

Farhad, Mohammad@Waterboards

From: Wyels, Wendy@Waterboards
Sent: Thursday, March 12, 2015 10:16 AM
To: Price, Jerome@CDCR; Beasley, Joseph@CDCR; jamie.rodriguez1@cdcr.ca.gov; Reyes, Pedro@CDCR; Stanley, Jeff@CDCR; Madia, Teri@CDCR; Cordano, Fred@CDCR; Bettencourt, Miles (Terry)@CDCR; Poston, Todd@CDCR; Vasconcellos, Edward@CDCR; Hardcastle, Mark@CDCR; gary.silva@calpia.ca.gov; darrol.vierra@calpia.ca.gov
Cc: Remick, David@Waterboards; Ewing, Catherine@Waterboards; Burton, Bruce@Waterboards; Hinrichs, Richard@Waterboards; Sahota, Bhupinder@Waterboards; Altevogt, Andrew@Waterboards; Hold, Howard@Waterboards; Kenny, Brendan@Waterboards; Busby, Robert@Waterboards; Herbst, Charlene@Waterboards; Corral, Gilberto@Waterboards; Holmes, Kari@Waterboards; Farhad, Mohammad@Waterboards; Young, Vanessa@Waterboards
Subject: Draft Cleanup and Abatement Orders for DVI: Title 27
Attachments: Final cover letter DVI three CAOs tentative .pdf; 10 March 15 DVI Title 27 CAO.pdf

Warden Price,

This is the first of three emails containing three draft Cleanup and Abatement Orders for the Deuel Vocational Institution. Once issued, the Orders will require improvements to ensure that CDCR Deuel complies with its Waste Discharge Requirements (WDRs) for the Title 27 brine ponds, its WDRs for the milk cow dairy, and its NPDES permit for the wastewater treatment plant.

Please provide any written comments by **March 25th**. Also by that date, please provide the name of a single point-of-contact within DVI or CDCR who will be responsible for coordinating all the work required by the CAOs and submitting all documents required by the CAOs.

If you have any questions, please contact me.

Wendy Wyels
Supervisor, Compliance and Enforcement Section
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite A
Rancho Cordova, CA 95670
(916) 464-4835
wwyels@waterboards.ca.gov



Central Valley Regional Water Quality Control Board

11 March 2015

via US Mail and email

J. Price, Warden
Deuel Vocational Institution
California Department of Corrections
P.O. Box 400
Tracy, CA 95378-0004

DRAFT CLEANUP AND ABATEMENT ORDERS, DEUEL VOCATIONAL INSTITUTION, SAN JOAQUIN COUNTY

Enclosed for your review and comment are three draft Cleanup and Abatement Orders (CAOs) that incorporate timelines for the completion of repairs and operational changes needed for the Deuel Vocational Institute to come into compliance with the three water quality permits previously issued by the Central Valley Water Board: Waste Discharge Requirements (WDRs) Order R5-2007-0005 for the reverse osmosis water treatment facility’s Class II surface impoundments, WDRs Order R5-2014-0014 (NPDES CA0078093) for the wastewater treatment plant, and Reissued WDRs General Order for Existing Milk Cow Dairies R5-2013-0122 for the dairy operation.

Please provide any written comments by **25 March 2015**. Copies of the draft Orders are also available for viewing on our website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/

Also by **25 March 2015**, please provide the name of a single point-of-contact within the Deuel Vocational Institution or California Department of Corrections Headquarters who will be responsible for coordinating all the work required by the CAO and submitting all the documents required by the CAO to the Board.

The Water Board has transitioned to a paperless office. Therefore, written comments shall be converted to PDF and sent to centralvalleysacramento@waterboards.ca.gov. To ensure that the document is properly logged and routed to the appropriate Water Board staff, please include the information in the following table in the body of the e-mail:

Date of Submittal	<i>Add Date and Title of Submittal Here</i>
Regulatory Program	Title 27, NPDES, and Dairies
Unit	Compliance and Enforcement
Regulated Party Name (Discharger)	California Department of Corrections and Rehabilitation
Facility Name	Deuel Vocational Institution
County	San Joaquin

If you have any questions regarding the draft CAOs, or wish to discuss the matter further, please contact Wendy.Wyels@waterboards.ca.gov.

--original signed by--

ANDREW ALTEVOGT
Assistant Executive Officer

Enc: Three Draft Cleanup and Abatement Orders

cc: Joseph Beasley, Associate Warden, Deuel Vocational Institution, Tracy
Terry Bettencourt, Correctional Plant Manager, Deuel Vocational Institution, Tracy
Jamie Rodriguez, Chief Engineer, Deuel Vocational Institution, Tracy
Pedro Reyes, California Department of Corrections and Rehabilitation, Rancho Cordova
Jeff Stanley, California Department of Corrections and Rehabilitation, Rancho Cordova
Terri Madia, California Department of Corrections and Rehabilitation, Rancho Cordova
Fred Cordano, California Department of Corrections and Rehabilitation, Rancho Cordova
Todd Poston, California Department of Corrections and Rehabilitation, Rancho Cordova
Edward Vasconcellos, Deuel Vocational Institution, Tracy
Mark Hardcastle, Regional Manager, Facilities Management, CDCR, Rancho Cordova
Gary Silva, Deuel Vocational Institute Dairy, Tracy
Jay Madsen, Ag Manager, CALPIA, Tracy
Darrol Vierra, Prison Industries Administrator, CALPIA, Tracy

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER R5-2015-XXXX
FOR

CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION
FOR
OPERATION OF CLASS II SURFACE IMPOUNDMENTS
DEUEL VOCATIONAL INSTITUTION
SAN JOAQUIN COUNTY

This Order is issued to the California Department of Corrections and Rehabilitation (Discharger) based on provisions of California 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 or Order), and Water Code section 13267 Order, which authorizes the 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. The California Department of Corrections and Rehabilitation (Discharger) discharges brine waste from a reverse osmosis water treatment plant into four Class II Surface Impoundments at the Deuel Vocational Institution (DVI). The facility is located east of the City of Tracy in San Joaquin County in Section 20, T2S, R6E, MDB&M.
2. Waste Discharge Requirements (WDRs) Order R5-2007-0005, adopted by the Board on 25 January 2007, classifies the waste stream produced by the reverse osmosis plant as "designated waste" and prescribes requirements for the discharge of this waste to the Class II Surface Impoundments.

VIOLATIONS OF ORDER R5-2007-0005

3. This CAO addresses violations of the California Water Code and WDRs Order R5-2007-0005, as previously cited in the following documents: (1) 31 July 2014 Notice of Violation, (2) 4 September 2014 Notice of Violation and (3) 18 November 2014 Water Code section 13267 Order to Submit Technical Reports.

Failure to Submit Financial Assurance Report

4. Financial Assurance Requirement D.1 of Order R5-2007-0005 states, "*The Discharger shall, by 30 April of each year, submit for review and approval, plans with detailed cost estimates and a demonstration of assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the waste management unit. The Discharger shall provide the assurances of financial responsibility to the Regional Board as required by Title 27 CCR, Division 2, Subdivision 1, Chapter 6.....*"

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5. On 31 July 2014, Regional Board staff issued a Notice of Violation (NOV) to the Discharger for failure to submit the 2014 Financial Assurance Certification by 30 April 2014. The NOV required the Discharger to submit the past due Financial Assurance Certification by 30 September 2014. The Financial Assurance Certification was submitted on 3 September 2014.

Failure to Conduct Monitoring or Submit Monitoring Reports

6. Provision E.2 of Order R5-2007-0005 states, *"The Discharger shall comply with Monitoring and Reporting Program No. R5-2007-0005, which is attached to and made part of this Order... A violation of Monitoring and Reporting Program No. R5-2007-0005 is a violation of these waste discharge requirements."*
7. On 4 September 2014, Regional Board staff issued a Notice of Violation for failure to submit the Second Semi-Annual 2013 Monitoring Report and the First Semi-Annual 2014 Monitoring Report. The monitoring required by Order R5-2007-0005 is designed, among other things, to detect the earliest possible release from the surface impoundments to groundwater. Without monitoring data, Regional Board staff is unable to evaluate compliance with the WDRs and determine if the discharge to the surface impoundments has impacted water quality. During a 21 October 2014 meeting, the Discharger stated that a lapse in outside contracting was the reason for the delinquent financial assurance report and the non-submittal of the Second Semi-Annual 2013 and First Semi-Annual 2014 reports.
8. On 23 October 2014, the Discharger notified Regional Board staff that a contract for facility and water quality monitoring was awarded on 8 October 2014 and ground water samples were collected on 23 October 2014. However, the Discharger has not submitted the Second Semi-Annual 2014 Monitoring Report, which was due on 31 January 2015.

Lack of Capacity and Release from the Surface Impoundments

9. Discharge Specification B.10 of the WDRs states, *"Each surface impoundment and related containment structures shall be constructed and maintained to prevent inundation, erosion, slope failure, washout, and overtopping under 1,000 year, 24 hour precipitation conditions, and shall be designed to contain the 100-year annual wet season precipitation without using the required two feet of freeboard."*
10. Discharge Specification B.18 of the WDRs states, *"If leachate is detected in the vadose zone monitoring system of a surface impoundment (including a leak in the containment structure) the Discharger shall:*
 - a. *Immediately cease discharge of waste, excluding leachate to the surface impoundment, until the leaks can be found and repaired.*

- b. Verbally notify the Regional Board that the containment structures have failed within 72 hours.*
 - c. Submit written notification of the release to the Regional Board within seven days, the notification should include a time schedule to repair the containment structures.*
 - d. The discharge of waste to the surface impoundment shall not resume until the Regional Board has determined that repairs to the liners are complete and there is no further threat to water quality.*
11. On 18 September 2014, the Discharger verbally notified Regional Board staff that on 2 September 2014 liquid was detected in the pan lysimeter (vadose zone monitoring system) of Surface Impoundment No. 1 (SI No.1). Samples collected from the lysimeter identified the liquid as brine, which indicates a leak in the leachate collection and removal system. Therefore, in accordance with Discharge Specification B.18, the Discharger was required to notify the Board within 72 hours and cease the discharge into SI No. 1. However, the Discharger did not immediately cease the discharge and did not provide written notification of the release until 21 October 2014¹.
12. On 21 October 2014, Regional Board staff met with the Discharger to discuss monitoring and reporting violations at the facility. Regional Board staff informed the Discharger that discharges to the Surface Impoundment No. 1 must cease and that a water balance was required to show whether the Discharger could meet the two foot freeboard requirement with only three operating surface impoundments. Additionally, Regional Board staff requested weekly monitoring/progress reports documenting the volume of water in the ponds, the volume of water hauled off-site for disposal and the status of contract development associated with investigation and liner repair of Surface Impoundment No. 1.
13. On 31 October 2014, the Discharger began submitting weekly status reports as requested by Regional Board staff. The reports indicated that between 18 October and 31 October 2014, approximately 14,550 gallons of brine were discharged into Surface Impoundment No.1, in violation of the WDRs.
14. On 3 November 2014, the Discharger submitted weekly monitoring data that indicated liquid was present in the pan lysimeter of Surface Impoundment No. 3. The liquid was first identified on 18 October 2014. Liquid in the pan lysimeter indicates that waste is leaking from the class II Surface Impoundment. Therefore, in accordance with Discharge Specification B.18, the Discharger was required to notify the Board within 72 hours and cease the discharge into SI No. 3. However, the Discharger failed to notify Regional

¹ A subsequent review of operator logs finds that the Discharger noted that water was present in the pan lysimeter of SI No. 1 in January 2014. The Discharger did not provide notification and did not stop the discharge, in violation of the WDRs.

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Board staff in the time frame required by the WDRs and failed to immediately cease the discharge into SI No. 3.

