

Central Valley Regional Water Quality Control Board

17 April 2014

Vern Millard
Correctional Plant Manager II
Deuel Vocational Institution
P.O. Box 400
Tracy, CA. 95378-0400

**SELF-MONITORING REPORT REVIEW AND NOTICE OF VIOLATION, CALIFORNIA
DEPARTMENT OF CORRECTIONS, DEUEL VOCATIONAL INSTITUTION, SAN JOAQUIN
COUNTY**

The discharge of wastewater by the California Department of Corrections (Discharger) from the Deuel Vocational Institution (Facility) was regulated by Waste Discharge Requirements (WDRs) Order R5-2008-0164 (NPDES CA0078093) through 28 March 2014 when it was replaced by Order R5-2014-0014. The Facility is also regulated by the Cease and Desist Order (CDO) R5-2008-0165-01. The Monitoring and Reporting Program (MRP) of the WDRs requires monitoring for constituents and other parameters and specifies the location and frequency of monitoring. Board staff has reviewed the electronic self-monitoring reports (eSMRs) submitted by the Discharger for the **November 2013, December 2013, Fourth Quarter 2013, Second Semi-Annual 2013, Annual 2013, January 2014, and February 2014** monitoring periods.

The following violations were determined from review of the eSMRs:

Effluent Limitation Violations

According to the eSMRs, the discharge violated the effluent limitation for nitrate, bromoform, and dibromochloromethane contained in the WDRs, as listed in Table A. These violations potentially subject the Discharger to mandatory minimum penalties (MMPs). Should Board staff determine that these violations are subject to MMPs, an additional notification will be provided.

Table A. Effluent Limitation Violations

Date	Parameter	Monitoring Location	Units	WDRs Limit	Measured	Period	CIWQS
12/31/2013	Total Nitrate (as N)	EFF-001	mg/L	10	11	Average Monthly	962390
1/14/2014	Bromoform	EFF-003	µg/L	1	3.5	Maximum Daily	964130
1/31/2014	Bromoform	EFF-003	µg/L	0.5	3.5	Average Monthly	964127
1/31/2014	Dibromochloromethane	EFF-003	µg/L	0.5	0.94	Average Monthly	964126

KARL E. LONGLEY ScD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

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Violation IDs: 962390, 964130, 964127, 964126, 965761, 95867, 959855, 959866, 959868, 962391, 964125, 964128, 965762, and 965763

Date	Parameter	Monitoring Location	Units	WDRs Limit	Measured	Period	CIWQS
2/28/2014	Total Nitrate (as N)	EFF-001	mg/L	10	11	Average Monthly	965761

Receiving Water Violations

According to WDRs Provision V.A.8, the discharge shall not cause the receiving water pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units in Deuel Drain. In addition, WDRs Provision V.A.15.b states, the discharge shall not cause the receiving water temperature rise greater than 4 °F above the natural temperature at any time or place. As shown in Table B below, The downstream receiving water pH and temperature was changed by more than the allowable limit.

Table B. Receiving Water Violations

Date	Parameter	Units	RSW-001	RSW-002	Limitation	Change	CIWQS
11/25/2013	pH	S.U	7.36	8.20	0.5	0.84	959867
11/25/2013	Temperature	°F	46.6	55.3	4	8.7	959855
11/26/2013	pH	S.U	7.4	8.20	0.5	0.8	959866
11/26/2013	Temperature	°F	46.6	58.8	4	12.2	959868
12/17/2013	Temperature	°F	42.7	47.8	4	5.1	962391
1/14/2014	Temperature	°F	45.2	50.3	4	5.1	964125
1/28/2014	Temperature	°F	50.7	59.8	4	9.1	964128
2/11/2014	pH	S.U	7.4	8.7	0.5	1.3	965762
2/25/2014	Temperature	°F	52.8	60.2	4	7.4	965763

Board staff has the following area of concern from review of the eSMRs:

Area of Concern

After reviewing the 2013 Annual operations report, Board staff is concerned that the Facility may lack adequate staffing to properly operate and maintain the Facility. 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.

According to the Annual operations report, the Facility has only two operators. Therefore, there may be times when there isn't another certified operator for the chief plant operator to designate in his absence. By **16 May 2014**, please submit a technical report addressing staff's concern about the staffing level at the wastewater treatment plant.

In addition, Board staff has the following comments from review of the eSMRs:

Comments

1. On 28 January 2014, the Discharger reported that the pH at receiving water monitoring location RSW-002 was changed by 0.8 units above the receiving water monitoring location RSW-001. The Discharger self-entered this pH exceedance as an order condition violation. Board staff reviewed the January 2014 eSMR and noted that at the time of receiving water monitoring sampling event the Discharger noted agricultural runoff upstream of receiving water monitoring location RSW-002. Therefore, based on the information provided, Board staff determined that the pH change in the receiving water was not caused by the effluent discharge. Board staff has dismissed Violation ID# 964129.
2. According to the November 2013 and December 2013 eSMR, the discharge exceeded the effluent limitation for electrical conductivity (EC) contained in the WDRs. However, on 1 June 2011, the Superior Court for Sacramento County issued an Order of Mandate in the matter of City of Tracy vs State Water Resources Control Board. The Court ruled that the current Bay-Delta EC objectives shall not apply to the City of Tracy and other municipal discharges. The Discharger discharges from EFF-001 to Deuel Drain, which is a tributary of the South Delta; thus the discharge is exempt from the EC effluent limitation.
3. In the December 2013, January 2014, and February 2014 eSMR, the Discharger submitted the accelerated monitoring test laboratory reports for accelerated toxicity monitoring. According the laboratory report the discharger exceeded the chronic toxicity trigger for Ceriodaphnia Dubia reproduction with a reported result of 1.3 TUc on 27 January 2014. According to the WDRs Provision VI.B.2.a.iv.a, the Discharger may cease accelerated toxicity monitoring if the results of four (4) consecutive tests do not exceed the monitoring trigger. Please continue the accelerated monitoring until this requirement is met.
4. Board staff has not reviewed the Fourth Quarter 2013 groundwater monitoring data. Board staff will provide a separate review letter at later date.

