

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

In the Matter of:

Yucaipa Valley Water District)	Mandatory Minimum Penalty Order No. R8-2011-0028
12770 Second Street)	and
Yucaipa, CA 92399)	Stipulations for Settlement
)	
)	

A. INTRODUCTION:

1. This is a Mandatory Minimum Penalty (MMP) Order (hereinafter Order) presented to the Executive Officer of the Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board) for consideration. This Order accepts the stipulations for settlement of mandatory penalties assessed to the Yucaipa Valley Water District (hereinafter YVWD or Discharger).

B. PARTIES TO THIS AGREEMENT:

1. Regional Board's Prosecution Team, represented by Robert L. Holub.
2. Yucaipa Valley Water District represented, by Joseph B. Zoba.
3. California State University San Bernardino (SEP Proponent), represented by Dr. Brett J. Stanly.

C. MANDATORY PENALTY BEING SETTLED:

1. YVWD is alleged to have violated provisions of law for which the Regional Board must impose mandatory penalties pursuant to California Water Code Section 13385 (i).
2. The mandatory penalty is based on the following facts:
 - a. On February 02, 2007, the Regional Board adopted Waste Discharge Requirements, Order No. R8-2007-0012, NPDES No. CA0105619, for YVWD. These requirements regulate discharges of waste from the Henry N. Wochholz Municipal Wastewater Treatment Plant (HNMMWTP).

- b. YVWD submitted self-monitoring reports (December 2007 through May 2010) for the HNWMWTP, which show effluent limit violations of coliform, turbidity, TIN, NH₃-N, chlorine residual, and pH. These violations are summarized in Attachment 1 of this order.
- c. Water Code Section 13385 (i) requires the Regional Board to assess a mandatory minimum penalty of three thousand dollars (\$3,000) for non-serious violations, not counting the first three non-serious violations following each six-month, violation-free period.
- d. Water Code Section 13385(j)(1)(D) specifies that mandatory penalties do not apply during the operation of a new or reconstructed wastewater treatment unit during a defined period of adjusting and testing.
- e. As shown in Attachment 1, the District incurred a total of ninety-eight (98) reported violations between December 2007 and May 2010. During the period between December 2007 and February 2009, the District was in the process of testing and adjusting various treatment units as a result of its wastewater treatment plant expansion. The violations that occurred during this period are not subject to mandatory penalties pursuant to CWC Section 13385(j)(1)(D). Fourteen violations out of the ninety-eight violations are subject to mandatory penalties of \$3,000 for each violation. In accordance with Water Code Section 13385 (i), the total mandatory penalty for the fourteen effluent limit violations cited in Attachment 1 is forty-two thousand dollars (14 x \$3,000 = \$42,000).

D. PROPOSED SETTLEMENT:

- 1. The Discharger agrees to settle the above mandatory penalty (total liability: \$42,000) in accordance with the following:

- a. The Discharger will pay \$22,414 to the State Water Resources Control Board. A check in this amount shall be mailed to the following address within 30 days of adoption of this Order:

Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

- b. The Discharger will pay \$19,586 to California State University San Bernardino (CSUSB), for a Supplemental Environmental Project (SEP). This is the suspended liability payment and is also due within 30 days of adoption of this Order. A check in the amount \$19,586, made payable to CSUSB, shall also be mailed to the Regional Board at the above address. The suspended liability shall be deemed satisfied once the Discharger

funds the SEP project and the project is completed by the SEP Proponent in accordance with the schedule proposed in the SEP proposal (Attachment 2).

2. CSUSB shall utilize the SEP allocation of \$19,586 as per the proposed budget in accordance with the schedule included in Attachment 2 of this Order.

E. TERMS AND CONDITIONS OF THE AGREEMENT:

1. The Discharger is alleged to have violated the California Water Code by discharging wastewater with constituents in excess of permit limitations to waters of the United States. These violations are subject to mandatory penalty. The Discharger waived its right to a hearing regarding this penalty. The total assessed liability is \$42,000.
2. The Discharger agrees to settle this penalty by making a payment of \$22,414 to the State Water Resources Control Board and by funding a SEP project for the suspended liability of \$19,586.
3. The SEP Proponent agrees to complete the SEP project as per the proposed budget and the schedule included in the SEP proposal outlined in Attachment 2 of this Order.
4. Upon adoption of this Order by the Executive Officer, incorporating this Agreement, this Order represents a final and binding resolution and settlement of violations alleged above against the Discharger and its subsidiaries, successors, assigns, and their officers, directors, employees, representative agents, and attorneys.
5. The Parties covenant and agree that they will not contest the Order before the State Water Resources Control Board, or any court.
6. The Parties agree that the procedure that has been adopted for the approval of the Agreement by the Parties, as reflected in this Order, will be adequate. In the event procedural objections are raised prior to this Order becoming effective, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the procedure as necessary or advisable under the circumstances.
7. **Description of the SEP:** See Attachment 2.
8. **Deliverable Products from SEP:** See Attachment 2.