15. On 18 November 2014, the Assistant Executive Officer issued a California Water Code section 13267 Order, requiring the Discharger to submit the following technical reports:
 - a. *A report stating why CDCR failed to provide timely verbal and written notification of the release from surface impoundments SI No.1 and SI No. 3. The report shall include a copy of CDCR's revised notification policy to ensure timely notification of all violations to Regional Board staff in accordance with Order R5-2007-0005.*
 - b. *A plan and time schedule (not to exceed 14 days) for removing and disposing of residual waste (brine water and storm water) in both SI No.1 and SI No. 3, while maintaining the required two feet of freeboard in surface impoundments Nos. 2 and 4. The plan may include off-site disposal of waste at EBMUD or another appropriately permitted facility. Once the water is removed from SI No.1 and SI No. 3, any storm water shall be removed within 72 hours following a rain event.*
 - c. *A proposed timeline and schedule for determining the sources of the leak(s) and repairing the liners of SI No.1 and SI No. 3.*
 - d. *A water balance for the surface impoundments.*
 - e. *Weekly monitoring/progress reports documenting the volume of water in the ponds, pan lysimeters and the volume of water hauled offsite for disposal at EBMUD.*
16. On 5 December 2014, the Discharger notified Regional Board staff that all four surface impoundments had less than two feet of freeboard, in violation of the WDRs. Additionally, the Discharger stated that liquid was observed in all four pan lysimeters and that no more waste was being discharged to the four surface impoundments.
17. On 16 December 2014, Regional Board staff met with the Discharger. The Discharger provided design information which confirmed that the four surface impoundments share the same base liner system and that the access roads which separate the surface impoundments do not contain a liner and are not designed to prevent the lateral migration of liquid waste between the impoundments. Therefore, although the WDRs refer to four surface impoundments, there is actually only one impoundment. The location(s) of the failed liner may be in one or more of the four cells. Board staff reiterated that waste may not be discharged to any of the four cells until the liner is repaired.
18. On 26 December 2014, the Discharger's weekly monitoring report again identified the presence of liquid in each of the surface impoundment pan lysimeters.

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19. In early January 2015, the Discharger began searching for a disposal option for the brine in the surface impoundments, and contacted East Bay Municipal Utilities District (EBMUD). EBMUD required a waste characterization to determine whether it could accept the waste; however, the Discharger did not complete the waste characterization until February 2015.
20. On 30 January 2015, the Discharger notified Regional Board staff that approximately fifty 21,000 gallon holding tanks were being delivered to the facility to temporarily store brine from the surface impoundments, so that the liners could be inspected and repaired. The stored brine would be hauled to EBMUD for disposal. The Discharger requested that the time schedule required by the 13267 Order to repair the surface impoundment liners be removed once the impoundments are empty.
21. On 11 February 2015, the Discharger began hauling brine from the surface impoundments to EBMUD for disposal. The initial hauling rate was 20,000 gallons per day (gpd), and as of 13 February, the rate was increased to 30,000 gpd.
22. The reverse osmosis water treatment plant has not been operating since October 2014². Based on a weekly report submitted by the Discharger on 27 February 2015, the Discharger anticipates that the water treatment plant will resume operation in March 2015. Brine from the water treatment plant will be temporarily stored in two 21,000 gallon tanks and hauled to EBMUD for disposal. The Discharger must continue hauling its brine to EBMUD (or other permitted facility) until the surface impoundment is repaired.
23. On 20 February 2015, the Discharger notified Regional Board staff that an assessment of the reverse osmosis facility and brine concentrator was being conducted to determine if it is feasible to install a crystallizer, which would eliminate the need to discharge brine to the surface impoundment. The Discharger did not provide a date by which the evaluation would be completed. This Order allows the Discharger the option to either repair the surface impoundments or clean close them in accordance with Section 21400 of Title 27.
24. On 24 February 2015, the Discharger submitted the water balance required by the Water Code 13267 Order. The water balance assumed a flow rate of 6 gallons per minute (gpm) because the operational records show that this has been the historical flow from the plant. However, Order R5-2007-0005 establishes a flow limit of 4 gpm. The water balance does not account for the buildup of solids (salt) in the surface impoundment. The water balance shows that the surface impoundment's interior roads may become partially submerged and access to the monitoring system (leachate collection and removal system and pan lysimeters) restricted. This Order requires the Discharger to revise the water balance based on the permitted flow of 4 gpm, and take

² The lack of operation is addressed in a companion Cleanup and Abatement Order.

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into account the historical buildup of solids in the pond and the need to access the monitoring system built into the interior roads.

25. If groundwater monitoring data submitted by the Discharger identifies that a release of “designated waste” from the surface impoundments has impacted groundwater, the Discharger shall be required to remediate the release and associated groundwater impacts.

REGULATORY CONSIDERATIONS

26. Groundwater monitoring reports have not been submitted for over a year, and based on the detection of liquid present in the pan lysimeters of the surface impoundment, there is a possible release of brine waste from the surface impoundment to groundwater that threatens to create a condition of pollution. As a result of the events and activities described in this Order, 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.
27. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (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. These requirements implement the Basin Plan.
28. Surface water drainage is toward the San Joaquin River in the Sacramento San Joaquin Delta Hydrologic Area (544.00). 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.
29. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
30. Water Code section 13304(a) states, in relevant part: *Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or 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*

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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.

31. Water Code section 13267(b) 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 ... 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.*
32. The technical reports required by this Order are necessary to ensure compliance with this Order, Title 27 of the California Code of Regulations, WDR Order R5- 2007-0005, and to ensure the protection of groundwater. The Discharger owns and operates the facility that discharges waste subject to this CAO and WDRs Order R5 2007-0005. Requiring the production of past due monitoring reports specified in MRP R5-2007-0005 in addition to reports requiring documentation of proper waste removal/disposal, a revised water balance, and a long term compliance plan related to the surface impoundment are necessary for the Regional Board to evaluate the extent of water quality impacts from the surface impoundment and to assess compliance with WDRs Order R5-2007-0005. The burden, including costs, of producing the technical reports is outweighed by the need of the reports in ensuring compliance with the WDRs Order R5-2007- 0005 and ensuring that the quality of groundwater is not compromised by any integrity issues from the surface impoundments.
33. 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, title 14, section 15321(a)(2).

IT IS HEREBY ORDERED, pursuant to Water Code sections 13304 and 13267 of the California Water Code, the California Department of Corrections and Rehabilitation shall cleanup and abate the water quality impacts caused by the reverse osmosis water treatment plant at the Deuel Vocation Institution, or take the necessary remedial action in the case of threatened water quality impacts, in accordance with the scope and schedule set forth below.

This Order requires submittal of technical reports. These technical reports shall contain the information and decisions required by the following paragraphs. If a report is submitted without

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the required information or decision, then the Discharger is in violation of this Order and subject to additional enforcement action.

All technical reports required by this Order must be converted to a searchable pdf file and emailed to centralvalleysacramento@waterboards.ca.gov. The following information shall be included in the body of the email: Attention Brendan Kenny, Compliance Section, Waste Discharge to Land Unit. In addition, include the Discharger name, facility name, county, and CIWQS place ID (642462) in the body of the email.

1. The Discharger shall **immediately** cease all discharges to the surface impoundments. All brine generated must be containerized and hauled to EBMUD (or other permitted facility approved by Water Board staff) for disposal.
2. The Discharger shall **immediately** comply with all aspects of WDRs Order and Monitoring and Reporting Program R5-2007-0005, including the submittal of complete technical and monitoring reports.
3. **Beginning with the month of March 2015**, the Discharger shall submit *Monthly Progress Reports* describing:
 - the work completed to-date to comply with each of the requirements in this Order;
 - total waste hauled that month to EBMUD or other permitted facility for disposal, including all hauling receipts for that month;
 - the status of all contracts needed to maintain compliance with this CAO. The status update shall certify that each contract is in place, provide its date of expiration, and provide the Discharger's schedule for ensuring that the contract is renewed prior to expiration.The Monthly Progress Reports shall be submitted by the **10th day of the month** following the end of the reporting period (e.g. the March report is due by 10 April 2015), and shall continue to be submitted until this CAO is rescinded.
4. By **1 April 2015**, the Discharger shall submit the past due *Second Semi-Annual 2014 Groundwater, Vadose Zone, and Leachate Monitoring Report* and *Annual Monitoring Summary Report*. If groundwater samples were not collected between July and December 2014, then by **1 April 2015**, the Discharger shall submit a report describing how samples will be collected in April 2015 and the report shall be submitted by **15 May 2015**. For either case, sampling, analysis, and reporting shall conform with MRP R5-2007-0005. Additional sampling in May or June 2015 will still be required to complete the First Semi-Annual 2015 monitoring event.
5. If any groundwater monitoring report shows that the discharge of "designated waste" to the surface impoundment has impacted groundwater, then within **30 days** of submittal of the report, the Discharger shall submit a corrective action plan that complies with the

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WDRs and Title 27, which includes actions beyond ceasing the discharge to the impoundments.

6. By **1 June 2015**, the Discharger shall submit a *Waste Removal Report* documenting that all waste (liquid and solids) have been removed from the surface impoundments. The report shall contain records confirming (a) that the solids have been adequately characterized prior to disposal and (b) that the material has been disposed of at permitted facilities (e.g. disposal receipts).
7. By **30 June 2015**, the Discharger shall submit a *Revised Water Balance* that uses the permitted flow rate of 4 gpm, and takes into account the historical buildup of solids in the pond and the need to access the monitoring system built into the interior roads.
8. By **30 September 2015**, the Discharger shall submit a *Long Term Compliance Plan* describing whether (a) the surface impoundment will be repaired and used for waste disposal in the future, (b) waste will continue to be hauled off, (c) the reverse osmosis plant will be modified such that liquid waste will be no longer be discharged to the surface impoundment, or (d) some combination of the above. The Discharger shall also submit a copy of the Corrective Action Plan required by Citation NO. 01-10-15C-002 issued by the State Water Resources Control Board Division of Drinking Water to the Discharger.
9. Based on the Discharger's chosen compliance option, by **30 November 2015**, the Discharger shall submit a *Long Term Compliance Implementation Report* which contains one of the following:
 - a. A schedule and workplan for locating and repairing the leaks in the primary and secondary liners of the surface impoundments. The schedule shall include a copy of the contract that has been awarded to the contractor(s) performing the work. The workplan shall include a leak location test of the lining system (primary and secondary liners) to identify the location of the failed liner sections. The workplan shall also include a copy of the construction quality assurance (CQA) plan that will be implemented for the project and which complies with section 20323 and 20324 of Title 27. Additionally, the workplan shall identify the company that has been contracted to perform an electronic leak test to verify the integrity of the class II surface impoundments once the repairs are completed. Finally, if the Discharger determines it will need to operate the reverse osmosis plant such that waste is produced at a rate greater than the permitted 4 gpm, then the report shall also include a Report of Waste Discharge and a request for revised WDRs.
 - b. A schedule and plan for installing a crystallizer or other device necessary to eliminate the discharge of brine from the reverse osmosis plant and brine concentrator. Additionally the report shall include a plan and proposed timeline for clean closing the

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evaporation basins in accordance with Title 27, Section 21400 and Discharge Specification B.22 of Order R5-2007-0005.

As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional.

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."

If 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 a delay is recognized and prior to the compliance date. An extension may be granted by revision of this Order or by a letter from the Assistant Executive Officer.

If 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 this CAO may result in the assessment of administrative civil liability up to \$5,000 per violation per day, pursuant to the Water Code section 13350 and up to \$1,000 per day pursuant to Water Code section 13268. 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 of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

This Order is effective upon the date of signature.

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Andrew Altevogt, Assistant Executive Officer

(Date)

BK/HH/WSW: 3March15

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Farhad, Mohammad@Waterboards

From: Wyels, Wendy@Waterboards
Sent: Thursday, March 12, 2015 10:24 AM
To: Price, Jerome@CDCR; Beasley, Joseph@CDCR; jamie.rodriguez1@cdcr.ca.gov; Reyes, Pedro@CDCR; Stanley, Jeff@CDCR; Madia, Teri@CDCR; Cordano, Fred@CDCR; Bettencourt, Miles (Terry)@CDCR; Poston, Todd@CDCR; Vasconcellos, Edward@CDCR; Hardcastle, Mark@CDCR; gary.silva@calpia.ca.gov; darrol.vierra@calpia.ca.gov
Cc: Remick, David@Waterboards; Ewing, Catherine@Waterboards; Burton, Bruce@Waterboards; Hinrichs, Richard@Waterboards; Sahota, Bhupinder@Waterboards; Altevogt, Andrew@Waterboards; Hold, Howard@Waterboards; Kenny, Brendan@Waterboards; Busby, Robert@Waterboards; Herbst, Charlene@Waterboards; Corral, Gilberto@Waterboards; Holmes, Kari@Waterboards; Farhad, Mohammad@Waterboards; Young, Vanessa@Waterboards
Subject: RE: Draft Cleanup and Abatement Orders for DVI: NPDES and Dairy
Attachments: DVI_NPDES_CAO.pdf; DVI_Dairy_CAO.pdf

This is the second (and final) email that contains the draft CAOs for the NPDES wastewater treatment plant and for the dairy.