By 16 May 2014, please submit a technical report addressing staff's concern about the staffing level at the wastewater treatment plant. Also, In your next monthly eSMR submittal, please address the violations cited above and indicate in the eSMR cover letter the actions that have been implemented, or will be implemented to prevent future similar violations. The cover letter may also include a discussion of any uncommon or unusual circumstances that resulted in a violation and which may suggest that reoccurrence of violations would be unlikely. If you disagree with any of the violations cited above, please provide an explanation and any supporting information necessary.

If you have any questions, please contact Mohammad Farhad at (916) 464-1181 or at mfarhad@waterboards.ca.gov.

/S/
NICHOLE MORGAN
Senior Water Resource Control Engineer
NPDES Compliance and Enforcement Unit

Central Valley Regional Water Quality Control Board

20 November 2014

Jaime Rodriguez
 Chief Engineer I
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SELF-MONITORING REPORT REVIEW AND NOTICE OF VIOLATION, CALIFORNIA DEPARTMENT OF CORRECTIONS, DEUEL VOCATIONAL INSTITUTION, SAN JOAQUIN COUNTY

The discharge of wastewater by the California Department of Corrections (Discharger) from the Deuel Vocational Institution (Facility) is regulated by Waste Discharge Requirements (WDRs) Order R5-2014-0014 (NPDES CA0078093). The Facility was also regulated by Cease and Desist Order (CDO) R5-2008-0165-01 until 8 August 2014 when it was rescinded. The Monitoring and Reporting Program (MRP) of the WDRs requires monitoring for constituents and other parameters and specifies the location and frequency of monitoring. Board staff has reviewed the electronic self-monitoring reports (eSMRs) submitted by the Discharger for the **April 2014, May 2014, June 2014, July 2014, August 2014, September 2014, Second Quarter 2014, and Third Quarter 2014** monitoring periods.

The following violations were determined from review of the eSMRs:

Effluent Limitation Violations

According to the eSMRs, the discharge violated the effluent limitation for nitrate plus nitrite contained in the WDRs, as listed in Table A. These violations potentially subject the Discharger to mandatory minimum penalties (MMPs). Should Board staff determine that these violations are subject to MMPs, an additional notification will be provided.

Table A. Effluent Limitation Violations

Date	Parameter	Units	WDRs Limit	Measured	Period	CIWQS
8/31/2014	Nitrate plus Nitrite (as N)	mg/L	10	12	Average Monthly	976826
9/30/2014	Nitrate plus Nitrite (as N)	mg/L	10	12	Average Monthly	978499

Late Reporting Violation

1. The Second Quarter 2014 eSMR was due on 1 August 2014 and it was submitted 45 days late on 15 September 2014, which is a violation of MRP requirements. Each 30-day period that a report is late is a serious violation of the NPDES permit and

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Violation IDs: 976826, 978499, 979951, 980084, 969057, and 980303

potentially subject to MMPs. Should Board staff determine that this violation is subject to MMPs, an additional notification will be provided. The failure to submit reports is also subject to discretionary penalties of up to \$1,000 per day late.

2. The Third Quarter 2014 eSMR was submitted seven days late, which violates MRP requirements. This violation does not appear to be a violation subject to MMP. The failure to submit reports is also subject to discretionary penalties of up to \$1,000 per day late.

Receiving Water Violation

According to WDRs Provision V.A.15.b, the discharge shall not cause the receiving water temperature to rise greater than 4 °F above the natural temperature at any time or place. As shown in Table B below, the downstream receiving water temperature was changed by more than the allowable limit.

Table B. Receiving Water Violation

Date	Parameter	Units	RSW-001	RSW-002	Limitation	Change	CIWQS
4/10/2014	Temperature	°F	55.7	60.9	4	5	969057

Order Condition Violation

According to WDRs Provision VI.C.2.a.iii.c, if the result of any accelerated monitoring test exceeds the toxicity trigger, the Discharger should cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Central Valley Water Board including, at minimum:

- Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
- Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
- A schedule for these actions.

In October 2013, the Discharger's laboratory reported that during the fourth quarter 2013 chronic toxicity test, *Ceriodaphnia dubia* exhibited higher mortality due to the parent organism not being healthy. The Discharger's laboratory changed its suppliers and the *Ceriodaphnia dubia* toxicity testing was rescheduled for December 2013. However, the sample exceeded the chronic toxicity trigger again on 19 December 2013. Samples were collected for accelerated monitoring on 6 January 2014, 21 January 2014, 3 February 2014, and 18 February 2014 with reported results of >1 TUc, 1.3 TUc, 1 TUc, and 1 TUc, respectively. In addition, the Discharger exceeded the chronic toxicity trigger for *Ceriodaphnia dubia* on 28 July 2014 with a reported result of 1.3 TUc. According to the Discharger, discussions are under way to hire an outside environmental consultant to initiate the TRE once a contract is finalized.

