quarter. The Quarterly Progress Reports shall be submitted by the **30th day of the month following the end of the quarter** (e.g. by 30 April, 30 July, 30 October, and 30 January). Remedial actions described by the Discharger in Attachment 4 include:

    a. **Immediately,** scrape manure from the areas north and east of the freestalls. Install a cover for the future storage of dry manure used for bedding to minimize leachate and runoff produced by rain events.

    b. **Immediately,** install freeboard markers on dairy lagoons.

    c. **Immediately,** install a cage to hold dead animals prior to pick up by a rendering company.

    d. **By 9 April 2015,** contract manure spreading services to land apply all dry manure onto the PIA-DVI fields in accordance with the certified Nutrient Management Plan dated 1 December 2014 or a more recently updated version.

    e. **By 9 May 2015,** install flow meters at the discharge point from the dairy lagoons, and at the irrigation pipeline flowing to Fields 1, 2, and 3.

    f. **By 9 July 2015,** redirect rainfall runoff from the freestall barn roof away from the dairy lagoons.

    g. **By 9 July 2015,** install berms to direct all runoff and leachate from areas surrounding the manure solid separator to the lift pump located approximately 100 feet to the northwest.

h. **By 9 July 2015,** scrape manure and build earthen berms along the corrals. Grade corrals and install drains to route water from the corrals to the storage lagoons.

i. **By 1 November 2015**, install a storage tank and new piping in the milk barn for the use of recycled plate cooler water for the floor wash and watering the cows.

j. **By 1 November 2015**, produce a map of the entire dairy site identifying all piping, drains and pumps.

k. **By 1 November 2015,** repair any malfunctioning lift pumps.

l. **By 1 November 2015**, remove all manure from the area east of the lagoons/north of the gun range.

m. **By 9 July 2016**, build berms to repurpose the area east of the lagoons/north of the gun range as a storm water runoff storage area.

n. **By 9 July 2016**, construct a new silage pit.

o. **By 1 November 2016**, relocate the separator to the top of the embankment to redirect process wastewater into the dairy ponds.

2. The Discharger must continue to comply with the inspection, sampling, and recordkeeping requirements of the Reissued Dairy General Order. The Discharger must continue to maintain the embankments of the lagoons free of vegetation. The Discharger must ensure that animal mortalities are disposed of properly and that records documenting proper animal disposal are maintained.

3. Storage of process wastewater in the “Freshwater Pond” is prohibited.

4. Storage of process wastewater in tailwater return ditches or any unlined ditch is prohibited.

GENERAL REQUIREMENTS

The Discharger shall:

5. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, have reports prepared by, or under the supervision of, a registered professional engineer or geologist and signed by the registered professional. All technical reports submitted by the Discharger shall include a cover letter signed by

an authorized representative of the Discharger, certifying under penalty of law that the signer has examined and is familiar with the report and that to their knowledge, the report is true, complete, and accurate. The Discharger shall also state if it/they agree with any recommendations/proposals and whether it/they approved implementation of said proposals.

6. Obtain all local and state permits and access agreements necessary to fulfill the requirements of this Order prior to beginning the work. The Discharger will continue any remediation or monitoring activities until such time as the Assistant Executive Officer determines that sufficient assessment and/or remediation has been accomplished to fully comply with this Order and this Order has been either amended or rescinded in writing.

7. If, for any reason, the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Assistant Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. Any extension request shall be submitted as soon as the situation is recognized and no later than the compliance date. An extension may be granted by revision of this Order or by a letter from the Assistant Executive Officer. Extension requests not approved in writing by the Assistant Executive Officer with reference to this Order are denied.

8. This Order does not limit the authority of the Water Board to institute additional enforcement actions or to require additional investigation and cleanup of the site consistent with the Water Code. This Order may be revised by the Assistant Executive Officer as additional information becomes available. **Failure to comply with the terms or conditions of this Cleanup and Abatement Order will result in additional enforcement action**, which may include the imposition of administrative civil liability pursuant to Water Code including sections 13350 and 13268 or referral to the Attorney General of the State of California for civil enforcement.

REPORTING REQUIREMENTS

1. **Signatory Requirements**. All reports required under this Cleanup and Abatement Order shall be signed and certified by the Discharger or by a duly authorized representative of the Discharger and submitted to the Central Valley Water Board staff. A person is a duly authorized representative of the Discharger only if: (1) the authorization is made in writing by the Discharger and (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility of activity. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

2. **Certification**. Include the following signed certification with all reports submitted pursuant to this Order:

> *I certify under penalty of perjury under the laws of the State of California that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

3. **Report Submittals**. All monitoring and technical reports required under this Order shall be submitted to:

> California Regional Water Quality Control Board
> Central Valley Region - Sacramento Office
> 11020 Sun Center Drive, Suite 200
> Rancho Cordova, CA 95670
> Attn: Charlene Herbst, Chief, Confined Animal Unit
> Email: Charlene.herbst@waterboards.ca.gov
> Phone: (916) 464-4724

Notifications:

4. **Cost Recovery**. Pursuant to Water Code section 13304, the Water Board is entitled to, and may seek, reimbursement for all reasonable costs actually incurred by the Water Board to investigate unauthorized discharges of wastes and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action required by this Order.

5. **Applicability of Other Orders**. This Order does not affect the Discharger's obligation to comply with any previously issued Orders, including the 2013 Reissued Dairy General Order (R5-2013-0122). The requirements and legal enforceability of these Orders are not superseded or affected upon issuance of this Order.

6. **California Environmental Quality Act (CEQA) Compliance**. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), pursuant to California Code of Regulations (CCR), title 14, section 15321(a)(2). The issuance of this Order may also be considered an action by a

regulatory agency for the protection of the environment, exempt pursuant to CCR, title 14, section 15308. This action is also exempt from the provisions of CEQA in accordance with section 15061(b) (3) of Chapter 3, Title 14 of the California Code of Regulations because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

7. **Requesting Administrative Review by the State Water Board**. Any person aggrieved by an action of the Central Valley Water Board that is subject to review as set forth in Water Code section 13320, subdivision (a), may petition the State Water Resources Control Board (State Water Board) to review the action. Any petition must be made in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition within 30 days of the date the action was taken, except that if the thirtieth day following the date the action was taken falls on a Saturday, Sunday, state holiday, then the State Water Board must receive the petition by 5:00 p.m. on the next business day. Copies of the law and regulation applicable to filing petitions may be found on the internet at: http://www.waterboards.ca.gov/publicnotices/petitions/waterquality or will be provided upon request.