9. **Budget and Milestones:** See Attachment 2.
10. **Representations and Agreements by the SEP Proponent:** As a material consideration for the Executive Officer's acceptance of this Order, the SEP Proponent represents that it will utilize the funds provided to it by the Discharger to implement the SEP in accordance with the schedule in Attachment 2. The SEP Proponent understands that its promise to implement the SEP as described in Attachment 2, in its entirety and in accordance with the schedule for implementation, is a material condition of this settlement of liability between the Discharger and the Regional Board. The SEP Proponent agrees that the Regional Board has the right to require the SEP Proponent to implement the SEP in accordance with the terms of this Order if it has received funds for that purpose from the Discharger. The SEP Proponent agrees to submit to the jurisdiction of the Regional Board to enforce the terms of this Order for purposes of implementation of the SEP.

The SEP Proponent represents to the Parties and to the Regional Board that the SEP Proponent will: 1) spend the SEP payment as described in the Order as per the project description in Attachment 2; and 2) provide a certified, written report to Regional Board staff consistent with the terms of this Order detailing the implementation of the SEP. The SEP Proponent agrees that Regional Board staff has the right to require an audit of the funds provided to it by the Discharger and expended by it to implement the SEP.

11. **Publicity:** Wherever the Discharger or its subcontractors or agents or the SEP proponent or its agents or subcontractors publicizes one or more elements of the SEP project, they shall state in a prominent manner that the project is being undertaken as part of the settlement of an enforcement action by the Regional Board against the Discharger.
12. **Public Notice:** This Order and Agreement, including the SEP proposal, were publicly noticed at least for 30 days. All public comments received have been considered and responded to.
13. **Regional Board Staff Oversight Costs:** Regional Board staff does not anticipate any staff oversight costs for the proposed SEP.
14. **Submittal of Progress Reports:** The SEP Proponent shall provide quarterly progress reports to the Designated Regional Board Representative on the 15th day of the month following the quarter; the first quarterly report is due on: January 15, 2012.
15. **SEP Program Audit:** The SEP Proponent shall allow Regional Board staff to audit the SEP project during normal business hours.

- 16. Final Certification:** On or before December 1, 2012, the SEP Proponent shall submit certified statements by responsible officials representing the SEP Proponent documenting the respective expenditures by the SEP Proponent to implement and to complete the SEP. The expenditures may be external payments to outside vendors or contractors implementing the SEP. In making such certification, the official may rely upon normal company project tracking systems that capture employee time expenditures and external payments to outside vendors such as environmental and information technology contractors or consultants. The SEP Proponent shall provide any additional information requested by the Regional Board staff which is reasonably necessary to verify the SEP Proponent's SEP expenditures. The certification need not address any costs incurred by Regional Board staff for oversight. The final report shall include a certification by the Principal Investigator, under penalty of perjury, stating that the SEP has been completed in accordance with Attachment 2 and any agreed upon written changes between the authorized representatives of the SEP Proponent and the Regional Board and the applicable provisions of this Order. Such documentation may include photographs, invoices, receipts, certifications, and other materials reasonably necessary for the Regional Board to evaluate the completion of the SEP and the costs incurred by the SEP Proponent.
- 17. Third Party Audit:** If the Designated Regional Board Representative obtains information that causes the representative to reasonably believe that the SEP Proponent has not expended money in the amounts claimed by the SEP Proponent, or has not adequately completed any of the work in the SEP proposal, as described in Attachment 2, the Designated Regional Board Representative, may require, and the SEP Proponent shall submit, at its sole cost, a report prepared by an independent third party(ies) acceptable to the Regional Board providing such party(ies)'s professional opinion that the SEP Proponent has expended money in the amounts claimed by the SEP Proponent. In the event of such an audit, the SEP Proponent agrees that it will provide the third-party auditor with access to all documents which the auditor requests. Such information shall be provided to the Designated Water Board Representative within three (3) months of the completion of the SEP Proponent's SEP obligations. The audit need not address any costs incurred by the Regional Board staff for oversight.
- 18. Regional Board's Acceptance of Completed SEP:** Upon the SEP Proponent's satisfaction of its obligations under this Order, the completion of the SEP and any audits, the Designated Water Board Representative, shall request that the Executive Officer issue a "Satisfaction of SEP Letter." The issuance of the Satisfaction of SEP Letter shall terminate any further obligations of the SEP Proponent and the Discharger under this Order.