From: Wyels, Wendy@Waterboards
Sent: Thursday, March 12, 2015 10:17 AM
To: Price, Jerome@CDCR; Beasley, Joseph@CDCR; 'jamie.rodriguez1@cdcr.ca.gov'; Reyes, Pedro@CDCR (Pedro.Reyes@cdcr.ca.gov); Stanley, Jeff; Madia, Teri@CDCR; Cordano, Fred@CDCR; Bettencourt, Miles (Terry)@CDCR (Miles.Bettencourt@cdcr.ca.gov); Poston, Todd@CDCR; Vasconcellos, Edward@CDCR; Hardcastle, Mark@CDCR; 'gary.silva@calpia.ca.gov'; 'darrol.vierra@calpia.ca.gov'
Cc: Remick, David@Waterboards; Ewing, Catherine@Waterboards; Burton, Bruce@Waterboards; Hinrichs, Richard@Waterboards; Sahota, Bhupinder@Waterboards; Altevogt, Andrew@Waterboards; 'Hold, Howard@Waterboards'; Kenny, Brendan@Waterboards; Busby, Robert@Waterboards; Herbst, Charlene@Waterboards; Corral, Gilberto@Waterboards; Holmes, Kari@Waterboards; Farhad, Mohammad@Waterboards; Young, Vanessa@Waterboards
Subject: Draft Cleanup and Abatement Orders for DVI: Title 27

Warden Price,

This is the first of three emails containing three draft Cleanup and Abatement Orders for the Deuel Vocational Institution. Once issued, the Orders will require improvements to ensure that CDCR Deuel complies with its Waste Discharge Requirements (WDRs) for the Title 27 brine ponds, its WDRs for the milk cow dairy, and its NPDES permit for the wastewater treatment plant.

Please provide any written comments by **March 25th**. Also by that date, please provide the name of a single point-of-contact within DVI or CDCR who will be responsible for coordinating all the work required by the CAOs and submitting all documents required by the CAOs.

If you have any questions, please contact me.

Wendy Wyels
Supervisor, Compliance and Enforcement Section
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite A
Rancho Cordova, CA 95670
(916) 464-4835
wwyels@waterboards.ca.gov

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER R5-2015-0XXX
FOR

CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION
FOR
OPERATION OF WASTEWATER TREATMENT FACILITY
DEUEL VOCATIONAL INSTITUTION
SAN JOAQUIN COUNTY

This Order is issued to the California Department of Corrections and Rehabilitation (Discharger) based on provisions of California 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 or Order), and Water Code section 13267 Order, which authorizes the 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. The Discharger is the owner and operator of a wastewater collection, treatment, and disposal system, and provides sewerage service to the Deuel Vocational Institution (Facility), a California prison (prison).
2. The Facility discharges domestic wastewater to Deuel Drain, a water of the United States, tributary to the San Joaquin River via Paradise Cut within the Sacramento – San Joaquin Delta. The discharge to surface water was previously permitted by Waste Discharge Requirements (WDRs) Order R5-2008-0164 (NPDES CA0078093), which was effective 13 December 2008 through 28 March 2014. On 7 February 2014, WDRs Order R5-2008-0164 was rescinded and replaced by WDRs Order R5-2014-0014, effective 29 March 2014.
3. The Facility was upgraded to include nitrification, denitrification and membrane bioreactor (MBR) filtration in September 2010. The Discharger also constructed a Reverse Osmosis (RO) water treatment plant to provide higher quality drinking water and to reduce electrical conductivity (EC) in the influent to the wastewater treatment plant.

VIOLATIONS OF WDRS ORDER R5-2014-0014

Chronic Toxicity

4. Effluent Limitations and Discharge Specifications Section IV.A.e. of the WDRs R5-2014-0014 states: "*There shall be no toxicity in the effluent discharge.*"
5. On 12 January 2012, the Discharger exceeded the chronic toxicity trigger level of 1 Toxic Unit Chronic (TUc) with a reported result of 1.33 TUc for *Selenastrum capricornutum*. Consequently, the Discharger initiated accelerated monitoring but was unable to achieve

four consecutive accelerated monitoring tests that did not exceed the monitoring trigger. After several requests made by Board staff in September 2012, the Discharger began a Toxicity Reduction Evaluation (TRE). On 27 March 2013, the Discharger submitted the TRE final findings report (report). The report concluded that one of the sources of toxicity is high EC. The wells which supply drinking water to the facility inmates and staff has high EC and a RO plant had been installed for the removal of contaminants and to provide potable water. However, when the RO plant is not operational, the wastewater treatment plant effluent has elevated EC which results in chronic toxicity. The report states, "...When collecting samples for chronic toxicity testing, DVI's Waste Water Treatment Plant (WWTP) staff should first identify and verify the operational status of the ROP [reverse osmosis plant]... If found to be off line for maintenance, staff should postpone sampling until the unit is back online. However, if a sample must be collected for either regular quarterly monitoring or accelerated and/or TRE monitoring, DVI staff should note this information when reporting the results, particularly if the results indicate toxicity of the effluent."

6. The RO plant was permitted to operate in February 2010. Since that time, the RO plant has not operated during all or part of the following months¹:
 1. April 2010 – February 2012: Out of service due to severe corrosion and cracking discovered in components of the brine conversion system (BCS).
 2. March 2012: BCS out of service for a planned inspection.
 3. May 2012 – June 2012: BCS was out of service for cleaning. Heat exchanger problem was discovered during restart, delaying the routine service.
 4. November 2012: BCS was out of service for cleaning.
 5. November 2013 – December 2013: BCS was out of service for cleaning. Heat exchanger plates were changed out for thicker titanium plates.
 6. October 2014 – current: BCS out of service.

To summarize, the RO plant has only operated for 16 months of the 48 months since it has been permitted to operate (i.e., it has operated 33% of the time). Chronic toxicity tests conducted while the RO plant is not operating continue to show toxicity to *Selenastrum capricornutum*.

Effluent Limitation Violations

7. WDRs Order R5-2008-0164 Effluent Limitations IV.A.1.a. includes, in part, the following effluent limitations:
 - a. Effective immediately, the Discharger shall maintain compliance with the effluent limitations at Discharge Point No. 001.....

Table 6. Effluent Limitations – Discharge Point No. 001

¹ Citation No. 01-10-15C-002 from the State Water Resources Control Board Division of Drinking Water to Deuel Vocational Institution, 2 March 2015.

Parameter	Units	Average Monthly
Nitrate Nitrogen, Total (as N)	mg/L	10

8. According to the Discharger's self-monitoring reports (SMRs), between 1 December 2013 and 28 March 2014, the Discharger violated the total nitrate nitrogen monthly average effluent limitation on two occasions. The Discharger was assessed mandatory minimum penalties (MMPs) of \$6,000 for these violations.
9. WDRs Order R5-2014-0014 Effluent Limitations IV.A.1.a. includes, in part, the following effluent limitations:
 - a. Effective immediately, the Discharger shall maintain compliance with the effluent limitations at Discharge Point No. 001...

Table 4. Effluent Limitations – Discharge Point 001

Parameter	Units	Average Monthly
Nitrate Plus Nitrite (as N)	mg/L	10

10. According to the Discharger's SMRs, the Discharger violated the nitrate plus nitrite monthly average effluent limitation on two occasions in August and September 2014. These violations were not subject to MMPs². The Discharger stated that high nitrate plus nitrite is due to manual operation of the membrane bioreactor (MBR), which decreases the detention time in the denitrification process resulting in high nitrate plus nitrite in effluent.

THREATENED VIOLATIONS OF WDRS ORDER R5-2014-0014

11. According to Standard Provision I.D of WDRs Order R5-2014-0014, the Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of the WDRs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

Membrane Bioreactor (MBR)

12. During an 18 February 2015 compliance inspection, Board staff noticed that the MBR was being manually operated. According to the Discharger, the MBR modules have been damaged due to inadequate maintenance, resulting in reduced filtration efficiency; therefore, it is necessary to operate the MBR manually. The manufacturer of the Facility's MBR is Siemens. Siemens recommends in their Operations and Maintenance Manual, which was provided to the Discharger at the start-up of operations, that the membranes be removed and cleaned at least once per year. The Discharger stated that a crane is

² MMPs were not assessed because the concentration did not exceed the effluent limit by more than 40%.

needed to remove the filters. Due to the time delay in permitting a crane to work at the Facility, the membranes were not properly pulled and cleaned for 2 ½ years. The lack of proper maintenance and the resulting nitrate effluent violations is a violation of the WDRs.

13. According to the 21 February 2010 Siemens report regarding the MBR (found as Attachment A to this CAO), Siemens notified the Discharger that their membrane has been damaged by screenings bypass and the membrane warranty does not cover this damage. The report states, "... *Once the source of the screenings bypass is eliminated, Siemens suggests the membrane modules be manually cleaned of as much debris as possible...removing trash from the fibers can cause damage. However, with excursions like these the only option of trash removal is by hand cleaning the modules...*"
14. According to the 25 January 2013 Siemens MBR inspection report (found as Attachment B to this CAO), it was noted that 80% of the jets were plugged and 80% of modules were also packed with sludge and the condition of the membrane modules is clearly inefficient, as shown in the photo log attached to Siemens' inspection report.
15. According to the 24 July 2014 recommendation regarding the MBR modules (found as Attachment C to this CAO), Evoqua Water Technologies recommended actions to improve the performance of the MBR. The report finds that the MBR modules must be replaced and states that, "... *cleaning recommendations are based our visit to your site January 22-24, and may, for a time, allow you to get more useable flow through the system. The improved efficiency should help you to get by until the new modules arrive at site. Technically speaking, however, the module replacement is overdue as they have reached the end of their useful life...*"

Chemical Reagent

16. During the 18 February 2015 compliance inspection, Board staff observed one bottle of chemical standard reagent for total chlorine residual had expired in 2014 and was still in use. Board staff is concerned that the current system to track expiration dates of reagents and laboratory controls does not comply with the Standard Provisions.

Standard Operating Procedures

17. During the 18 February 2015 compliance inspection, Board staff noted that the Discharger has not developed standard operating procedures (SOPs). SOPs are necessary for proper operation and maintenance of the Facility to ensure consistency among operation and maintenance staff. In addition, SOPs will assist the Discharger in training new operators, which is critical in assuring the Facility is properly operated and maintained.

Adequate Staffing

18. According to Chapter 26 of Division 3 of Title 23 of the California Code of Regulations:

.... a chief plant operator shall appoint a certified operator to be the designated operator-in-charge for any period of time during which the chief plant operator is unable to carry out the responsibilities of the position of "chief plant operator" as defined in section 3671.

19. According to the 2013 and 2014 Annual Operations Report, the Facility has only two full time operators. The chief plant operator oversees multiple operations, including those at the RO plant. Because there are only two full time operators, there may be times when there isn't another certified operator for the chief plant operator to designate in his absence. Moreover, it appears that the Discharger needs more than two staff to respond to maintenance needs of the Facility, especially when the Facility is operated manually.

Housekeeping

20. During the 18 February 2015 compliance inspection, Board staff noted general housekeeping issues in and around the Facility's grounds. Specifically, it was found that the Discharger uses the site for general storage of old and unused equipment, vehicles, metal debris, and dumpster bins. Pooled water from a recent broken pipeline was also observed during the inspection. Good housekeeping practices and procedures are necessary to ensure that the activities at the Facility protect groundwater and surface water quality.

Influent Flows

21. According to Standard Provision A.2.k. of the WDRs, a publicly owned treatment works whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach the hydraulic and treatment capabilities of the treatment and disposal facilities.
22. Based on the 18 February 2015 compliance inspection and evaluation of membrane efficiency, Board staff is concerned that the Facility may not have enough treatment capacity to capture all wastewater flows and treat to tertiary standards as set forth in WDRs Order R5-2014-0014. In addition, the Discharger stated that if all inmates in the prison were to flush at or around the same time, the Facility would not have sufficient capacity to treat all of the flows. During summer months, inmates fill the basins in their cells to bathe, which potentially increases the dry weather flows from the Facility.