8. **Enforcement Notification.** If, in the opinion of the Assistant Executive Officer, the Discharger fails to comply with the provisions of this Order, the Assistant Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability. Failure to comply with the terms or conditions of this Cleanup and Abatement Order may result in additional enforcement action, which may include the imposition of administrative civil liability in an amount not to exceed $5,000 for each day in which the violation occurs under Water Code section 13304 and not to exceed $1,000 for each day in which the violation occurs under Water Code section 13268, or referral to the Attorney General of the State of California for injunctive relief or civil or criminal liability.

This Order is effective upon the date of signature.

ANDREW ALTEVOGT, Assistant Executive Officer

30 March 2015

(Date)

Attachment 1– 23 September 2011 Notice of Violation and 13 September 2011 Inspection Report

Attachment 2 – 26 September 2014 Notice of Violation and 17 July 2014 Inspection Report

Attachment 3 – 15 December 2014 Inspection Report

Attachment 4 – Proposed Timeline of Strategies for Resolving Violations and Staying in Compliance with Regional Water Quality Control Board Regulations, California PIA-DVI Dairy, January 9, 2015

California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair

11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6114
(916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

Attachment 1

NOTICE OF VIOLATION

23 September 2011

CERTIFIED MAIL
7007 0710 0004 3778 0911

Dan Volmer
23500 Kasson Rd.,
BOX 400
Tracy, CA 95376

FAILURE TO MANAGE PROCESS WASTE AND OTHER DAIRY COMPONENTS, DEUEL VOCATIONAL INSTITUTE DAIRY, 23500 KASSON ROAD, TRACY, SAN JOAQUIN COUNTY

On 13 September 2011 Regional Water Quality Control Board staff inspected Deuel Vocational Institute Dairy for compliance. During the inspection the following violations pertaining to management of dairy facility components was noted:

- No current operational documents.
- Nutrient Management Plan not complete.
- Waste Management Plan not complete.
- Manure storage area not designed to convey manure leachate to wastewater lagoon.
- Standing water / wastewater beyond a 72 hour period after the last rainfall.

Please submit a written report to this office by **10 October 2011** outlining steps you will take to resolve these issues. Please include a date – within 90 days of receiving this letter – when the improvements / modifications will be complete. When we receive the report addressing the above items, staff will reinspect the dairy to confirm that the violations have been corrected.

You will continue to accrue potential daily liability until you comply with this Notice of Violation. If you fail to comply with this Notice of Violation you will be subject to additional enforcement action and/or termination of the authorization to discharge according to the General Order Provision E.10.

If you have questions regarding this matter, please contact Sean Walsh at (916) 464-4795.

Charlene Herbst
Chief, Confined Animal Facility Regulatory Unit

Enclosure: Inspection Report

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

DATE:	23 September 2011
LOCATION & COUNTY:	Deuel Vocational Institute Dairy 23500 Kasson Road, Tracy San Joaquin County
CONTACTS:	Dan Volmer
INSPECTION DATE:	13 September 2011
INSPECTED BY:	Sean Walsh (CVRWQCB)
ACCOMPANIED BY:	Gilberto Corral (CVRWQCB)

OBSERVATIONS AND COMMENTS:

On 13 September 2011 Regional Water Quality Control Board staff conducted a routine compliance inspection at the Deuel Vocational Institute Dairy located at 23500 Kasson Road, Tracy. The facility contains approximately 750 mature cows.

Several General Order-required operational documents were not found at the facility. Water Board staff could not locate or review production area inspection forms, wastewater application records, fresh water application records, wastewater lagoon photos, well analysis, and significant storm event tracking documents. Additionally the Nutrient Management Plan is not field specific. The Waste Management Plan only included production area and cropland maps.

The facility utilizes a total of 7 lagoons (settling and storage combined). All lagoons and settling basins had 3'-6' freeboard (Photo 1) and were free of animal burrows and/or signs of berm erosion except the "Big Reservoir" located southwest of the production area and immediately east of Kasson Road; staff observed a large hole on the outside of the eastern lagoon embankment (Photos 2-3) that appeared to staff to compromise berm integrity. The lagoons are cleaned out as needed with manure being directly applied to the field from the lagoon.

The facility utilizes a large dedicated manure storage area located on compacted native soil (Photo 4-5). The site was not graded to prevent leachate from ponding and had no control to convey leachate to the wastewater lagoon.

Silage is covered and stored on concrete with all leachate contained and conveyed directly to the wastewater lagoon.

Corrals are moderately-well graded and free of features that would cause water to pond. All corral run off is conveyed to the wastewater lagoon.

Cropland tailwater is managed using a series of berms, ditches, tail water ponds, and a large storage lagoon located in the southwest corner of the property.

Staff observed considerable ponding of wastewater in a weed filled shallow basin east of the wastewater lagoons and north of the prison shooting range. According to an employee of the dairy / prison (Jag) the conveyance ditch that helps to convey tailwater overflowed into this shallow basin. The electrical conductivity of the water contained in the basin was 2200 µs/cm (Photos 6-7). Jag didn't know when the overflow occurred; the wastewater needs to be pumped out to the wastewater lagoons as soon as possible.

Photo 1: Typical condition of all storage lagoons at the facility. No signs of berm erosion and/or animal burrowing. Note 3'-5' freeboard.

Photo 3: Large hole on the eastern embankment of the 'Big Reservoir.'

Photo 2: Large hole on the eastern embankment of the 'Big Reservoir.' It appeared to staff this hole compromises berm integrity.

Photo 4: Designated manure drying / storage area. No control to convey manure leachate to wastewater lagoon.

Photo 5: Same Designated Manure Drying Area as seen in Photo 4. No control to convey manure leachate to the wastewater storage lagoon.

Photo 7: The same low spot pictured in Photo 6.

Photo 6: Shallow basin containing standing wastewater located east of the wastewater lagoons and north of the facility shooting range.

Attachment 2

Central Valley Regional Water Quality Control Board

26 September 2014

Certified Mail No.
7012 0470 0000 9903 6743

Gary Silva
Deuel Vocational Institute Dairy
23500 Kasson Rd
Tracy, CA 95376

NOTICE OF VIOLATION, DEUEL VOCATIONAL INSTITUTE DAIRY, 23500 KASSON ROAD, TRACY, SAN JOAQUIN COUNTY

Central Valley Regional Water Quality Control Board staff conducted a routine compliance inspection at the Deuel Vocational Institute Dairy on 17 July 2014. During the compliance inspection staff observed multiple violations of Board Order No. R5-2013-0122 (Reissued General Order) to exist onsite. A copy of the 17 July 2014 inspection report is attached for your records.