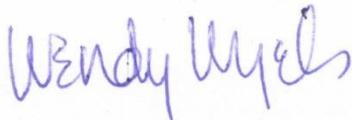
The Discharger should have initiated a TRE after the first accelerated monitoring result exceeded the toxicity trigger in 6 January 2014. The Discharger's failure to conduct a TRE is a violation of Provision VI.C.2.a.iii.c. Not having a contract is not an excuse for failure to comply with WDRs. Failure to submit the required report may result in the discretionary assessment of administrative civil liability up to \$1,000 per violation per day. The Deuel Vocational Institution has currently accrued a potential liability of over **\$285,000** for failure to initiate the TRE action plan.

Please submit a TRE Action Plan consistent with WDRs Provision VI.C.2.a.iii.c by **19 December 2014**.

Board staff is extremely concerned that the Discharger did not have a contract in place to initiate the TRE as required by WDRs. If the Discharger fails to initiate a TRE by 19 December 2014, Board staff will consider discretionary penalties.

In your next monthly eSMR submittal, please discuss steps taken to ensure a contractor is available whenever a TRE is needed. Also, address the violations cited above and indicate in the eSMR cover letter the actions that have been implemented, or will be implemented to prevent future similar violations. The cover letter may also include a discussion of any uncommon or unusual circumstances that resulted in a violation and which may suggest that reoccurrence of violations would be unlikely. If you disagree with any of the violations cited above, please provide an explanation and any supporting information necessary.

If you have any questions, please contact Mohammad Farhad at (916) 464-1181 or at mfarhad@waterboards.ca.gov.



WENDY WYELS, Supervisor
Compliance and Enforcement Unit

Central Valley Regional Water Quality Control Board

9 September 2015

Terry Bettencourt
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**SELF-MONITORING REPORT REVIEW AND NOTICE OF VIOLATION, CALIFORNIA
 DEPARTMENT OF CORRECTIONS, DEUEL VOCATIONAL INSTITUTION, SAN JOAQUIN
 COUNTY**

The California Department of Corrections (Discharger) discharges treated wastewater from the Deuel Vocational Institution (Facility), which is regulated by Waste Discharge Requirements (WDRs) Order R5-2014-0014 (NPDES CA0078093). The Monitoring and Reporting Program (MRP) of the WDRs requires monitoring for constituents and other parameters and specifies the location and frequency of monitoring. Board staff has reviewed the electronic self-monitoring reports (eSMRs) submitted by the Discharger for the **October 2014** through **June 2015** and **Fourth Quarter 2014** through **Second Quarter 2015** monitoring periods.

Review of the eSMRs identified the following violations:

Effluent Limitation Violations

According to the eSMRs, the Discharger violated the final effluent limitations for nitrate plus nitrite and total coliform organisms contained in the WDRs, as listed in Table A. These violations potentially subject the Discharger to mandatory minimum penalties (MMPs). Should Board staff determine that these violations are subject to MMPs, an additional notification will be provided.

Table A. Effluent Limitation Violations

Date	Parameter	Units	WDRs Limit	Measured	Period	CIWQS
5/27/14*	Total Coliform Organisms	MPN/100 mL	2.2	4.5	7-Day Median	995607
6/10/14*	Total Coliform Organisms	MPN/100 mL	2.2	13	7-Day Median	995608
11/18/14	Total Coliform Organisms	MPN/100 mL	2.3	23	7-Day Median	995609
3/17/15	Total Coliform Organisms	MPN/100 mL	2.2	23	7-Day Median	995610
3/31/15	Nitrate plus Nitrite (as N)	mg/L	10	13	Average Monthly	989791
4/30/15	Nitrate plus Nitrite (as N)	mg/L	10	12	Average Monthly	991142
5/7/15	Total Coliform Organisms	MPN/100mL	2.2	170	7-Day Median	995612
5/12/15	Total Coliform Organisms	MPN/100 mL	240	>1600	Instantaneous Maximum	992382
5/12/15	Total Coliform Organisms	MPN/100 mL	2.2	>1600	7-Day Median	995613
5/19/15	Total Coliform Organisms	MPN/100 mL	2.2	13	7-Day Median	995614
5/26/15	Total Coliform Organisms	MPN/100 mL	2.2	240	7-Day Median	992381

Table A. Effluent Limitation Violations

Date	Parameter	Units	WDRs Limit	Measured	Period	CIWQS
5/26/15	Total Coliform Organisms	MPN/100 mL	22	240**	More than once in 30-day period	992380
6/2/15	Total Coliform Organisms	MPN/ 100 mL	23	79	More than once in 30-day period	993960
6/2/15	Total Coliform Organisms	MPN/100 mL	2.2	79	7-Day Median	993956
6/9/15	Total Coliform Organisms	MPN/100 mL	23	49	More than once in 30-day period	993957
6/9/15	Total Coliform Organisms	MPN/100 mL	2.2	49	7-Day Median	995616
6/16/15	Total Coliform Organisms	MPN/100 mL	2.2	13	7-Day Median	993961
6/23/15	Total Coliform Organisms	MPN/100 mL	2.2	49	More than once in 30-day period	993958
6/23/15	Total Coliform Organisms	MPN/100 mL	2.2	49	7-Day Median	993959
7/1/15	Total Coliform Organisms	MPN/100 mL	2.2	6.1	7-Day Median	995160
7/7/15	Total Coliform Organisms	MPN/100 mL	2.2	170	7-Day Median	995157
7/7/15	Total Coliform Organisms	MPN/100 mL	23	170	More than once in 30-day period	995159
7/14/15	Total Coliform Organisms	MPN/100 mL	23	23	More than once in 30-day period	995158
7/14/15	Total Coliform Organisms	MPN/100 mL	2.2	23	7-Day Median	995156

* Based on reevaluation for the April 2014 through September 2015 monitoring reports.