REGULATORY CONSIDERATIONS

23. The Discharger is in violation of the WDRs because the reverse osmosis treatment plant, which removes salts and therefore allows the wastewater treatment plant to comply with effluent limits, has failed to operate reliably and has remained out of service for 66% of the time since it was permitted. Without the reverse osmosis plant, the discharged effluent will likely continue to exceed chronic toxicity limits. In addition, inadequate operation and maintenance has resulted in water quality exceedances above the permitted effluent limitations. When left unaddressed, there is a likely potential that the discharges of domestic wastewater will continue to contain levels exceeding the chronic toxicity and nitrate/nitrite limits in WDRs Order R5-2014-0014. Requiring the Discharger to comply with this Order, including the requirement to continuously operate the RO plant and reporting obligations related to the operations and maintenance of the RO plant, are necessary remedial actions to prevent wastewater from polluting Deuel Drain and its

connected tributaries.

24. As a result of the events and activities described in this Order, 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.
25. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (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. These requirements implement the Basin Plan.
26. Surface water drainage is toward the San Joaquin River in the Sacramento San Joaquin Delta Hydrologic Area (544.00). 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.
27. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
28. Water Code section 13304(a) states, in relevant part: *Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or 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.*
29. Water Code section 13267(b) 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 ... 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.*

30. The technical reports required by this Order are necessary to ensure compliance with this Order and WDRs Order R5-2014-0014, and to ensure the protection of surface water and groundwater. The Discharger owns and operates the Facility that discharges waste subject to this Order and WDRs Order R5-2014-0014. Reports related to the operation and maintenance of all facilities and systems of treatment and control (including the RO plant) are necessary for the Discharger to properly assess and document the treatment capacity, staff requirements, procurement processes, contingency measures, and the like to achieve compliance with conditions of WDRs Order R5-2014-0014. The burden, including costs, of producing the technical reports is outweighed by the need of the reports in ensuring compliance with the WDRs Order R5-2014-0014 and ensuring the protection of water quality.
31. 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, title 14, section 15321(a)(2).

IT IS HEREBY ORDERED, pursuant to Water Code sections 13304 and 13267 of the California Water Code, that the California Department of Corrections and Rehabilitation shall cleanup and abate the water quality impacts caused by the wastewater treatment plant at the Deuel Vocational Institution, and take the necessary remedial actions in the case of threatened water quality impacts, in accordance with the scope and schedule set forth below.

This Order requires submittal of technical reports. These technical reports shall contain the information and decisions required by the following paragraphs. If a report is submitted without the required information or decision, then the Discharger is in violation of this Order and subject to additional enforcement action.

All technical reports required by this Order must be converted to a searchable pdf file and emailed to centralvalleysacramento@waterboards.ca.gov. The following information shall be included in the body of the email: Attention Mohammed Farhad, Compliance Section, NPDES Unit. In addition, include the Discharger's name, facility name, county, and CIWQS place ID (642462) in the body of the email.

1. The Discharger shall **immediately** comply with all aspects of WDRs Order and Monitoring and Reporting Program R5-2014-0014, including complying with effluent limits.
2. Unless the Discharger presents an alternative plan to reduce the electrical conductivity in its waste stream, beginning **30 March 2015**, the Discharger shall **continuously** operate the RO plant at all times.
 - a. In event that the RO plant is taken off-line for maintenance for more than 24 hours, the Discharger shall immediately notify the Central Valley Water Board and state when the RO plant will return to operation.

- b. In the event that the RO plant is taken off-line for more than seven days, the Discharger shall immediately submit a time schedule for when the RO plant will return to operation. In addition, beginning on the eighth day after the RO plant is taken off-line, the Discharger shall conduct three species chronic toxicity testing, as specified in MRP V.B. of WDRs R5-2014-0014, to determine whether the effluent is contributing chronic toxicity to the receiving water due to the RO plant being off-line. The chronic toxicity monitoring results shall be reported to the Central Valley Water Board within 15 days following completion of the test and shall contain an updated chronology of chronic toxicity test results expressed in TUC, organized by test species, and type of test (survival, growth or reproduction).
 - c. As of **30 March 2015**, if the RO plant is off-line for more than seven days, then the Discharger shall provide alternate drinking water to inmates and staff, as required by Citation No. 01-10-15C-002 from the State Water Resources Control Board Division of Drinking Water to Deuel Vocational Institution. Within **one day** of providing alternate drinking water, the Discharger shall notify Board staff that it has done so.
3. By **30 April 2015**, the Discharger shall submit a *RO Plant Spare Parts Status* report documenting that the RO plant has adequate spare parts available, describe redundancy and/or features in place for continuous operation, and an action plan containing a schedule to prevent chronic toxicity when the RO plant is taken off-line for maintenance.
4. By **30 April 2015**, the Discharger shall submit a *MBR Modules Replacement Time Schedule* for replacing membrane bioreactor (MBR) modules, which shall be replaced no later than **31 March 2016**. The schedule shall include the process for all contracting actions necessary to complete the work.
5. By **30 May 2015**, the Discharger shall update and submit the Facility's *Operation and Maintenance (O&M) Manual and Standard Operating Procedures (SOPs)* to maximize efficiency of the MBR under current operating conditions such that the wastewater treatment plant effluent will meet all requirements of WDRs Order R5-2014-0014.
6. By **1 September 2015**, the Discharger shall submit a *Time Schedule for Cleaning and Properly Maintaining Facility Grounds* for either removing and/or adequately storing broken and unused equipment, non-operational vehicles, metal debris and dumpster bins, to assure protection of groundwater and surface water quality.
7. By **1 October 2015**, the Discharger shall submit a *Third Party Selection Report*. The Discharger shall contract with a qualified Professional Engineer or Registered Geologist third party to complete the evaluation required by Item #9, below. The report due on 1 October 2015 shall contain the name of the selected third party, their statement of qualifications, and the contract for services.
8. By **1 May 2016**, the Discharger shall submit a *MBR Modules Replacement Final Report and Updated O&M Manual*. The Replacement Report shall document that the MBR modules have been replaced and are operational. The Updated O&M Manual shall

contain procedures to ensure that the newly installed MBR modules are maintained properly and in accordance with the manufacturer's recommendations

9. By **1 June 2016**, the Discharger shall submit a *Third Party Evaluation of the Operation and Maintenance* of the Facility, which includes recommendations on how to adequately operate and maintain the Facility. The review shall be completed by the individual identified in the report required by Item #7, above. At a minimum, the items listed below shall be reviewed and evaluated. The *Evaluation* shall contain recommendations for any needed improvements.
 - a. Appropriate staffing levels for the Facility's operations;
 - b. Appropriate staffing levels for the Facility's maintenance;
 - c. Redundancy processes and/or features for the Facility and RO Plant to ensure compliance with WDRs;
 - d. The Facility's treatment capacity at maximum projected flows in the summer and winter;
 - e. The backlog of corrective and preventive maintenance work orders; and
 - f. Determine if industrial activities (including vocational training programs) occurring at the Facility are subject to or require coverage under the Industrial Storm Water General Permit.
10. **Beginning with the first quarter 2014**, the Discharger shall submit quarterly progress reports describing the work completed to date to comply with each of the above requirements, 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).

As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional.

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."

If 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 a delay is recognized and prior

to the compliance date. An extension may be granted by revision of this Order or by a letter from the Assistant Executive Officer.

If 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 this CAO may result in the assessment of administrative civil liability up to \$5,000 per violation per day, pursuant to Water Code section 13350, and up to \$1,000 per day pursuant to Water Code section 13268. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law. Water Code sections 13268, 13350, and/or 13385

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 of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

This Order is effective upon the date of signature.

Andrew Altevogt, Assistant Executive Officer

(Date)

- Attachment A: Siemens MBR Report
- Attachment B: Siemens MBR Inspection Report
- Attachment C: Evoqua Water Technologies MBR Recommended Actions

February 21, 2010

Chris Clardy
Water & Sewage Plant Supervisor
CDCR - Deuel Vocational Institution
23500 Kasson Rd
Tracy, CA 95376
(209) 835-4141 x5897

Ref: Siemens MBR Project 43026 DVI, Tracy, CA

Dear Chris,

We have been in contact with your plant regarding the screenings bypass debris that has accumulated in the membrane modules supplied by Siemens. Our initial contact with you on this subject matter was on 1/6/2011. Since then we have observed several photos from the plant showing the debris that appears to be accumulated in the membranes. The level of debris we observed in the photos raises our concern over the long term integrity of the membrane modules.

As you may know our membrane warranty does not cover damage caused by screenings bypass. We suggest that the screenings bypass be eliminated as soon as possible to prevent further damage to the membranes. Once the source of the screenings bypass is eliminated, Siemens suggests the membrane modules be manually cleaned of as much debris as possible. Manual cleaning is an activity that we try to avoid as the action of physically removing trash from the fibers can cause damage. However, with excursions like these the only option of trash removal is by hand cleaning the modules. It is needed to prevent further damage and to prevent accumulation of solids within the trash that can lead to solids packing of the membranes. We suggest you schedule this cleaning with us in advance so that we can make arrangements to be onsite to oversee this cleaning process. We can count this as one of our required follow-up trips.

Once the membranes have been manually cleaned, we recommend performing a sodium hypochlorite CIP on each tank. Following the manual and chemical cleaning we suggest the facility assess the condition of the membrane modules by running each tank at the design peak flux rates to confirm hydraulic capacity. Based on the results of the hydraulic capacity testing, Siemens will make an assessment of the damage caused by the screenings bypass.

Sincerely,



Branden E. Hudson
Project Manager
Biological and Clarification
Siemens Water Technologies

cc: Jeff Piccirillo, Gerry Kwiatkowski (Siemens)
Mike Tooley (Misco)
Chris Cleveland, Keith Corcoran (Carollo Engineers)
Steve Haslam (RGW Construction)

ATTACHMENT B: Siemens MBR Inspection Report

FIELD SERVICE REPORT

Service Technician	Russell Goodpasture	Date of Report:	1-25-2013
Project No:	SAP # 1190/000049 Field Service Time 1190/000049.W.01.L - 5003015 - FSA0 Field Service Expenses 1190/000049.W.01.D 43026	Project Manager:	John Hartwick Branden Hudson,
Product (s) Inspected:		Date(s) of Service:	1-22-24-2013
Customer: (Main Contact, Title, Phone & Email)	DUELL VOCATIONAL INST. Mullins, Daniel@CDCR [mailto:Daniel.Mullins@cdcr.ca.gov]		
Jobsite Name: (Installation name, & Address City/State)	DVI 23500 Kasson Road, Tracy, CA 95304		
Jobsite Contact: (Main Contact, Title, Phone & Email)			
WWTP Supervisor/Plant Mgr or Superintendent (Name, Phone & Email)	Mullins, Daniel@CDCR [mailto:Daniel.Mullins@cdcr.ca.gov]		
Equipment: (Include Description)	MBR		
Unit Designation per Drawing:			
Engineer Contact: (Main Contact, Phone & E-mail - if available)	na		

Service Objective:

Investigate the condition of the membrane system low permeability and high TMP.

Details of Services Performed:

Tank #4 was taken out of service. Packed sludge and trash was removed from MEMJET header piping. 80% of the jets were plugged and the last 3 to 4 jets in the piping were packed with sludge. 80% of the Modules were also packed with sludge. The modules were clean of the packed sludge. There is a good amount of plastic tangle in the fibers of the modules. The fibrousness material seen at other site was not present. I have included pictures from the site.

When I was on site the plant was running with three tanks online running at rate of 174 GPM per tank. Mix liquor total flow of 2427 GPM. The Air scours total flow of 1328 SCFM. The filtrate temperature of 76 degrees F. The ML is (per there test) 7000 PPM in bio tanks and 8842 RAS from the membrane tanks. It looks higher than that? They are wasting 5000 gals. Per day with

FIELD SERVICE REPORT

an SRT of 60 days this was just been changed form 120 days. The ml in the bio tank CST test results was 36.8.

Tank 1 TMP 2 psi and the perm. 2.78.

Tank 2 TMP 2 0.85 psi and the perm. 6.48.

Tank 3 TMP 1.93 psi and the perm. 2.69.

They were going to perform a HCIP on tank 4 before they put it back in service.

As time would allow them they were to perform the same maintenance on the remaining of the tanks.

I will be sending all of my pictures under a addition email from the visit to the site.