Reissued General Order violations observed during the 17 July 2014 inspection are as follows:

1. Dairy staff was unable to produce Reissued General Order required documentation (i.e. production area inspections, land application area inspections, monthly lagoon photos, manure wastewater and freshwater applications records, lab sample results (i.e. forage, wastewater, and manure), and rendering records)
2. Failed to produce/maintain a Reissued General Order-compliant Nutrient Management Plan onsite
3. Incomplete Waste Management Plan (WMP): The facility's WMP failed to include wastewater volume generated by the onsite milk bottling plan; this wastewater is currently stored in the dairy lagoon
4. Wastewater ponding at the manure stacking area
5. On-property discharge: one-acre area where wastewater had been discharged due to a dysfunctional manure solid separator
6. Excessive weeds on the wastewater lagoon embankments
7. Storage of blended wastewater & freshwater in a "freshwater pond"
8. Failure to quantify nutrient (manure) application rates on cropland
9. Small number of dead animal remains observed onsite
10. Tailwater conveyance ditches used to store wastewater/tailwater

Submit to Central Valley Water Board staff copies of the missing documentation for 2013 and 2014 (see item 1), an updated NMP (see item 2), and an updated WMP (see item 3) **by no later than 31 October 2014.** Actions need to be taken immediately to correct onsite operational violations (see bullet 4 thru 10). Correct onsite violations **by no later than 31 October 2014.** Staff will re-inspect the dairy facility soon after the 31 October 2014 deadline. Provide staff a detailed map showing existing plumbing used to manage wastewater onsite, including off-property connections from along the prison's east boundary by **no later than 31 October 2014**.

You will continue to accrue potential daily liability until you comply with this Notice of Violation. If you fail to comply with this Notice of Violation, you will be subject to additional enforcement action, and/or termination of the authorization to discharge according to the Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies Order No. R5-2013-0122, Provision E.10.

If you have any questions regarding this Notice of Violation, please contact Gilberto Corral at (916) 464-4653 or gilberto.corral@waterboards.ca.gov.

Charlene Herbst
Senior Engineering Geologist
Confined Animal Facility Regulatory Unit

cc: Jay Madsen, Ag Manager - CALPIA, Tracy CA
Darrol Vierra, Administrator - CALPIA, Tracy CA

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

DATE:	17 July 2014
DISCHARGER:	Dairy at Deuel Vocational Institute, CA Dept. of Corrections
LOCATION & COUNTY:	23500 Kasson Road, Tracy, San Joaquin Co.
CONTACTS:	Gary Silva – Superintendent II Agriculture Jag Botsch – Field Staff under Gary Silva
INSPECTION DATE:	17 July 2014
INSPECTED BY:	Gilberto Corral & Sean Walsh - CVRWQCB
ACCOMPANIED BY:	Kristel M. Kranz – JMLord Inc. (Dairy Consultant)

OBSERVATIONS AND COMMENTS:

Central Valley Regional Water Quality Control Board staff conducted a routine compliance inspection at the Deuel Vocational Institute (DVI) dairy located east of Tracy, on 17 July 2014 (see Map 1). The entire DVI compound is composed of a wastewater treatment plant, inmate cell blocks, freshwater treatment plant, milk barn, milk bottling plant, seven wastewater storage lagoons, one "freshwater pond", 405 acres of cropland, and a large return ditch along the eastern property perimeter (see Map 2). The dairy at DVI is permitted under the Reissued General Order for a total maximum of 805 mature cows (milking & dry, including 15%). At the time of the inspection, there were approximately 650 mature cows onsite (560 milking and 90 dry cows).

Staff met with Superintendent Gary Silva, field staff Jag Botsch, and consultant Kristel M. Kranz. Staff asked to review the facility's Reissued General Order required documentation (i.e. production area inspections, land application area inspections, monthly lagoon photos, manure wastewater and freshwater applications records, lab sample results (i.e. forage, wastewater, and manure), and rendering records), but no documentation was available for staff to review. Staff then asked to review the facility's Nutrient Management Plan (NMP) and Waste Management Plan (WMP). Staff were handed two documents labeled as such, but the content of each document was far from conforming to the Reissued General Order guidelines. Neither document presented to staff contained professional signatures certifying their content (i.e. a registered engineer for the WMP and technical service provider/certified crop advisor for the NMP). However, staff did determine a certified WMP was on file at the Regional Board office, received 1 July 2010. At the time of inspection, a 2013 Annual Report had not yet been received by the Regional Board; however a 2013 Annual Report recently produced by Ms. Kranz was onsite. Staff reviewed the report and determined the report was missing nitrogen (N) import/export data, wastewater lab sample results, and included unreasonably low N applications to cropland (e.g. 100 lbs of N were applied to 405 acres during 2013). The Annual Report is incomplete and will need to be revised to include all real data available (e.g. nutrient exports/imports).

Staff then inspected the dairy (production area and cropland) and observed the following:

A. Staff first observed the milk bottling plant. The majority of the milk produced onsite is bottled for prison use and the remaining milk is sold to a milk broker and shipped offsite. Staff discovered the onsite milk bottling plant generates an unknown volume of wastewater that flows to the wastewater storage lagoons. Note this unknown volume of wastewater was not included in the facility's WMP. Staff inspected the milk barn and wash pen areas and observed no issues.

B. The manure stacking area north of the manure separator was unorganized and contained wastewater ponding (see Photo 1). Manure in this area should be mounded neatly and any leachate should be drained to the wastewater lagoons.

C. Staff then observed a one-acre area located north of the manure solid separator where manure (liquid & solids) had been discharged (see Photo 2). The one-acre area had significant wastewater ponding issues created by a dysfunctional manure solid separator. The manure separator had been discharging wastewater into the one-acre area every time the separator was turned on (see Photo 3). Mr. Silva told staff someone had been called out to repair it, but the repairmen had found nothing was wrong with it. Staff observed a temporary berm made of manure had been placed to redirect discharging wastewater from the separator to the lagoon; staff was informed the berm was placed prior to the inspection. This is only a temporary fix rather than a permanent one. Staff suggested wastewater bypass the separator until it was repaired properly.

D. The one-acre area produces runoff that flows into a lower elevation return ditch along the institution's eastern perimeter (see Photo 4). Staff's concern is the return ditch may be connected to an off-property drain that discharges water to the San Joaquin River. Due to time and security constraints during the inspection, staff was unable to fully inspect the entire on-property length of the return ditch along the eastern perimeter.

E. The seven lagoons onsite contained excessive weeds on their inner and outer embankments (see Photo 5). Staff asked DVI dairy staff to better control excessive vegetation on the lagoon embankments.