** First excursion occurred on 5/12/2015 with a reported value of 1600 MPN/100 mL.

Comments Regarding the eSMRs

1. According to the WDRs Compliance Determination Provision VII.D, the 7-day median values are calculated utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the results from that sampling event and all results from the previous 6 days are used to calculate the 7-day median. However, according to the eSMRs, the Discharger is calculating the 7-day median total coliform values incorrectly and Board staff recalculated 7-day median values prior to entering these violations into CIWQS. Please ensure that the 7-day median total coliform values are calculated correctly prior to submittal.
2. According to the WDRs Provision V.A.15.b, the discharge shall not cause the surface water temperature to rise more than 4°F above the natural temperature at any time. On 13 January 2015, the temperature at the RSW-001 and RSW-002 were reported as 49°F and 54°F, respectively (5°F difference). The Discharger self-reported this exceedance as a violation in CIWQS (Violation ID #987022). Board staff reviewed the January 2015 eSMR and determined that the 13 January 2015 receiving water exceedance was not a violation of the WDRs because the temperature rise in the receiving water was not due to the Facility's discharge. According to the receiving water visual observations, there was no flow in RSW-001 and very little flow in RSW-002; therefore, the discharge could not have caused the downstream temperature to rise more than 4°F. Violation #987022 has been dismissed.
3. In the December 2014 eSMR, the Discharger incorrectly reported the temperature and pH data for the downstream receiving water location RSW-002. For example, the pH data for RSW-002 was reported as temperature data. In the future please double check all of the monitoring data and ensure it is properly reported.

4. In response to the effluent total coliform violations, the Discharger stated that the high coliform violations are likely due of the inadequate filtration because the membrane bioreactor (MBR) modules have been damaged. The Discharger is currently in the bidding process to replace the MBR modules. Until the MBR modules are replaced, please take appropriate actions to minimize total coliform violations to protect water quality.
5. In February 2015, the Discharger's laboratory reported that during the first quarter 2015 chronic toxicity test, *Selenstrum Capricornutum* growth and *Cerodaphnia dubia* reproduction, exceeded the chronic toxicity trigger with reported results of >1 TUC and 4 TUC, respectively. According to the Discharger, these exceedances were because the Reverse Osmosis (RO) plant was not in operation, which provides the drinking water to the prison. The Discharger's potable water supply has high EC and the RO plant had been installed for the removal of contaminants and when it is not operational, the wastewater treatment plant effluent has elevated EC which can result in chronic toxicity.

Also, during the second quarter 2015 chronic toxicity test which was conducted on 13 April 2015, *Cerodaphnia dubia* reproduction exceeded the chronic toxicity trigger with reported results of 2 TUC. Once again, the Discharger stated that the exceedance was because the RO plant was not operational at the time of chronic toxicity sample collection. The 13 April 2015 final TRE report submitted by the Discharger confirms that the toxicity in the effluent is due to high TDS concentration.

Currently, the Discharger is under Cleanup and Abatement Order (CAO) R5-2015-0704 which requires the Discharger to continuously operate the RO plant in addition to reporting obligations related to the operations and maintenance of the RO plant. Directive 2.b of the CAO R5-2015-0704 states:

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).

In the event that the RO plant is off-line, the Discharger's notification must include an estimated timeline for when the plant will return to operation. Also, if the RO plant is offline more than 7-days, the Discharger must collect chronic toxicity. When the numeric toxicity monitoring trigger is exceeded during this event, the Discharger must initiate accelerated monitoring.

On 2 September 2015, Board staff had a conference call with the Discharger in regards to the recent total coliform violations. During the conference call, the Discharger stated that they have conducted two additional chronic toxicity tests in accordance with the CAO R5-2015-0704 requirement; however, Board staff have not yet received the results of these additional chronic toxicity tests. Not reporting the results is a violation of CAO R5-2015-0704 and may subject to discretionary

penalties. Please provide all of the additional chronic toxicity test results required by CAO R5-2015-0704 to the Central Valley Water Board.

In future monthly monitoring reports, please summarize how many days the RO plant was off-line during the monitoring period. If the RO plant was taken offline for more than seven days, please state if a chronic toxicity test was conducted during the monitoring period and provide the results to the Central Valley Water Board.

Required Response

Water Board staff is extremely concerned about the continuing violations at this wastewater treatment plant. By **30 September 2015**, please submit a technical report describing (a) the additional steps that DVI will take to properly treat its wastewater and comply with the NPDES permit during the period that the damaged MBR modules are in place and the reverse osmosis plant is not operating, (b) the steps that DVI will take to comply with Directive 2.b of CAO R5-2015-0704, and (c) the steps that DVI will take to ensure that the 7-day median total coliform concentrations are calculated correctly.

If you have any questions, please contact Mohammad Farhad at (916) 464-1181 or at mfarhad@waterboards.ca.gov.