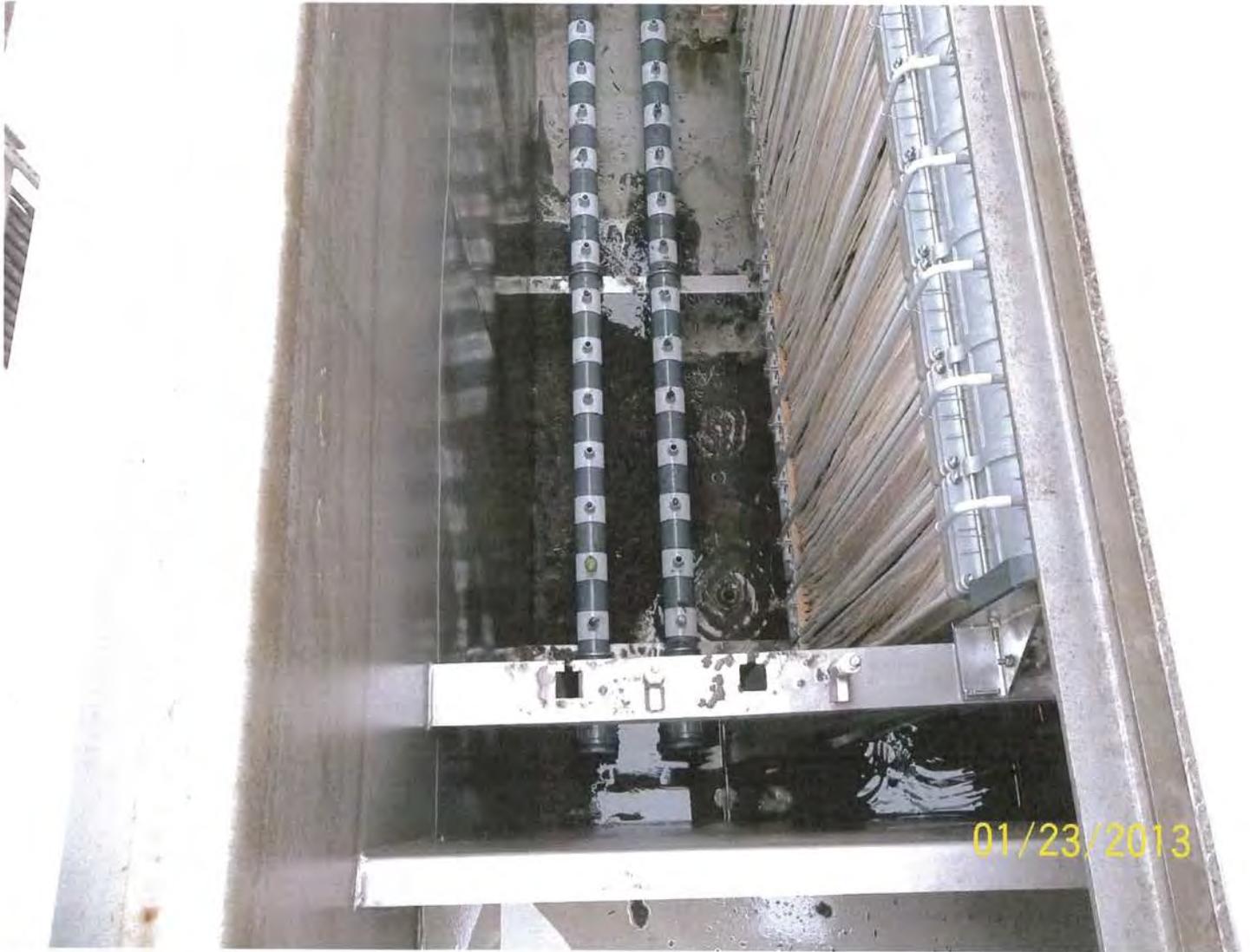
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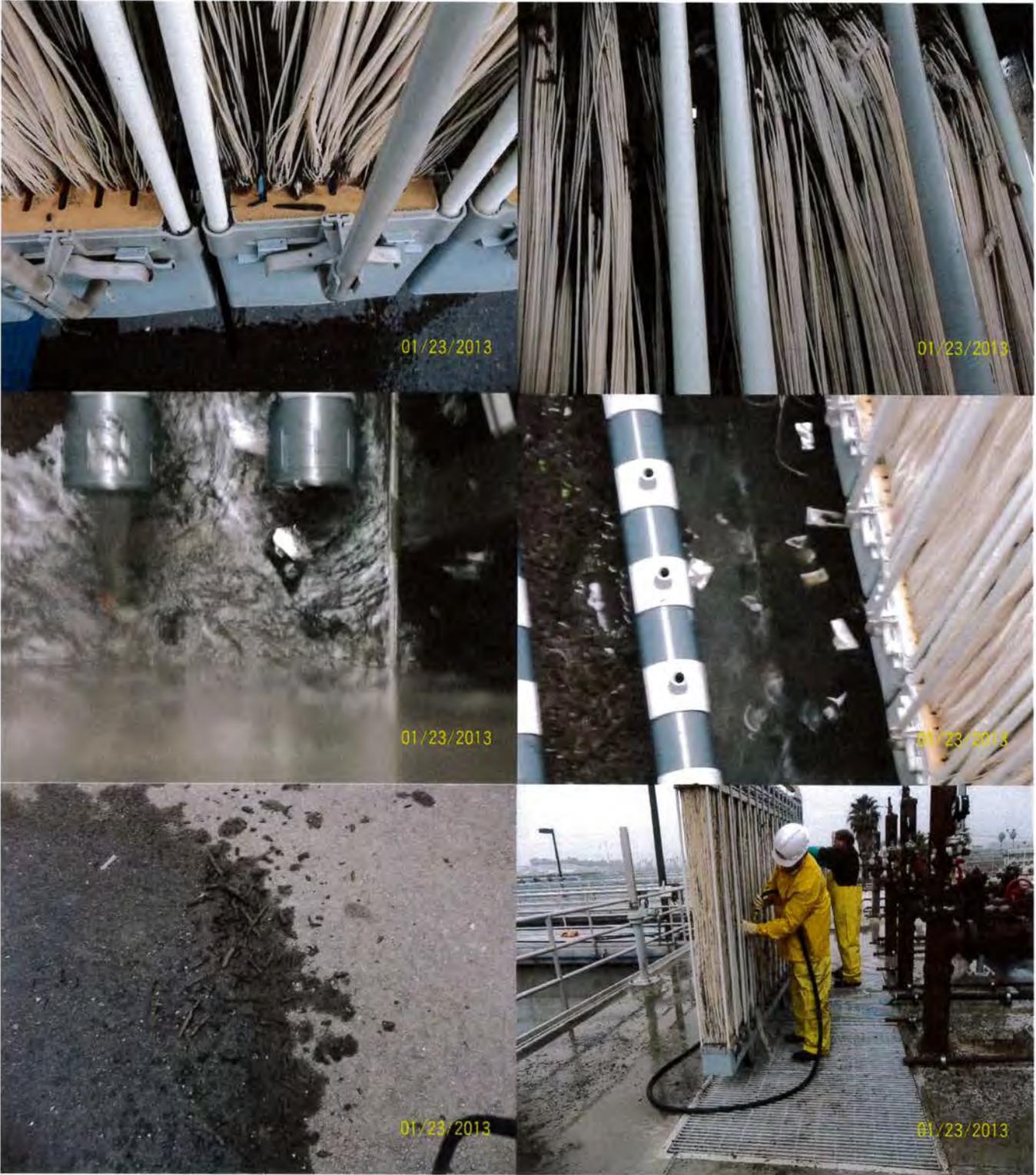
FIELD SERVICE REPORT



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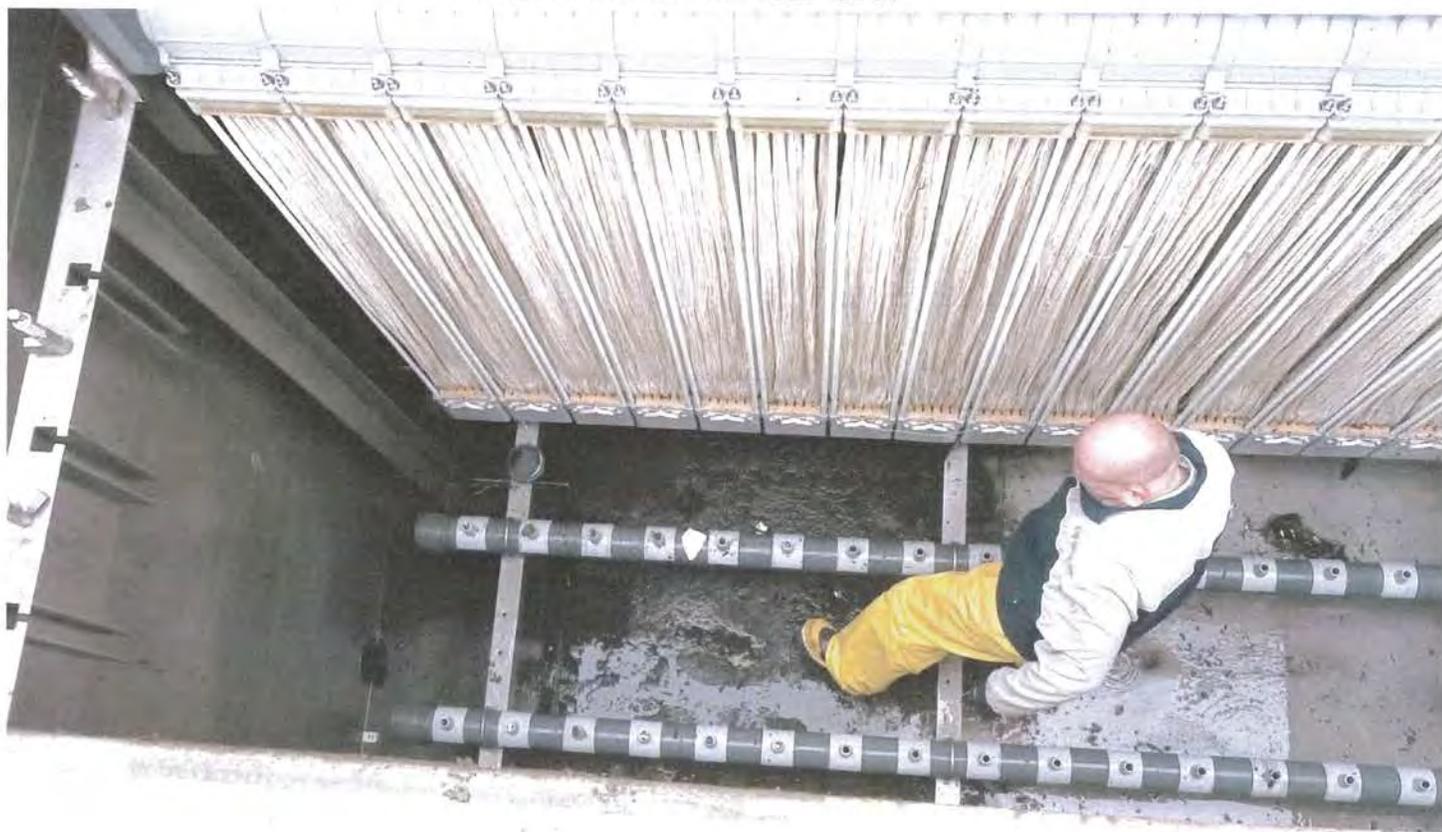
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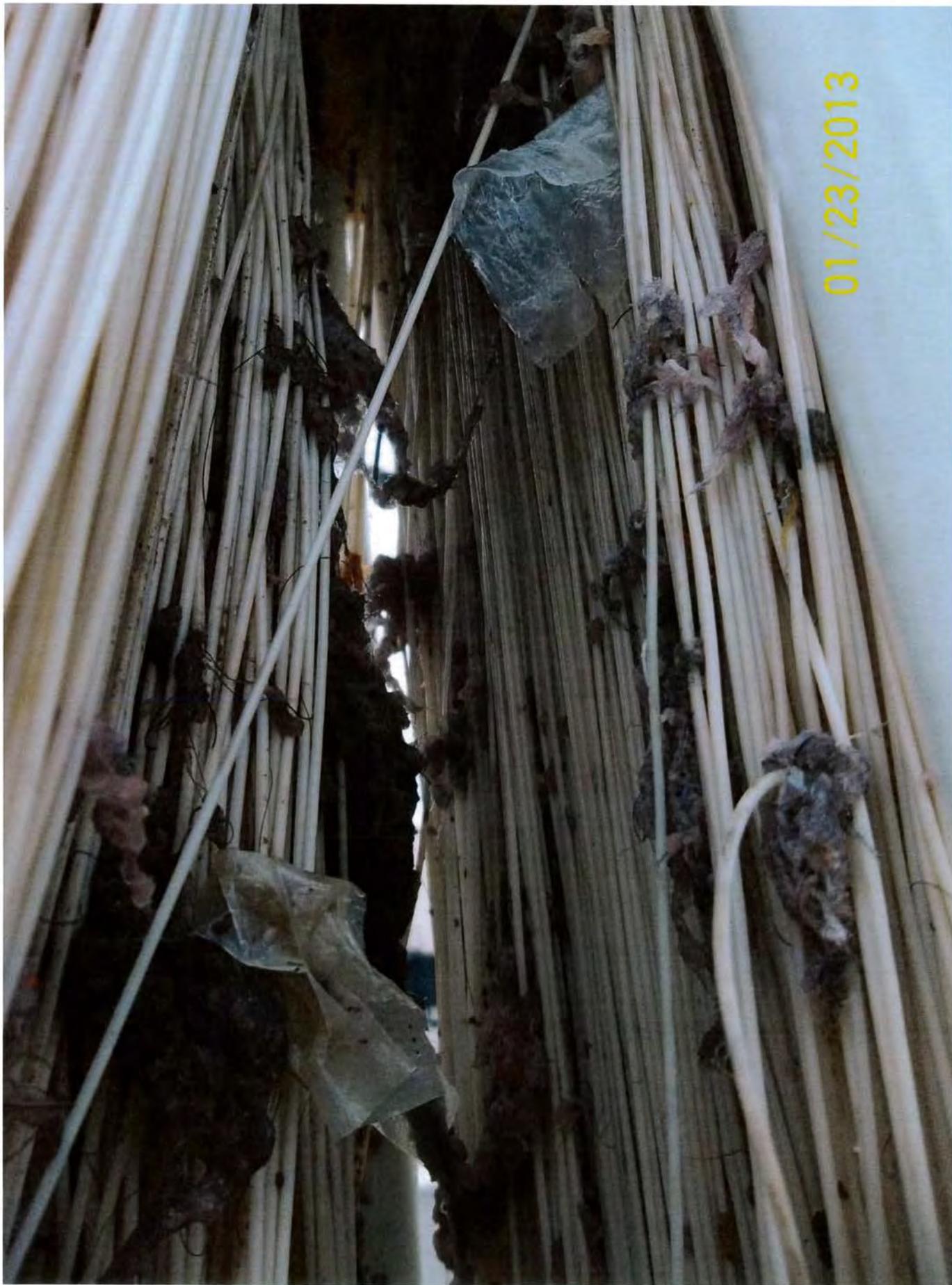