F. DVI staff indicated it is common practice at the dairy to blend wastewater with freshwater and store it in the "freshwater pond" located adjacent to South Kasson Road. The "freshwater pond" is not a wastewater storage lagoon according to the facility's WMP. A large fraction of cropland onsite is irrigated from the "freshwater pond".

G. DVI staff have no mechanisms in place to quantify nutrient loading on their cropland. Regional Board staff witnessed a failed crop on at least one large field, and several other smaller parcels were fallow.

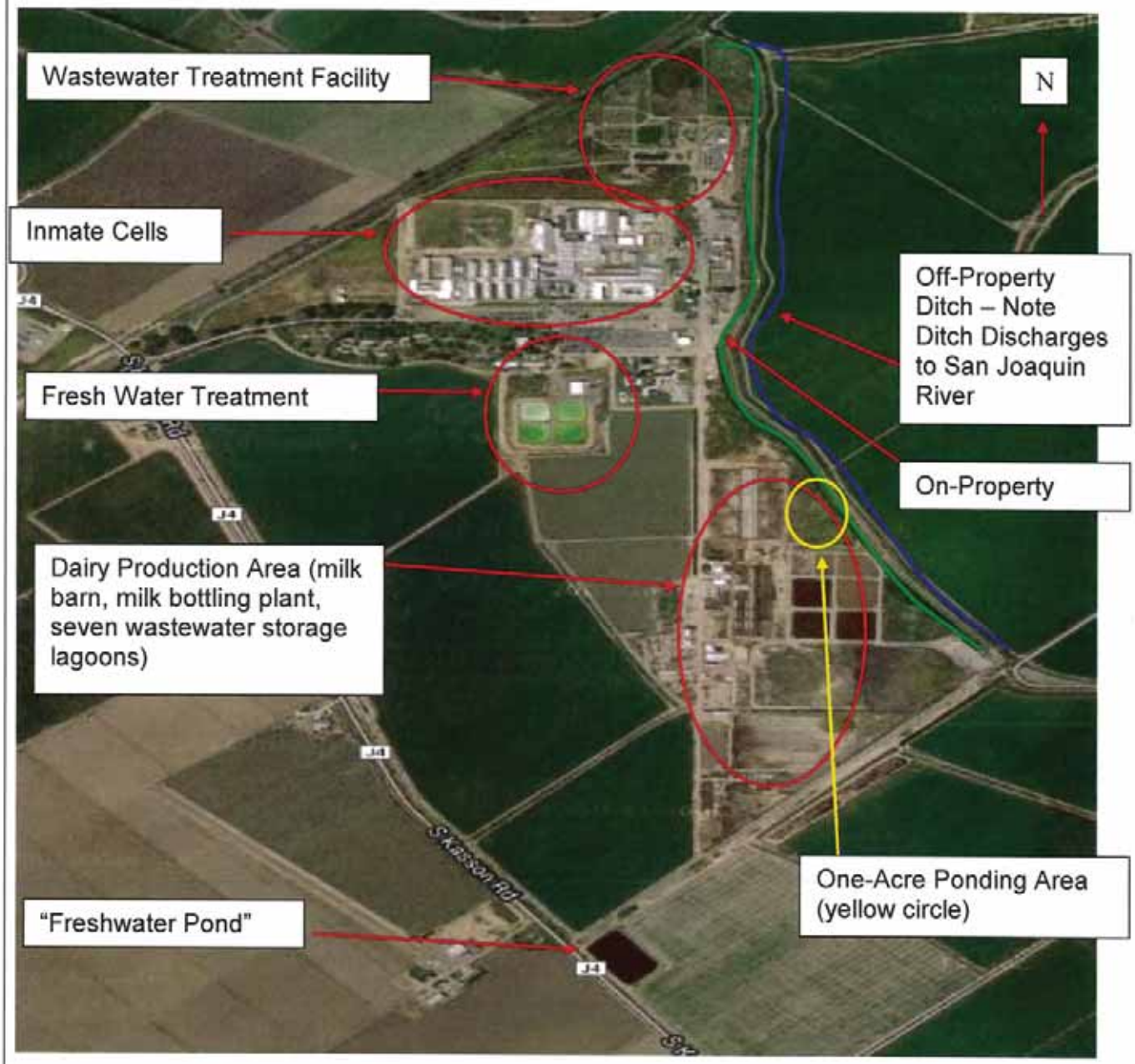
H. Staff also noted a small number of dead animal remains strewn near the feed storage area. Staff were told coyotes sometime consume the dead calves before the rendering company picks them up. Additionally, staff was told the rendering company doesn't pick up dead

animals regularly because accessing the prison is difficult.

l. Lastly, staff observed several tail water return ditches at capacity surrounding dairy cropland; staff was informed that the ditches remain full of tail water throughout the irrigation season.

The dairy facility needs to immediately produce an updated NMP, WMP and must begin collecting data required to complete their 2014 Annual Report. The revised NMP & WMP need to account for wastewater generated by the milk bottling operation. The placement of wastewater not generated by dairy operations into dairy lagoons may trigger a requirement for individual WDRs. The 2013 Annual Report should be revised to include all data/information available (e.g. nutrient imports/exports). Ongoing recordkeeping set forth by the Reissued General Order needs to be maintained and kept onsite, including rendering records. The following onsite violations need to be addressed: (1) repair broken manure solid separator, (2) completely remove all manure from the area affected by the separator's wastewater discharge, (3) control excessive vegetation on lagoon embankments, (4) provide a centralized area for staging dead cows where they are not accessed by coyotes, (5) neatly mound manure in the stacking area and provide proper drainage, and (6) discontinue using the "freshwater pond" and tail water return ditches to store manure wastewater.

Map 1: This map shows the location of Deuel Vocational Institute relative to the city of Tracy.



Map 2: This map shows the features of Deuel Vocational Institute.

Photo 1: Photo of the uncontained manure stacking area without proper drainage.

Photo 2: Photo of the one-acre area, north of the separator, where manure (liquid & solid) had been discharged.

Photo 3: Photo of wastewater spilling from the broken manure solid separator during the inspection.