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Farhad, Mohammad@Waterboards

From: Mullins, Daniel@CDCR <Daniel.Mullins@cdcr.ca.gov>
Sent: Tuesday, October 06, 2015 8:22 AM
To: WB-RB5S-CentralValleySacramento
Cc: Holmes, Kari@Waterboards; Wyels, Wendy@Waterboards; Farhad, Mohammad@Waterboards; Stanley, Jeff@CDCR
Subject: Response to NOV (2015-09-09)
Attachments: NOV Self Monitoring Report (10-6-15).pdf

Date of Title of Submittal	October 6, 2015 – Response to NOV (2015-09-09)
Regulatory Program	Order R5-2014-0014-01 (NPDES CA0078093)
Unit	Compliance and Enforcement
Regulated Party (Discharger)	California Department of Corrections and Rehabilitation
Facility Name	Deuel Vocational Institution
County	San Joaquin

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DIVISION OF ADULT INSTITUTIONS

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October 1, 2015

Kari Holmes, P.E.
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SUBJECT: *Response to Self-monitoring Report and Review of Notice of Violation, California Department of Corrections, Deuel Vocational Institution, San Joaquin County, Order R5-2014-0014-01 (NPDES CA0078093) for October 2014 through July 2015 and Fourth Quarter 2014 through Second Quarter 2015 monitoring periods.*

The California Department of Corrections and Rehabilitation (CDCR), appreciates the opportunity to respond to the Self-Monitoring Report and Review of Notice of Violation dated September 9, 2015. Deuel Vocational Institution (DVI) understands it is regulated by Waste Discharge Requirements (WDR) R5-2014-0014-01 (NPDES CA0078093). After careful review of the violations listed, DVI offers the following responses:

Violations under order R5-2014-0014-01

Effluent Limitations Violations

According to the eSMRs, the Discharger violated the final effluent limitations for nitrate plus nitrite and total coliform organisms contained in the WDRs listed in Table A of the Notice of violation from the dates 27 May, 2014 to 14 July, 2015

Response:

The UV system is functioning properly after inspection of the lamps and crystal sleeve lamp housing. All three (3) UV Trains are yielding the same results; therefore the high coliforms were most likely due to the inadequate filtration of the membrane filters. DVI is currently in the bidding process for the replacement of the filters. On August 6, 2015, Aqua Sierra Controls made program changes to the maintenance cleaning program to improve the condition of the filters. The back pulse flow rate was changed from 240 GPM to 140 GPM. The high flow rate may have been causing filter blow out during the weekly maintenance cleans which would allow some biological floc to pass through the

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filters during normal operation. The UV light may not be capable of penetrating the biological floc for deactivation of the coliform which is bound in the biological floc. Since the change in the maintenance clean program on August 6, 2015, the coliform results have decreased from a weekly positive, to two (2) positive results of 4.5 MPN/100ml up to September 15, 2015. We have not received results for September 22, 2015.

On March 31, 2015 and April 30, 2015, the nitrate plus nitrite average monthly was over the maximum allowable limits of 10 mg/l in the final effluent due to the reduced filter flow ratings at higher influent flows. Four (4) membrane tanks must be put online to treat the incoming flows from the institution. Running four (4) filter tanks reduces the detention time in the denitrification tanks; therefore increasing the final effluent nitrate plus nitrite levels. A water savings program has been initiated at DVI due to the drought and the result has been nitrate plus nitrite levels below the maximum allowable limits in the final effluent.

Comments regarding the eSMRs

According to the WDRs Compliance Determination Provision VII.D, the 7-day median values are calculated utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the results from that sampling event and all results from the previous 6 days are used to calculate the 7-day median. However, according to the eSMRs, the Discharger is calculating the 7-day median total coliform values incorrectly and Board staff recalculated 7-day median values prior to entering these violations into CIWQS. Please ensure that the 7-day median total coliform values are calculated correctly prior to submittal.

Response:

The 7-day median total coliform values will be calculated correctly prior to submittal.

According to the WDRs Provision V.A.15.b, the discharge shall not cause the surface water temperature to rise more than 4 F above the natural temperature at any time. On 13 January 2015, the temperature at the RSW-001 and RSW-002 were reported as 49 F and 54 F respectively (5 F difference). Board staff reviewed the January 2015 eSMR and determined that the 13 January 2015 receiving water exceedance was not a violation of the WDRs because the temperature rise in the receiving water was not due to the Facility's discharge. According to the receiving water visual observations, there was no flow in RSW-001 and very little flow in RSW-002; therefore, the discharge could not have caused the downstream temperature to raise more than 4 F. Violation #987002 has been dismissed.

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Response:

DVI concurs with the findings.

In the December 2014 eSMR, the Discharger incorrectly reported the temperature and pH data for the downstream receiving water location RSW-002. For example, the pH data for RSW-002 was reported as temperature data. In the future please double check all of the monitoring data and ensure it is properly reported.

Response:

The DVI wastewater treatment staff has received documented training and will ensure any future data is entered properly.

In response to the effluent total coliform violations, the Discharger stated that the high coliform violations are likely due to the inadequate filtration because the membrane bioreactor (MBR) modules have been damaged. The Discharger is currently in the bidding process to replace the MBR modules. Until the MBR modules are replaced, please take appropriate actions to minimize total coliform violations to protect water quality.

Response:

Although the UV dose has been above the minimum hourly dose of 82 (mJ/cm²), DVI staff are rebuilding UV train 2 and will continue with train 1 and train 3. With the new crystal sleeve lamp housing and wiper system, the dose will increase to a much higher level. After all UV trains have been rebuilt, staff will monitor the coliform results.

In February of 2015, the Discharger's laboratory reported that during the first quarter 2015 chronic toxicity test, Selenstrum Capricornutum growth and Cerodaphnia dubia reproduction, exceeded the chronic toxicity trigger with reported results of >1 TUc and 4 TUc, respectively. According to the Discharger, these exceedances were because the Reverse Osmosis (RO) plant was not in operation, which provides the drinking water to the prison. The Discharger's potable water supply has high EC and the RO plant had been installed for the removal of contaminants and when it is not operational, the wastewater treatment plant effluent has elevated EC which can result in chronic toxicity.