FIELD SERVICE REPORT



01/23/2013

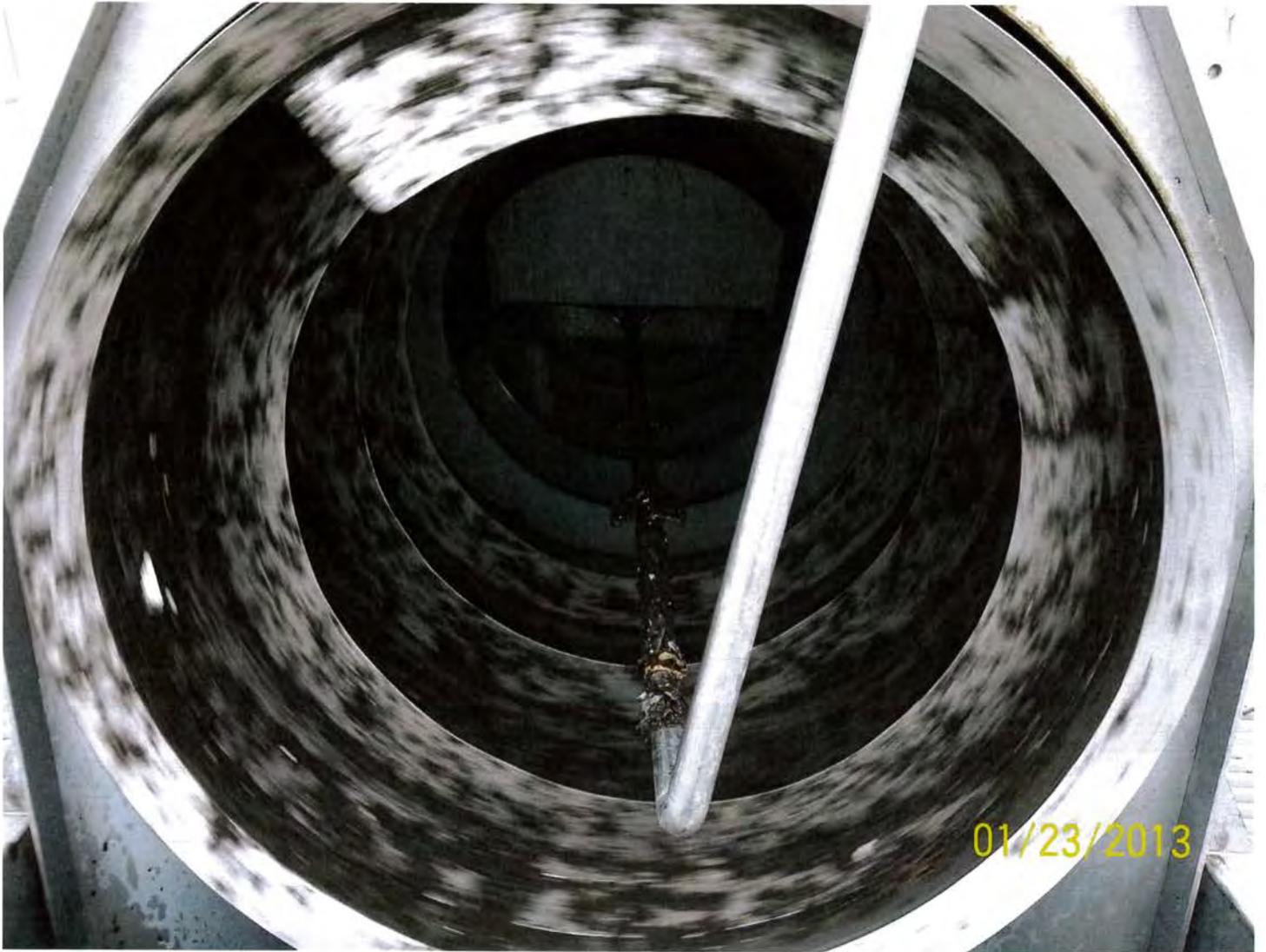
FIELD SERVICE REPORT



FIELD SERVICE REPORT



FIELD SERVICE REPORT



FIELD SERVICE REPORT



01/23/2013

Additional Service Trips Required:	
for this unit?	_____
for entire job?	_____
Can Certification form be sent for this unit?	_____

Check list Required for this trip?	
Checklist Attached?	
Checklist Completed?	

FIELD SERVICE REPORT

INTERNAL ONLY:

Time Allocation for PM

General comments

Aftermarket Parts:

Action Items:



July 24, 2014

ROBERT ENGLEHEART
Regional Manager
California Department of Corrections and Rehabilitation

Dear Robert,

Please see the recommendation below regarding the MBR Modules at your facility.

DUELL VOCATIONAL INST (DVI) Tracy, CA

Recommended action to improve the performance of the installed MBR modules.

The primary issue is trash and debris in the BIO system that collects and causes the jets to become plugged. Once this occurs, the modules get extremely dirty and will not function efficiently, so an in place cleaning becomes necessary. As the modules age and are cleaned repeatedly via the clean in place system, they lose some efficiency each time so that over a period of years, they cannot be cleaned enough to get back to an acceptable operational level. At this point they must be replaced.

The following cleaning recommendations are based our visit to your site January 22-24, 2013, and may, for a time, allow you to get more useable flow through the system. The improved efficiency should help you to get by until the new modules arrive at site. Technically speaking; however, the module replacement is overdue as they have reached the end of their useful life.

Procedure:

- Drain and inspect modules for packing/fouling if the modules are packed with sludge, proceed to the next steps. If they are not packed increase the intervals of the Hypo Clean in Place (HCIP) process.
- If packing is present pull modules and hand clean each of them.
- Clean all trash and sludge from the Memjet headers in the bottom of the tanks to allow for maximum flow through all jets.
- Keeping the module wet during this process is essential. If the modules are allowed to dry out, their performance will be further impaired.
- Perform a Hypo Clean in Place (HCIP) on each tank after hand cleaning
- Place cleaned tank back in operation.

NOTE: It should be understood that this process will/may provide a temporary operational improvement in your MBR module system. It should not be expected to provide a long term solution for your location.

With kind regards,

Charles Harrison, MTO Aftermarket

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER R5-2015-xxxx

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.

VIOLETIONS 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. 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.

10. 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...

11. 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.

12. 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.

13. 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.

14. 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.

15. 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.
16. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.
17. 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.

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

(Date)



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

Attachment 1



Matthew Rodriguez
Secretary for
Environmental Protection

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

Edmund G. Brown Jr.
Governor

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

California Environmental Protection Agency



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 $\mu\text{s}/\text{cm}$ (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. Not used to convey manure material to the wastewater storage lagoon.



Photo 7: The same view 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.



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

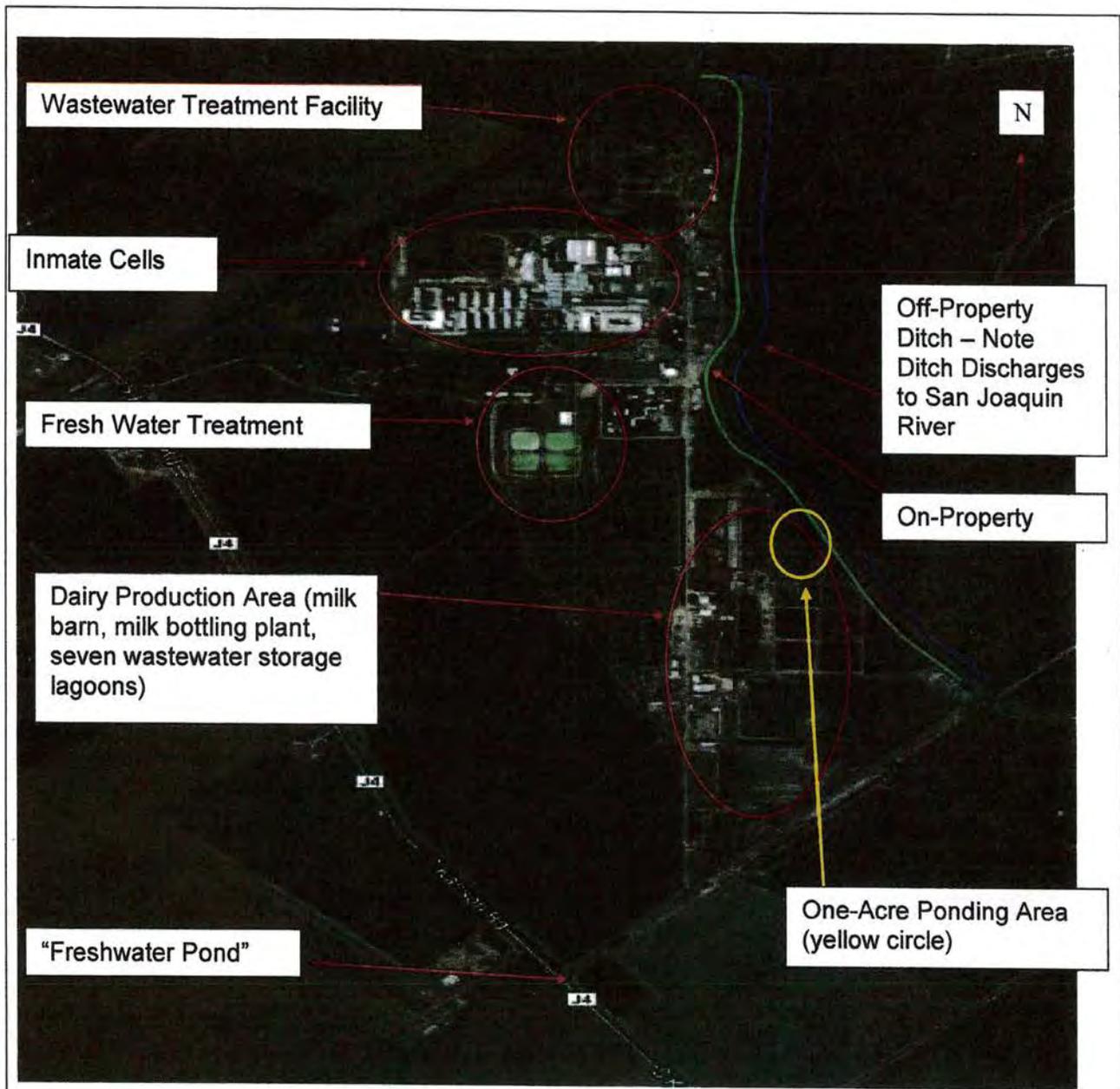
animals regularly because accessing the prison is difficult.