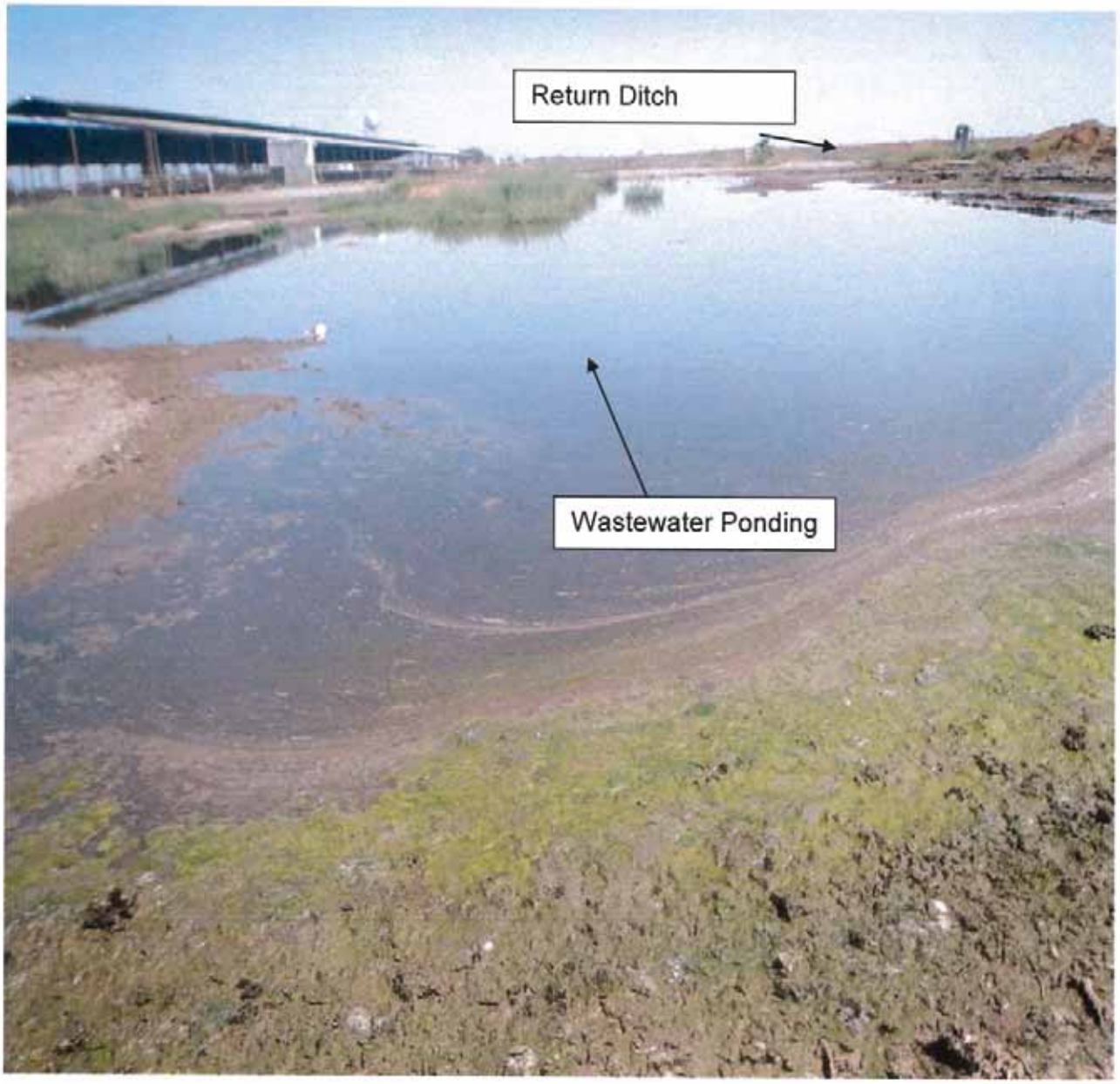


Photo 4: Photo of wastewater ponding in the one-acre area; wastewater from this area appears to have flowed into the return ditch along the east property perimeter.

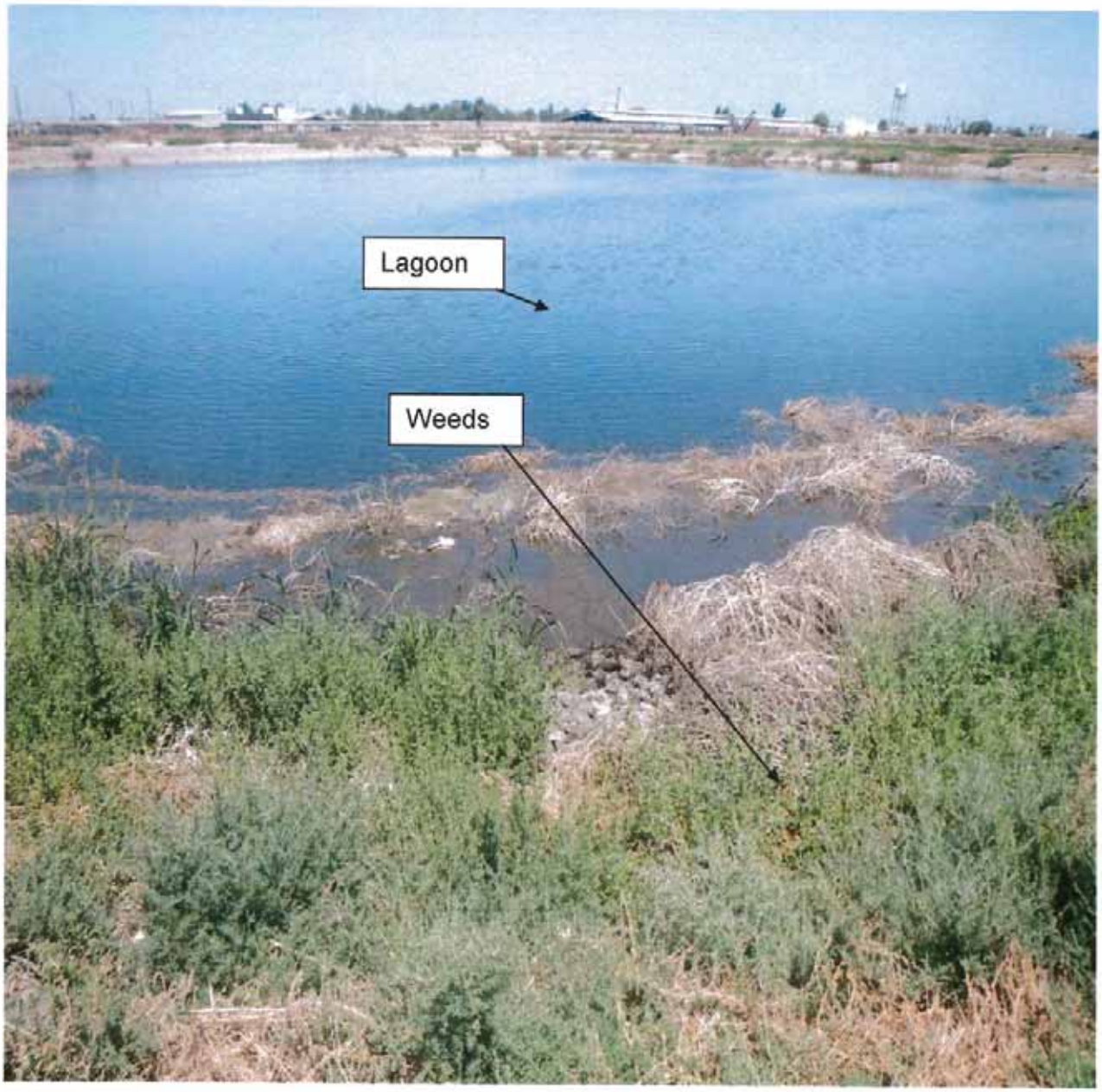


Photo 5: Photo of a lagoon with excessive vegetation on its inner and outer embankments.