Also, during the second quarter 2015 chronic toxicity test which was conducted on 13 April 2015, Cerodaphnia dubia reproduction exceeded the chronic toxicity trigger with reported results of 2 Tuc. Once again, the Discharger stated that the

DIVISION OF ADULT INSTITUTIONS

Deuel Vocational Institution
23500 Kasson Road
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Tracy, CA 95378



exceedance was because the RO plant was not operational at the time of chronic toxicity sample collection. The 13 April 2015 final TRE report submitted by the Discharger confirms that the toxicity in the effluent is due to high TDS concentration.

Currently, the Discharger is under Cleanup and Abatement Order (CAO) R5-2015-0704 which requires the Discharger to continuously operate the RO plant in addition to reporting obligations related to the operations and maintenance of the RO plant. Directive 2.b of the CAO R5-2015-0704 requires: In the event that the RO plant is off-line, the Discharger's notification must include an estimated timeline for when the plant will return to operation. Also, if the RO plant is offline more than 7-days, the Discharger must collect chronic toxicity. When the numeric toxicity monitoring trigger is exceeded during this event, the Discharger must initiate accelerated monitoring.

Response:

As requested, when the numeric toxicity monitoring trigger is exceeded during this event, the Wastewater Treatment Operators will initiate accelerated monitoring.

On 2 September 2015, Board staff had a conference call with the Discharger in regards to the recent total coliform violations. During the conference call, the Discharger stated that they have conducted two additional chronic toxicity tests in accordance with the CAO R5-2015-0704 requirement; however, Board staff has not yet received the results of these additional chronic toxicity tests. Not reporting the results is a violation of CAO R5-2015-0704 and may subject to discretionary penalties.

Response:

Only one additional toxicity test has been conducted for the year of 2015 due to the RO water treatment plant having only been shut down once, on August 10, 2015, since its initial startup on April 3, 2015. Samples were drawn on August 17, 2015. The report was submitted on the August 2015 monthly monitoring report in the eSMR system.

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If you should have any further questions or concerns regarding this response, please contact me at (209) 835-3933, or via email at Tom.Elliott@cdcr.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Tom Elliott".

TOM ELLIOTT
Correctional Plant Manager II (A)
Deuel Vocational Institution

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated 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.

Note: Per Standard Provisions, Reporting sections V.B.2 and V.B.3, the LRO must be a principal executive officer or ranking elected official of the Discharger's agency, or a duly authorized representative that meets the intent of 40 CFR 122.22(b)(2).

Central Valley Regional Water Quality Control Board

12 January 2016

Jaime Rodriguez
 Chief Engineer I
 Deuel Vocational Institution
 P.O. Box 400
 Tracy, CA 95378-0400

SELF-MONITORING REPORT REVIEW AND NOTICE OF VIOLATION, CALIFORNIA DEPARTMENT OF CORRECTIONS, DEUEL VOCATIONAL INSTITUTION, SAN JOAQUIN COUNTY

The California Department of Corrections (Discharger) discharges treated wastewater from the Deuel Vocational Institution (Facility), which is regulated by Waste Discharge Requirements (WDRs) Order R5-2014-0014 (NPDES CA0078093) and Cleanup and Abatement Order (CAO) R5-2015-0704. The Monitoring and Reporting Program (MRP) of the WDRs requires monitoring for constituents and other parameters and specifies the location and frequency of monitoring. Board staff has reviewed the electronic self-monitoring reports (eSMRs) submitted by the Discharger for the **August 2015** through **November 2015** and the **Third Quarter 2015** monitoring periods.

Review of the eSMRs identified the following violations:

Effluent Limitation Violations

According to the eSMRs, the Discharger violated the final effluent limitations for ammonia, nitrate plus nitrite, and total coliform organisms contained in the WDRs, as listed in Table A. These violations potentially subject the Discharger to mandatory minimum penalties (MMPs). Should Board staff determine that these violations are subject to MMPs, an additional notification will be provided.

Table A. Effluent Limitation Violations

Date	Parameter	Units	WDRs Limit	Measured	Period	CIWQS
8/25/15	Total Coliform Organisms	MPN/100 mL	2.2	4.5	7-Day Median	996583
9/8/15	Total Coliform Organisms	MPN/100 mL	2.2	4.5	7-Day Median	998550
9/29/15	Total Coliform Organisms	MPN/100 mL	2.2	49	7-Day Median	998551
10/19/15	Total Ammonia (as N)	mg/L	2.2	3.5	Maximum Daily	1000280
10/19/15	Total Ammonia (as N)	lbs/day	11.4	12.4	Maximum Daily	1000277
10/31/15	Total Ammonia (as N)	mg/L	0.7	0.88	Average Monthly	1000279
10/31/15	Nitrite Plus Nitrate (as N)	mg/L	10	14	Average Monthly	1000278
11/3/15	Total Coliform Organisms	MPN/100 mL	2.2	23	7-Day Median	1000743
11/10/15	Total Coliform Organisms	MPN/100 mL	2.2	240	7-Day Median	1000739
11/17/15	Total Coliform Organisms	MPN/100 mL	2.2	7.8	7-Day Median	1000742

Table A. Effluent Limitation Violations

Date	Parameter	Units	WDRs Limit	Measured	Period	CIWQS
11/24/15	Total Coliform Organisms	MPN/100 mL	2.2	13	7-Day Median	1000741
11/30/15	Nitrite Plus Nitrate (as N)	mg/L	10	14	Average Monthly	1000740

Late Reporting Violation

The October 2015 eSMR was submitted ten days late, which violates the MRP requirements. This violation does not appear to be subject to MMPs; however, please note each 30-day period that a report is late is a serious violation of the NPDES permit and potentially subject to MMPs. Also, the failure to submit reports in accordance with the WDRs may also be subject to discretionary penalties of up to \$1,000 per day late.