- I. 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.

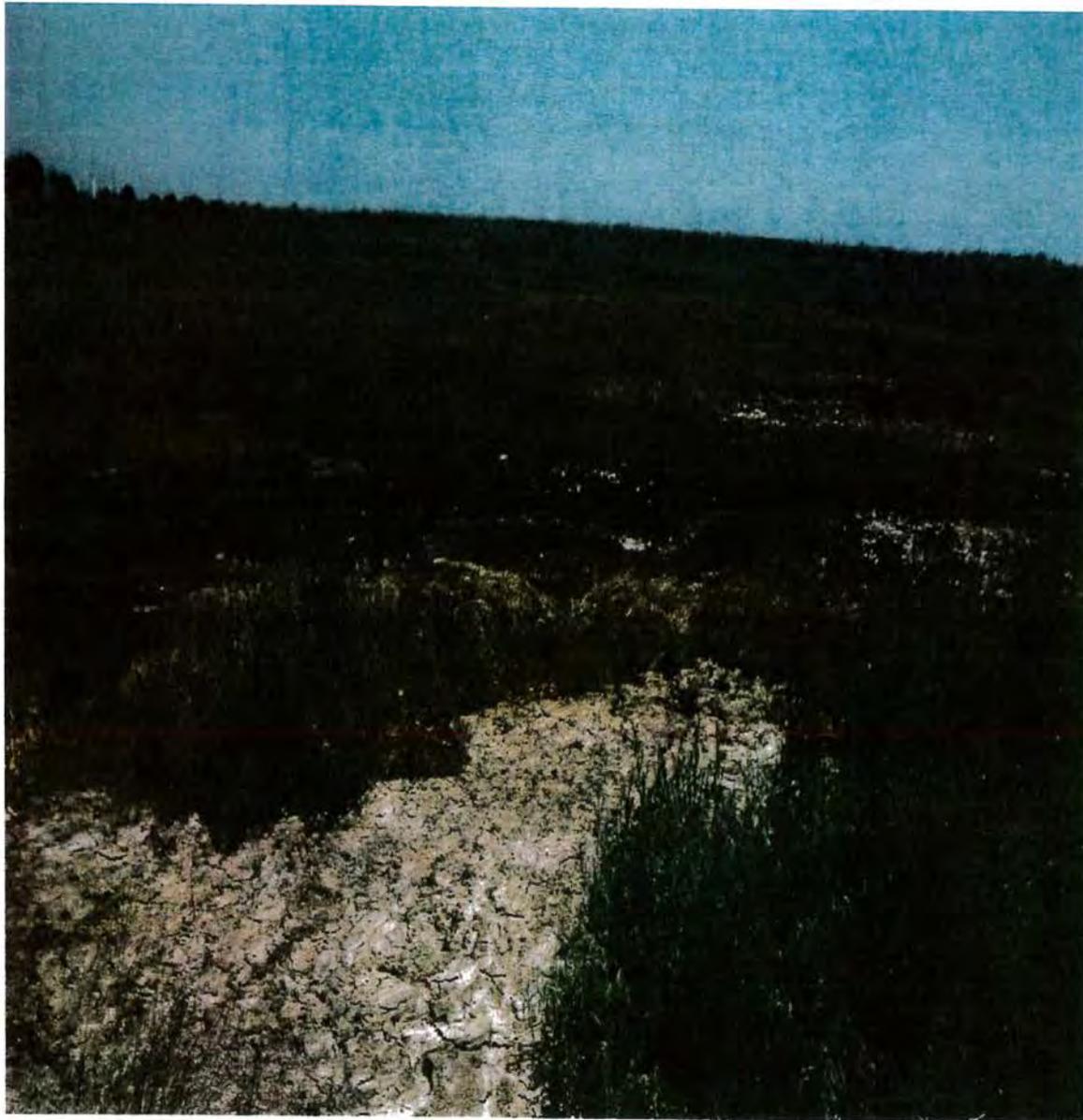


Photo 2: Photo of the one-acre area, north of the separator, where manure (liquid & solid) had been discharged.



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

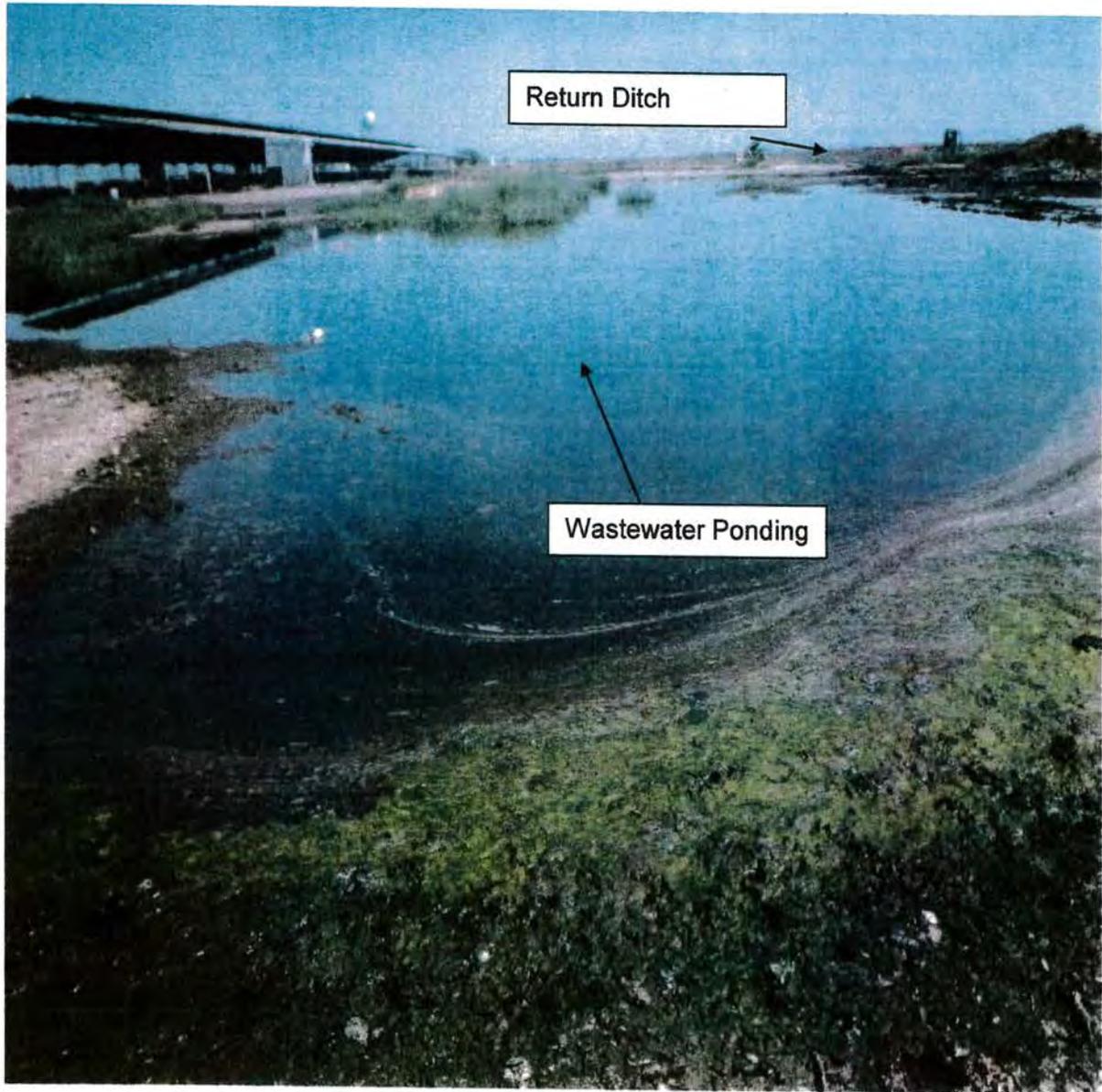


Photo 4: Photo of wastewater ponding in the one-acre area; wastewater from this area appears to have flowed into the return ditch along the east property perimeter.

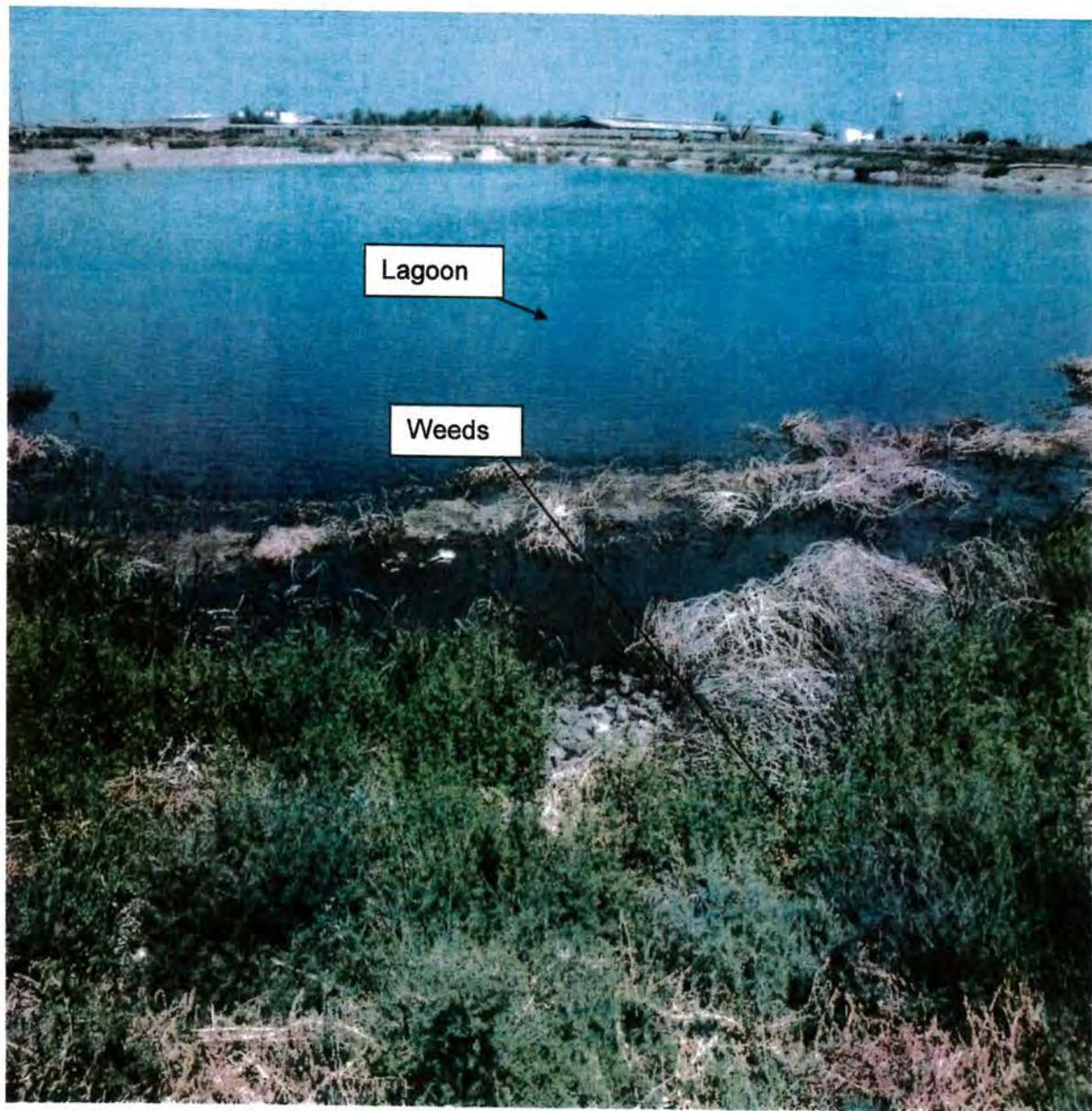


Photo 5: Photo of a lagoon with excessive vegetation on its inner and outer embankments.