Photo 6: Photo of the "freshwater pond" containing wastewater blended with fresh water.

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

Attachment 3

INSPECTION REPORT

DATE:	15 December 2014
DISCHARGER:	CA. Dept. of Corrections Deuel Vocational institute Dairy
LOCATION & COUNTY:	23500 Kasson Road, Tracy, San Joaquin County
CONTACTS:	Gary Silva and Darrin Vierra - Dairy Contacts
INSPECTION DATE:	15 December 2014
INSPECTED BY:	Gilberto Corral & Sean Walsh – CVRWQCB

OBSERVATIONS AND COMMENTS:

On 15 December 2014, Central Valley Regional Water Quality Control Board staff inspected the dairy at Deuel Vocational Institute (DVI) in Tracy to follow-up on a Notice of Violation (NOV) issued on 26 September 2014. The aforementioned NOV included the following violations: (1) failure to provide staff with General-Order required onsite records, (2) failure to provide staff a certified Nutrient Management Plan and Waste Management Plan, (3) major wastewater ponding throughout the production area, (4) a wastewater discharge to an undefined one-acre area, (5) excessive weeds on the lagoon embankments, (6) process wastewater storage in a "Fresh Water Pond", (7) failure to quantify manure application rates to cropland, (8) a small number of dead animal remains observed onsite, and (9) tailwater conveyance ditches being used to store wastewater/tailwater.

Staff arrived onsite and met with DVI's staff, Gary Silva and Darrin Vierra. Staff walked the entire dairy production area. Staff continued to observe major ponding issues due to lack of proper drainage capabilities at the corrals, feed storage areas, and manure storage areas (see Photo 1 thru 3). Excessive weeds on the lagoon embankments appeared to have been mitigated; however the lagoons were at capacity with minimal freeboard (see Photo 4). Various locations along the east dairy production area perimeter, including the one-acre undefined area north of the manure separator, continued to have lots of uncontained manure (liquid & solids) and runoff was observed flowing east to an on-property storm water retention ditch (see Photo 5). Wastewater discharging from a defective manure separator into the one-acre undefined area north of the manure separator was no longer observed, however the wet manure that remains strewn in this area still needs to be removed (see Photo 6). Staff no longer observed recent dead animal remain onsite. Lastly, staff discussed with Mr. Silva and Mr. Vierra various compliance options for future uses of the "Fresh Water Pond", tailwater conveyance ditches currently used to store wastewater, and methods to quantify nutrient applications to their cropland. Staff were told the "Fresh Water Pond" and tailwater conveyance ditches will no longer be used for wastewater storage. Furthermore staff were told flow meters would be installed in the near future to better quantify nutrient loading on cropland.

Staff concluded their inspection by reviewing DVI's records required under the Reissued General Order. Staff observed a 3-inch binder was now being used to maintain their onsite records. The 3-inch binder only included more recent onsite/self-inspection records, but appeared to be a comprehensive set. A certified Nutrient Management Plan and Waste Management Plan were now onsite.

Photo 1: Photo of major corral ponding without proper drainage capabilities.

Photo 2: Photo of major ponding at the feed storage area.

Photo 3: Photo of major wastewater ponding at the manure staking area.

Photo 4: Photo of the lagoons onsite at capacity without the required freeboard.

Photo 5: Photo of uncontained manure at the one-acre undefined area north of the manure separator.

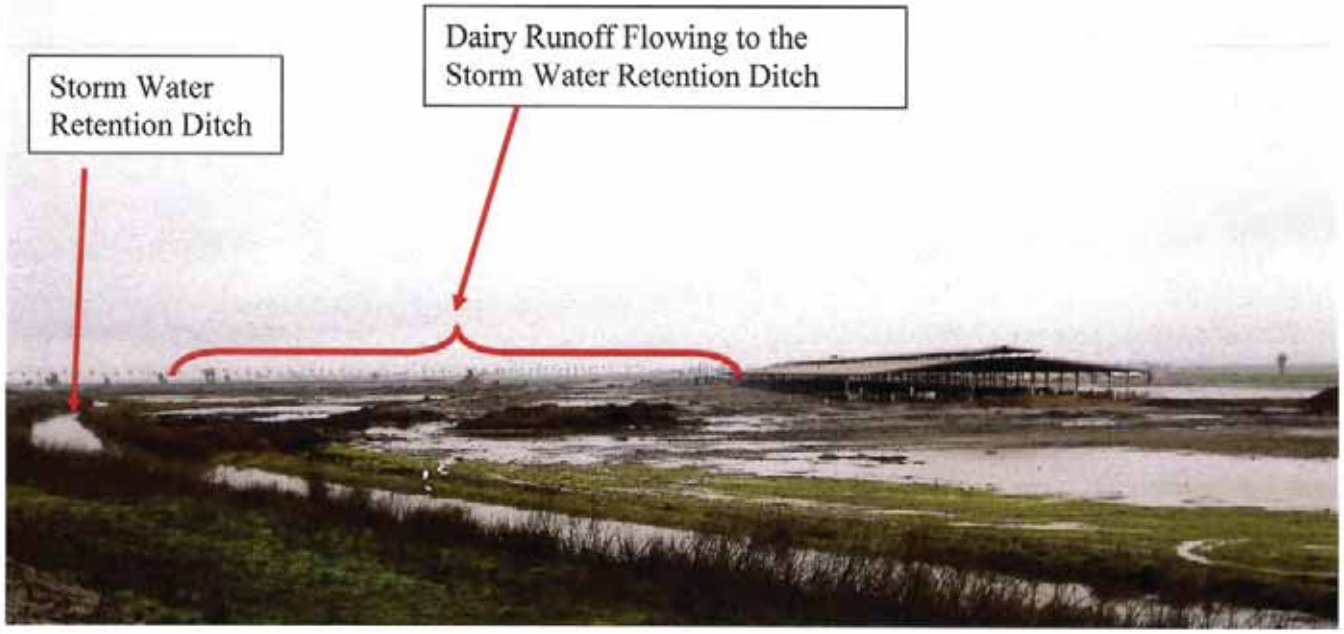


Photo 6: Photo of the dairy production area east perimeter with lots of runoff flowing into an on-property storm water retention ditch.