Comments Regarding the eSMRs

1. In response to the total coliform effluent limitation violations, the Discharger stated that these violations are likely due to inadequate filtration because the membrane bioreactor (MBR) modules have been damaged. The Discharger stated in their eSMR cover letter that they are currently in the bidding process to replace the MBR modules as required by CAO R5-2015-0704. Until the MBR modules are replaced, please take appropriate actions to minimize total coliform violations to protect water quality.
2. In response to the ammonia and nitrate plus nitrite effluent limitation violations, the Discharger stated that a plant upset affected both the nitrification and denitrification processes. On 20 October 2015, the digester compartment normally used as a surge basin was converted back to an aerobic digester to isolate the aerobic organisms and the plant has since recovered from the upset.

Submittals Required by the WDRs R5-2014-0014

All technical and progress reports required by WDRs R5-2014-0014 during the monitoring periods reviewed under cover of this letter are shown in Table B. The next reports required by the WDRs are the *Annual Operations Report* and *Pollution Prevention Plan for Mercury and Compliance Schedule for Methylmercury-Progress Report*, which is due on 30 January 2016.

Table B. Submittal Required by WDRs

Report	Due Date	Date Submitted
Phase I Methylmercury Control Study Progress Report	10/20/2015	9/29/2015

Submittals Required by Cleanup and Abatement Order (CAO) R5-2015-0704

All technical and progress reports required by CAO R5-2015-0704 since the CAO adoption date of 30 March 2015, are shown in Table C. The *Third Quarter 2015 Progress Report* was due on 30 October 2015. However, this report has not been submitted, as shown in Table C below.

The technical reports are required pursuant to Water Code section 13267. Failure to submit them subjects the Discharger to a penalty of up to \$1,000 per day late per late

report. **The California Department of Corrections is currently subject to a penalty of over \$822,000. Please submit the incomplete reports and the Third Quarter 2015 Progress Report forthwith to avoid accruing a larger penalty.** The next report required by CAO R5-2015-0704 is the *Fourth Quarter 2015 Progress Report*, which is due 30 January 2016.

Table C. Submittal Required by CAO R5-2015-0704

Report	Due Date	Submitted	CIWQS
First Quarter 2015 Progress Report	30 April 2015	11 days late	990645 ¹
RO Plant Spare Parts Status Report	1 May 2015	Incomplete	990646 ²
MBR Modules Replacement Time Schedule	1 May 2015	Incomplete	990647 ²
O&M manual and SOPs	1 June 2015	Incomplete	992564
Second Quarter 2015 Progress Report	1 June 2015	7/29/2015	NA
Time Schedule for Cleaning and Properly Maintaining Facility Grounds	9/1/2015	9/1/2015	NA
Third Party Selection Report	10/1/2015	10/1/2015	NA
Third Quarter 2015 Progress Report	10/30/15	Not Submitted	1001699

¹ Violation cited in 8 May 2015 Notice of Violation (NOV).

² Board staff incorrectly identified these violations as late reporting violations in the 8 May NOV letter. These CIWQS violations have been modified to reflect that the reports were submitted on time; however, materially deficient and marked incomplete.

Although the Discharger identified the cause of the effluent violations cited above to be a result of inadequate filtration and plant upset, the Discharger did not address preventative measures the Discharger will implement to prevent similar violations at the Facility.

By **1 February 2016**, please submit a response summarizing actions the Discharger will immediately implement to properly treat its wastewater and comply with the NPDES permit until the damaged MBR modules are in place. In addition, the response shall include steps to minimize or eliminate effluent violations related to upset at the Facility.

If you have any questions, please contact Mohammad Farhad at (916) 464-1181 or at mfarhad@waterboards.ca.gov.

KARI HOLMES, P.E.
Senior Water Resource Control Engineer
NPDES Compliance and Enforcement Unit

Central Valley Regional Water Quality Control Board

18 February 2016

Jaime Rodriguez
Chief Engineer I
Deuel Vocational Institution
P.O. Box 400
Tracy, CA 95378-0400

**SELF-MONITORING REPORT REVIEW AND NOTICE OF VIOLATION, CALIFORNIA
DEPARTMENT OF CORRECTIONS, DEUEL VOCATIONAL INSTITUTION, SAN JOAQUIN
COUNTY**

The California Department of Corrections (Discharger) discharges treated wastewater from the Deuel Vocational Institution (Facility), which is regulated by Waste Discharge Requirements (WDRs) Order R5-2014-0014-01 (NPDES CA0078093) and Cleanup and Abatement Order (CAO) R5-2015-0704. The Monitoring and Reporting Program (MRP) of the WDRs requires monitoring for constituents and other parameters and specifies the location and frequency of monitoring. Board staff has reviewed the electronic self-monitoring reports (eSMRs) submitted by the Discharger for the **December 2015, Fourth Quarter 2015, Second Semi-Annual 2015, and Annual 2015** monitoring periods.

Review of the eSMRs identified the following violations:

Effluent Limitation Violations

The Discharger violated the final effluent limitations for total coliform organisms contained in the WDRs, as listed in Table A. These violations subject the Discharger to mandatory minimum penalties (MMPs). Board staff will assess the additional total coliform organism violations in a future Administrative Civil Liability Complaint.