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

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

Attachment 3

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.

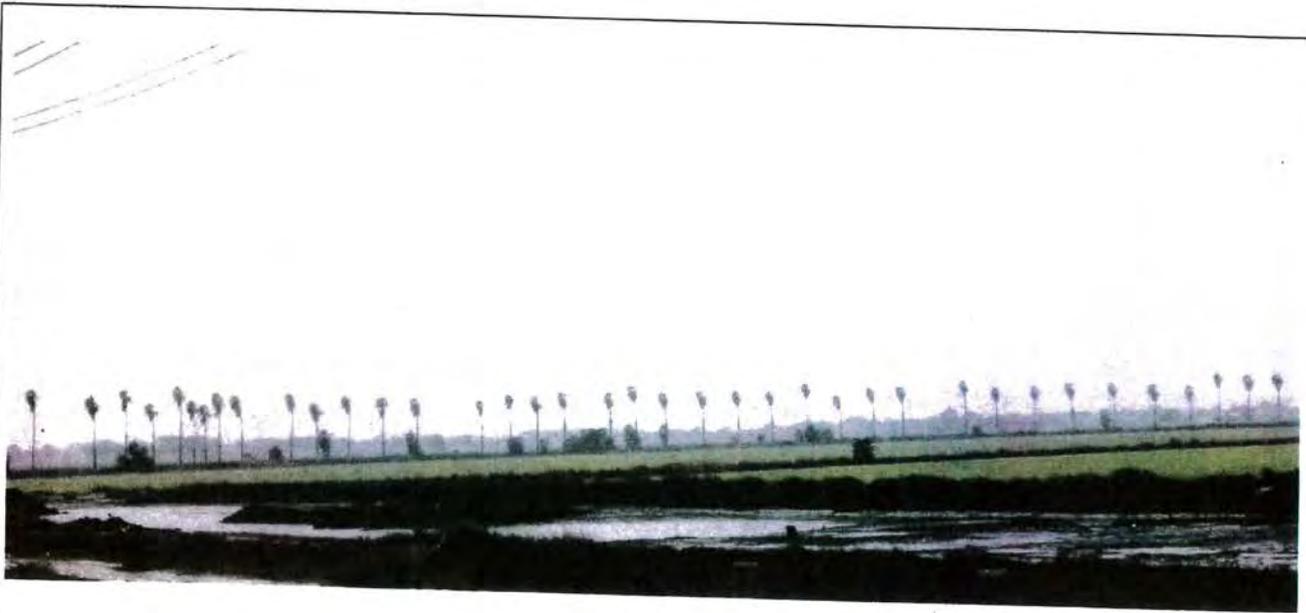


Photo 3: Photo of major wastewater ponding at the manure staking area.



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.

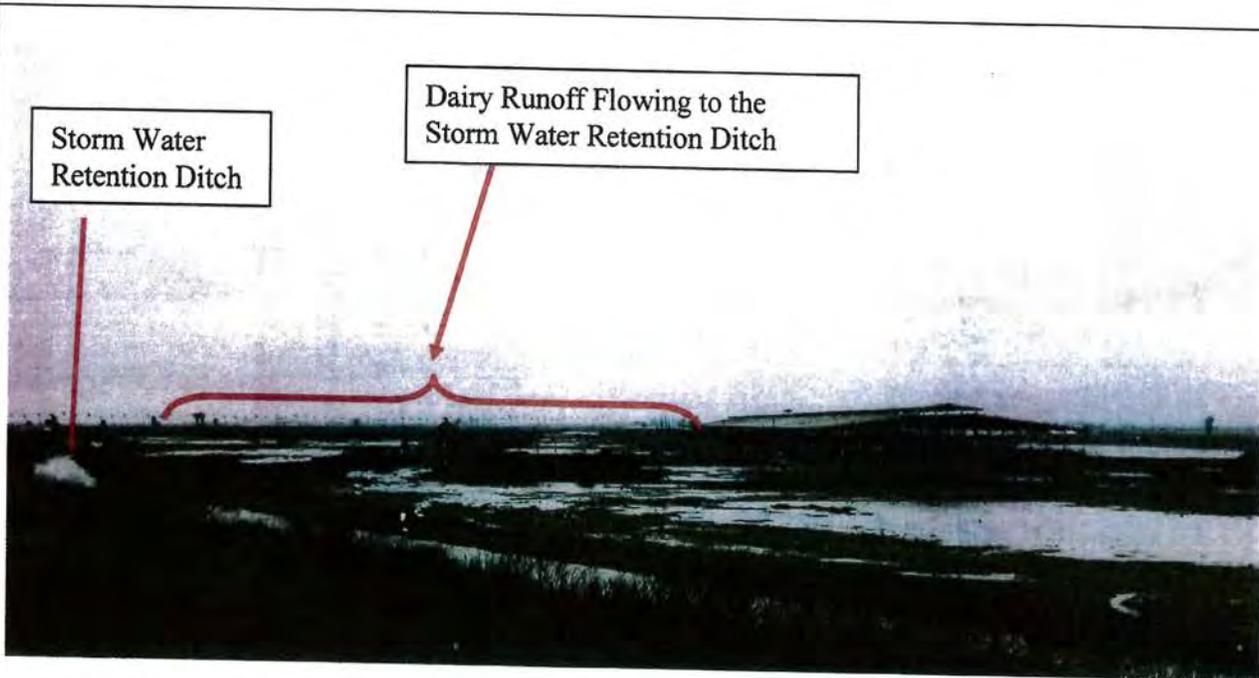


Photo 6: Photo of the dairy production area east perimeter with lots of runoff flowing into an on-property storm water retention ditch.

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.
M.S. Civil Engineering*

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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

Farhad, Mohammad@Waterboards

From: Wyels, Wendy@Waterboards
Sent: Friday, March 13, 2015 1:51 PM
To: Young, Vanessa@Waterboards; Altevogt, Andrew@Waterboards; Hold, Howard@Waterboards; Kenny, Brendan@Waterboards; Farhad, Mohammad@Waterboards; Holmes, Kari@Waterboards
Subject: Call from Terry Bettencourt (DVI)

I just talked to Terry Bettencourt (CPO with DVI) about the draft CAOs. He had some questions and I explained about the process of commenting on the drafts and what we're looking for. He was happy to hear that we're open to discussion and will be contacting Headquarters to figure out how best to respond. He said that we've identified things that they're already starting to work on internally and that they also know are issues (ie, lack of redundancy, what they'll do with the RO plant long term, etc). Off the record, he's happy to get an enforcement action from us because this is the only way to elevate the issue to Headquarters.

Wendy

Farhad, Mohammad@Waterboards

From: Wyels, Wendy@Waterboards
Sent: Friday, March 27, 2015 11:21 AM
To: Price, Jerome@CDCR; Beasley, Joseph@CDCR; jamie.rodriquez1@cdcr.ca.gov; Reyes, Pedro@CDCR; Stanley, Jeff@CDCR; Madia, Teri@CDCR; Cordano, Fred@CDCR; Bettencourt, Miles (Terry)@CDCR; Poston, Todd@CDCR; Vasconcellos, Edward@CDCR; Hardcastle, Mark@CDCR; gary.silva@calpia.ca.gov; darrol.vierra@calpia.ca.gov
Cc: Altevogt, Andrew@Waterboards; Hold, Howard@Waterboards; Kenny, Brendan@Waterboards; Busby, Robert@Waterboards; Herbst, Charlene@Waterboards; Corral, Gilberto@Waterboards; Holmes, Kari@Waterboards; Farhad, Mohammad@Waterboards; Young, Vanessa@Waterboards
Subject: Finalizing the dDraft Cleanup and Abatement Orders for DVI

Warden Price:

On 12 March 2015, Water Board staff sent you three draft Cleanup and Abatement Orders for the Deuel Vocational Institution. We provided CDCR until 25 March to submit any comments. This email is to notify you that no comments have been received, and that the Orders will be finalized and mailed early next week.

In addition, we had asked that that by 25 March you provide the name of a single point-of-contact within DVI or CDCR who will be responsible for coordinating all the work required by the CAOs and submitting all documents required by the CAOs. We have not received that information either. Therefore, as the highest ranking official at DVI, we will expect that you will be the point of contact with the Water Board. If you wish to designate a different person to work with us directly, please let me know as soon as possible.

If you have any questions, please feel free to contact me.

Wendy Wyels
Supervisor, Compliance and Enforcement Section
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite A
Rancho Cordova, CA 95670
(916) 464-4835
wwyels@waterboards.ca.gov

Farhad, Mohammad@Waterboards

From: Price, Jerome@CDCR <Jerome.Price@cdcr.ca.gov>
Sent: Friday, March 27, 2015 1:16 PM
To: Wyels, Wendy@Waterboards; Beasley, Joseph@CDCR; jamie.rodriguez1@cdcr.ca.gov; Reyes, Pedro@CDCR; Stanley, Jeff@CDCR; Madia, Teri@CDCR; Cordano, Fred@CDCR; Bettencourt, Miles (Terry)@CDCR; Poston, Todd@CDCR; Vasconcellos, Edward@CDCR; Hardcastle, Mark@CDCR; gary.silva@calpia.ca.gov; darrol.vierra@calpia.ca.gov
Cc: Altevogt, Andrew@Waterboards; Hold, Howard@Waterboards; Kenny, Brendan@Waterboards; Busby, Robert@Waterboards; Herbst, Charlene@Waterboards; Corral, Gilberto@Waterboards; Holmes, Kari@Waterboards; Farhad, Mohammad@Waterboards; Young, Vanessa@Waterboards
Subject: RE: Finalizing the dDraft Cleanup and Abatement Orders for DVI

Hello Wendy,

We are working with our Facility Management Branch to comply with the cleanup and abatement orders. The single point of contact at DVI will be Miles Bettencourt, Correctional Plant Manager.

Jerome Price
Warden
Deuel Vocational Institution
(209) 830-3850

From: Wyels, Wendy@Waterboards [<mailto:Wendy.Wyels@waterboards.ca.gov>]
Sent: Friday, March 27, 2015 11:21 AM
To: Price, Jerome@CDCR; Beasley, Joseph@CDCR; jamie.rodriguez1@cdcr.ca.gov; Reyes, Pedro@CDCR; Stanley, Jeff@CDCR; Madia, Teri@CDCR; Cordano, Fred@CDCR; Bettencourt, Miles (Terry)@CDCR; Poston, Todd@CDCR; Vasconcellos, Edward@CDCR; Hardcastle, Mark@CDCR; gary.silva@calpia.ca.gov; darrol.vierra@calpia.ca.gov
Cc: Altevogt, Andrew@Waterboards; Hold, Howard@Waterboards; Kenny, Brendan@Waterboards; Busby, Robert@Waterboards; Herbst, Charlene@Waterboards; Corral, Gilberto@Waterboards; Holmes, Kari@Waterboards; Farhad, Mohammad@Waterboards; Young, Vanessa@Waterboards
Subject: Finalizing the dDraft Cleanup and Abatement Orders for DVI

Warden Price:

On 12 March 2015, Water Board staff sent you three draft Cleanup and Abatement Orders for the Deuel Vocational Institution. We provided CDCR until 25 March to submit any comments. This email is to notify you that no comments have been received, and that the Orders will be finalized and mailed early next week.

In addition, we had asked that that by 25 March you provide the name of a single point-of-contact within DVI or CDCR who will be responsible for coordinating all the work required by the CAOs and submitting all documents required by the CAOs. We have not received that information either. Therefore, as the highest ranking official at DVI, we will expect that you will be the point of contact with the Water Board. If you wish to designate a different person to work with us directly, please let me know as soon as possible.

If you have any questions, please feel free to contact me.

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