Corral, Gilberto@Waterboards

From: Kristel Kranz <Kristel@jmlordinc.com>
Sent: Monday, January 26, 2015 12:35 PM
To: Corral, Gilberto@Waterboards
Subject: PIA Timeline
Attachments: PIA-DVI NOV Resolution.pdf

Hi Gilberto,

Thanks again for the heads up this morning. Gary and Darrol looked over the timeline one last time, and they think that all the deadlines listed are realistic for them. Attached is the document; this one has a table of all the tasks at the bottom.

Thanks,
Kristel

Kristel M. Kranz, E.I.T.
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Proposed Timeline of Strategies for Resolving Violations and Staying in Compliance with Regional Water Quality Control Board Regulations

California PIA-DVI Dairy (Tracy, CA)
January 9, 2015

During a meeting at the Central Valley Regional Water Quality Control Board on December 16, 2014, Water Board personnel, Wendy and Rob, reviewed the items on PIA-DVI Dairy's Notice of Violation. They remarked that several items had been resolved, but some were left unsolved. PIA-DVI Dairy has addressed some of the items, but a lot of work is needed to address the remaining items. In response to requests made by the Water Board during the meeting, PIA-DVI Dairy will be implementing measures to get into compliance. However, because of the extensive scope of these changes, and the challenges associated with working on prison property and with state funds, many of these retrofits will likely span one to two years.

1. Record keeping has improved. A designated staff member will continue to keep accurate and detailed records in the white binder to ensure continued compliance.

   This item has been resolved and will continue on an ongoing basis.

2. An updated Nutrient Management Plan (NMP) has been submitted. The Water Board emphasized the importance of following the NMP to maintain proper N-ratios for each crop. During the meeting, the Water Board recommended that PIA-DVI Dairy stop using commercial fertilizer and apply wastewater and manure produced onsite as the primary nutrient sources for all crops grown.

   A manure spreader/hauler will be contracted to land apply all dry manure to PIA-DVI Dairy fields. The expected completion date for this transition is approximately 3 months from today (April 9, 2015).

3. An updated Waste Management Plan (WMP) has been submitted. Although the WMP indicates that there is sufficient storage capacity in the dairy ponds, steps must be taken to reduce wastewater production and additional water going to the ponds. Below are some options to address this:

   a. Install freeboard markers on all the ponds so that the amount of freeboard can be tracked and documented at each pond inspection.

      JMLord personnel will install freeboard markers the second week of February 2015.

   b. Instead of draining "fresh" water from the plate cooler directly into the ponds, redirect this water to a storage tank. This water can be reused for the red hose floor wash, for bulk tank washing, for pipeline washing, and for the water needs of the bottling plant. This action could potentially divert 25,000 gallons per day of water from the ponds.

The dairy will acquire a storage tank to hold recycled water from the plate cooler. The milk barn will be re-piped so this water can be used for the floor wash and watering the cows. The expected completion date for this task is approximately 12 months from today (January 9, 2016).

c. Continue to scrape solids from the bottoms of dairy wastewater ponds and export as dry manure to increase wastewater pond storage capacity.

Slurry spreading will continue annually and scraping of the ponds will occur every two years.

d. Construct a new fresh water pond and divert stormwater runoff from dairy roof surfaces away from the ponds to be collected here. One benefit of constructing a fresh water pond is that the regulatory requirements are significantly less for fresh water ponds than for wastewater ponds.

The dairy will install a rainwater collection system that redirects roof runoff from the freestall barn away from the wastewater ponds. The expected completion date for this task is approximately 6 months from today (July 9, 2015). Once the dairy completely isolates manure and wastewater from the area east of the lagoons and west of the gun range, it can be repurposed as a stormwater runoff storage area. The expected completion date for this task is approximately 18 months from today (July 9, 2016).

4. The Water Board emphasized the importance of preventing and managing ponding throughout the site. Some areas were specifically addressed by Water Board staff. These are discussed below with options for resolving the problems.

a. Ponding around the mechanical solids separator and leachate from the separated solids pile: scrape all residual manure from the area and store manure in appropriate storage areas. Re-grade the ground and berm as necessary to redirect drainage from the separator and leachate from the solids to drain either directly back into the ponds or to the lift pump approximately 100 feet NW of the separator, which can pump water back into the ponds. Build or reinforce berms to prevent leachate or runoff from entering this area in the future.

Berms will be built to direct all runoff and leachate to the lift pump approximately 100 feet northwest of the separator. The expected completion date for this task is approximately 6 months from today (July 9, 2015). The separator will be relocated to the top of the bank so that water runs directly back into the dairy ponds. The expected completion date for this task is approximately 24 months from today (January 9, 2017).

b. Ponding throughout the dairy site including feed storage areas and the south heifer corrals; runoff drainage from this area runs into the eastern ditch. Scrape all residual manure from the area and store manure in appropriate storage areas. Re-grade the ground to redirect ponding to drains which can be pumped back into the ponds. Build berms as necessary to prevent ponding around the feed storage areas. Consider discontinuing use of some of the corrals, reducing the areas that come into contact with manure.

In the short term, water will be pumped from the feed storage area and from the corrals within 36 hours after a rain event. In the long term, it will be necessary to locate all the drains and repair any malfunctioning lift pumps on site so that the drainage can be returned to the dairy ponds. In addition, the entire silage pit will be reconstructed. The expected completion date for this retrofit is approximately 18 months from today (July 9, 2016).

c. Ponding east of the lagoons: If ponds are leaking, new liners may need to be installed. Alternatively, clay or soil additives may need to be added. If water from the ditch along the eastern perimeter is seeping, the berms on either side of the ditch may need to be reconstructed with steps taken to prevent gopher holes and future seepage. It may be necessary to install a drain and lift pump in this area to redirect any water back to the ponds. Re-grade the ground and build or reinforce berms to prevent runoff from entering this area in the future.

Scraping of manure and building berms along the corrals will prevent manure or wastewater from running off into this area. The expected completion date for this task is approximately 6 months from today (July 9, 2015). Once this area is free of manure and wastewater, it can be repurposed as a stormwater storage area. The expected completion date for this task is approximately 12 months from today (January 9, 2016).

d. Ponding north of the freestall area: The Water Board observed that manure had been scraped and improperly stored at the north end of the freestall area. Leachate and runoff from this manure was causing ponding and improper drainage into the ditch. Scrape all residual manure from the area and store manure in proper manure storage areas. Moving forward, this area should not be used for manure storage. It may be necessary to re-grade the ground here to direct runoff to a drain which can pump water back to the ponds.