Table A. Effluent Limitation Violations

Date	Parameter	Units	WDRs Limit	Measured	Period	CIWQS
12/1/2015	Total Coliform Organisms	MPN/100 mL	2.2	49	7-Day Median	1002368
12/8/2015	Total Coliform Organisms	MPN/100 mL	2.2	240	7-Day Median	1002366
12/8/2015	Total Coliform Organisms	MPN/100 mL	23	240	More than once in 30-day period	1002369
12/15/2015	Total Coliform Organisms	MPN/100 mL	2.2	4	7-Day Median	1002367

Comment Regarding the eSMRs

In response to the total coliform effluent limitation violations, the Discharger stated that these violations are likely due to inadequate filtration because the membrane bioreactor (MBR) modules have been damaged. The Discharger stated in their eSMR cover letter that they are currently in the bidding process to replace the MBR modules as required by CAO R5-2015-0704. Until the MBR modules are replaced, please take appropriate actions to minimize total coliform violations to protect water quality.

Submittals Required by the WDRs R5-2014-0014

All technical and progress reports required by WDRs R5-2014-0014-01 during the monitoring periods reviewed under cover of this letter are shown in Table B. However, the *2015 Annual Progress Report for Pollution Prevention Plan for Mercury and Compliance Schedule for Methylmercury* was not received. **Please submit the 2015 Annual Progress Report for Pollution Prevention Plan for Mercury and Compliance Schedule for Methylmercury forthwith.** Please note failure to submit a complete report potentially subjects the Discharger to discretionary penalties of \$1,000 per day per incomplete report. The next reports required by the WDRs are the *Annual Operations Report* and *2016 Annual Progress Report for Pollution Prevention Plan for Mercury and Compliance Schedule for Methylmercury*, which are both due on 30 January 2017.

Table B. Submittals Required by WDRs

Report	Due Date	Date Submitted	CIWQS Violation ID
Annual Operations Report	1/30/2016	1/25/2016	NA
2015 Annual Progress Report for Pollution Prevention Plan for Mercury and Compliance Schedule for Methylmercury	1/30/2016	Not Submitted	1003250

Submittals Required by Cleanup and Abatement Order (CAO) R5-2015-0704

All technical and progress reports required by CAO R5-2015-0704 since the adoption of the CAO are shown in Table C. The next report required by the CAO is the *MBR Modules Replacement Final Report and Updated O&M Manual*, which is due 1 May 2016.

On 30 June 2015, Board staff issued Notice of Violation (NOV) for materially deficient reporting and requested the Discharger to submit the completed reports **forthwith**. However, the Discharger has not submitted any of these incomplete reports. In addition, the Quarterly Progress Reports lack detail; for example, a completed task outlined in the CAO should include the date it was completed and uncompleted tasks should include detail such as a timeline, a budget if applicable, and/or any other pertinent information to allow Board staff to determine if completion is on schedule for the dates listed in the CAO. In addition, the Quarterly Progress Reports should thoroughly describe all activities that were performed by the Discharger to achieve compliance with the CAO in the previous quarter and list of steps the Discharger is taking to hasten completion of the remaining uncompleted tasks and bring the Deuel Vocational Institution's Wastewater Treatment Plant into compliance with the NPDES permit limitations as well as the CAO.

Therefore, these Progress Reports are considered materially deficient and do not comply with CAO R5-2015-0704.

Please resubmit these inadequate technical and Quarterly Progress Reports **immediately**. Be advised that continued failure to comply fully with reporting requirements may result in staff recommending additional enforcement, which may include the issuance of an discretionary administrative civil liability complaint of up to \$1,000 per day for each late or inadequate report. **As of the date of this Notice, the maximum liability for delinquent monitoring reports is \$1,881,000.**

Table C. Submittals Required by CAO

Report	Due Date	Submitted	Status	CIWQS Violation ID
First Quarter 2015 Progress Report	4/30/15	5/11/15	11 Days Late Incomplete	990645
RO Plant Spare Parts Status Report	5/1/15	5/1/15	Incomplete	990646
MBR Modules Replacement Time Schedule	5/1/15	5/1/15	Incomplete	990647
O&M Manual and SOPs	6/1/15	5/1/15	Incomplete	992564
Second Quarter 2015 Progress Report	7/30/15	7/19/15	Incomplete	1003320
Time Schedule for Cleaning and Properly Maintaining Facility Grounds	9/1/15	9/1/15	Complete	N/A
Third Party Selection Report	10/1/15	9/29/15	Complete	N/A
Third Quarter 2015 Progress Report	10/30/15	1/27/15	89 Days Late Incomplete	1001699
Fourth Quarter 2015 Progress Report	1/30/15	1/27/15	Incomplete	1003322

Although the Discharger identified the cause of the effluent violations cited above to be a result of inadequate filtration and plant upset, the Discharger did not address preventative measures the Discharger will implement to prevent similar violations at the Facility.

In the next eSMR review cover letter, please submit a response summarizing actions the Discharger will immediately implement to properly treat its wastewater and comply with the NPDES permit until the damaged MBR modules are in place. In addition, the response shall include steps to minimize or eliminate effluent violations related to upset at the Facility.

If you have any questions, please contact Mohammad Farhad at (916) 464-1181 or at mfarhad@waterboards.ca.gov.

A handwritten signature in blue ink, appearing to be 'Kari Holmes', written in a cursive style.

KARI HOLMES, P.E.
Senior Water Resource Control Engineer
NPDES Compliance and Enforcement Unit

cc: J. Price, Warden, Deuel Vocational Institution
Vanessa Young, Office of Enforcement, State Water Resources Control Board, Sacramento