All manure will be scraped from this area and used for dry bedding. The dairy will store manure as dry bedding in this area, but will purchase a cover for the bedding pile to prevent rainfall runoff contamination. The expected completion date for this task is approximately 1 month from today (February 9, 2015).

5. If steps in item number four are taken, discharge to the area around the separator will cease, and all water from the separator itself and from solids leaching will be redirected back to the ponds. It will be necessary to provide documentation of the repair and maintenance of the separator.

This item has been resolved. Receipts are attached.

6. PIA staff has removed weeds along the ponds and will continue to do so. Pond inspection pictures should be taken of all embankments to document weed removal.

This item has been resolved and will continue on an ongoing basis.

7. Because wastewater blended with freshwater is still considered wastewater, this blend cannot be stored in the freshwater pond near Field 11. Instead of storing the blended water, it should be used directly from the pipelines to irrigate fields immediately upon mixing. Moving forward, it

may be necessary to install and mixing chamber or standpipe and backflow prevention valve so that blended water is no longer stored in the freshwater pond. Golden State Irrigation has been contacted should design and construction work on this project move forward.

This pond is used for the blending of wastewater and freshwater immediately prior to irrigating, and is completely emptied. No blended water is stored in this pond between irrigations. The dairy will continue to use the pond in this manner with the understanding that this use is acceptable under the Dairy General Order. If it is deemed unacceptable, the dairy will contract Golden State Irrigation to retrofit the piping to allow mixing only in the pipeline, leaving the pond as storage solely for river water. Completion date is contingent on review from the Water Board.

8. As long as samples are collected and analyzed according to the schedule, this item is resolved by steps taken in item number one. Installing valves and meters at a few key points will help dairy personnel to measure and manage freshwater and wastewater irrigations to each field. Likewise, keeping proper documentation such as Attachment D forms for manure exports and hauling and any third party agreements for wastewater exports will help with this item.

   The dairy plans to install two meters. The first will be at the discharge point from the dairy lagoons, and the second will be at the irrigation pipeline heading to fields 1, 2, and 3. The expected completion date for this task is approximately 4 months from today (May 9, 2015).

9. To ensure timely collection and pick-up of dead animals, staff has undergone training sessions. In addition, a cage will be built for the storage of dead animals until such time as they can be properly removed from the site. Bakker Commodity receipts are kept on site to document pick-ups.

   The expected completion date for the installation of the cage is approximately 2 months from today (March 9, 2015).

10. There are a number of possible actions that can be taken to help solve the problem of wastewater and tailwater storage in the ditches. To increase wastewater storage capacity in the ponds, slurry buildup in the ponds has been removed. This increase in storage capacity will make it possible for tailwater from the ditches to be pumped into the ponds. However, because there are a number of sources feeding into these ditches, each must be addressed:

    a. Institutional runoff: redirect stormwater runoff from institutional surfaces to a segregated storage area or ditch which can be dealt with separately from the dairy wastewater or tailwater.

    b. Reverse osmosis plant brine: ensure that all leftover brine from the RO plant is properly stored only in the designated brine ponds and that none enters ditches designated only for tailwater.

    c. Tailwater from the fields: because these ditches are meant primarily for this purpose, it is acceptable for tailwater to drain into these ditches. However, to minimize the amount of tailwater entering the ditches, irrigations must be properly monitored and managed so

that only the amount of water needed to water each field is used. Valves may need to be installed along the pipelines so that irrigation water on each field can be controlled.

d. Dairy site runoff: To prevent water that has come into contact with manure from entering the ditches, steps in number four must be taken. Stormwater runoff from roof surfaces can be redirected and stored for use as an additional water source and prevented from entering the tailwater ditches. Any other surface runoff should be directed to the ponds.

e. Whenever water collects in the ditches, the pump near the gun range must be used regularly to empty the ditches by pumping water back into the standpipe for reuse in irrigations or pumped back to the dairy ponds. This action will help prevent seepage from the ditches onto neighboring property or onto areas where ponding has been observed.

Fixing this problem is contingent on the institution and the RO plant. Constructing a mechanism for isolating the ditches from institutional runoff and from the RO brine will greatly alleviate the amount of water entering these ditches. It is the dairy's understanding that as long as no manure or wastewater enters the ditches and as long as the water is within an acceptable range for pH, the tailwater can be pumped back into the river. Completion date is contingent on review from the Water Board and participation from the RO plant and the institution.

11. In addition to the numbered items on the NOV, Water Board staff requested updated and detailed mapping of the dairy site and vicinity showing all pipelines, pumps, drains, valves, ponds, ditches, discharge points, manure storage areas, and any other apparatus or object associated with the water and waste management systems at the PIA-DVI Dairy. It will be necessary to work with staff onsite to produce such a map.

To accurately map the entire dairy site, it will be necessary to identify and locate all the relevant structures and acquire historical schematic documents. Expected completion date of this task is approximately 12 months from today (January 9, 2016).

12. During the meeting, Water Board staff also suggested that the dairy join a monitoring well program such as Dairy Cares (http://dairycares.com/CVDRMP).

PIA-DVI Dairy is already a paying member of the Dairy Cares program.

Table: Tasks and Estimated Dates of Completion

Task	Estimated Date of Completion
Scrape manure from the area north of the freestalls. Install a cover for the future storage of dry manure for bedding.	February 9, 2015
Install freeboard markers on dairy ponds.	February 12, 2015
Install a cage for dead animals.	March 9, 2015
Contract a manure spreader to land apply all dry manure on PIA-DVI fields.	April 9, 2015
Install a meter at the discharge point from the dairy lagoons, and another at the irrigation pipeline heading to fields 1, 2, and 3.	May 9, 2015
Redirect rainfall runoff from freestall barn roof away from dairy ponds.	July 9, 2015
Install berms to direct all runoff and leachate from the area around the separator to the lift pump approximately 100 feet northwest of the separator.	July 9, 2015
Scrape manure and build berms along the corrals.	July 9, 2015
Install storage tank and new piping in the milk barn for the use of recycled plate cooler water for the floor wash and watering the cows.	January 9, 2016
Produce a map of the entire dairy site identifying all piping, drains, and pumps.	January 9, 2016
Remove all manure from the area east of the lagoons / west of the gun range and build berms to repurpose the area as a stormwater runoff storage area.	July 9, 2016
Locate all the drains and repair any malfunctioning lift pumps.	July 9, 2016
Construct new silage pit.	July 9, 2016
Move the separator to the top of the bank so that water runs directly back into the dairy ponds.	January 9, 2017