- 19. Failure to Expend All Suspended Liability on the Approved SEP Project:**
In the event that the SEP Proponent is not able to demonstrate to the reasonable satisfaction of the Regional Board staff that it has spent the entire SEP Amount for the completed SEP, the SEP Proponent shall pay the difference between the SEP funds and the actual amount expended.
- 20. Failure to Complete the SEP:** If the SEP is not fully implemented as per the schedule in Attachment 2 or there has been a material failure to satisfy a Milestone Requirement, the Designated Regional Board Representative shall issue a Notice of Violation. As a consequence, the SEP Proponent shall be liable to pay the entire SEP funds or, some portion thereof less the value of the completion of any Milestone Requirements. Unless otherwise ordered, the SEP Proponent shall not be entitled to any credit, offset, or reimbursement from the Regional Board for expenditures made on the SEP prior to the date of the "Notice of Violation" by the Designated Regional Board Representative. The amount of the SEP funds owed shall be determined via a "Motion for Payment of SEP Funds" before the Regional Board. Upon a determination by the Regional Board of the amount of the SEP funds, the amount owed shall be paid to the State Water Resources Control Board-WDPF within thirty (30) days after the service of the Regional Board's determination. In addition, the SEP Proponent shall be liable for the Regional Board's reasonable costs of enforcement, including but not limited to legal costs and expert witness fees. Payment of the suspended liability amount will satisfy the SEP Proponent's obligations to implement the SEP.
- 21. Regional Board is not Liable:** Neither the Regional Board members nor the Regional Board staff, attorneys, or representatives shall be liable for any injury or damage to persons or property resulting from the negligent or intentional acts or omissions by the SEP Proponent or its respective directors, officers, employees, agents, representatives or contractors in carrying out activities pursuant to this Order, nor shall the Regional Board, its members or staff be held as parties to or guarantors of any contract entered into by the SEP Proponent, or its directors, officers, employees, agents, representatives or contractors in carrying out activities pursuant to this Order.
- 22.** The SEP Proponent and the Discharger covenant not to sue or pursue any administrative or civil claim or claims against the Regional Board, or its officers, employees, representatives, agents, or attorneys arising out of or relating to any matter expressly addressed by the administrative civil liability, this Order or the SEP project.
- 23.** Nothing in this Order shall be deemed to create any rights in favor of, or to inure to the benefit of, any third party or parties, or to waive or release any defense or limitation against third party claims.

24. The Executive Officer may extend any of the due dates in this Order upon the joint request of the Parties. Such extensions must be in writing.
25. The effective date of this Order shall be the date on which it is adopted by the Executive Officer.
26. This Order relates only to the mandatory minimum penalty for violations that were listed Attachment 1 of this Order. The Regional Board reserves all rights to take additional enforcement actions, including without limitation the issuance of administrative civil liability complaints or orders for violations other than those addressed by this Order.
27. In the event of a dispute, the SEP Proponent shall file a "Notice of Dispute" with the Executive Officer or the Executive Officer's Designee within ten (10) days of discovery of the problem. The Regional Board and the SEP Proponent shall then attempt to negotiate a resolution of such claim and, if appropriate, process an amendment to implement the terms of any such resolution. If the Regional Board and SEP Proponent are unable to resolve the dispute, the decision of the Executive Officer or the Executive Officer Designee shall be final, unless appealed to a court of competent jurisdiction.
28. Each person executing this Agreement in a representative capacity represents that he or she is authorized to execute this Agreement on behalf of and to bind the entity on whose behalf he or she executes the Agreement.
29. This Agreement shall not be construed against the party preparing it, but shall be construed as if the Parties jointly prepared it and any uncertainty and ambiguity shall not be interpreted against any one party.
30. This Agreement shall not be modified by any of the Parties by oral representation made before or after the execution of this Agreement. All modifications must be made in writing and approved by the Executive Officer.
31. This Agreement may be executed by the parties and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one document.

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ATTACHMENT 2

PROPOSAL FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT

1. Project Title: Investigation of Interferences in Free Cyanide Testing of Wastewater

2. Organization Proposing the Project: California State University San Bernardino
Brett J. Stanley, Professor bstanley@csusb.edu 909-537-7218
Department of Chemistry and Biochemistry
5500 University Parkway, San Bernardino, CA 92407

3. Project Description: We have been conducting studies in collaboration with participating wastewater treatment facilities (WWTFs) in the Santa Ana Regional Dischargers Association (SARDA) beginning in 2009 on the analytical testing of cyanide, CN^- , in treated wastewater effluent. Anomalously high cyanide levels in tested effluent have been reported by several agencies, inside and outside of the local area. Literature studies have implicated several possible sources. We conducted a sampling study in which effluent samples were provided by eight WWTFs at six times spanning two years. These samples were in turn analyzed by us as well as two of the participating agencies, the Inland Empire Utilities Agency (IEUA) and the Riverside Water Quality Control Plant (RWQCP). An importantly related issue concerned the specific analytical method utilized. There are several cyanide testing methods. IEUA and RWQCP use different methods for testing "free" cyanide, which is a separate type of test than the commonly accepted "total" cyanide method.

The results of this study revealed the inter-laboratory and inter-method confidence limit of the various methods. Both free cyanide methods appear to agree with the total cyanide method results. The results also verified that a cyanide increase appears most significantly when the samples are preserved with sodium hydroxide (NaOH), as called for in the standard testing methods. The method of standard additions was used to show that the increase was real cyanide and not a matrix interference. A holding time study was also performed to show that unpreserved samples retain their cyanide levels up to 48 hours if kept sealed and refrigerated. This latter result also shows that it is indeed an increase in cyanide being observed in the preserved sample and not a decrease being observed for unpreserved samples (properly sealed and refrigerated within 48 hours). Finally, the results also seemed to suggest that the wastewaters that had undergone a chlorination/dechlorination disinfection process before discharge showed the greatest increase in cyanide concentration with preservation. The results in aggregate are important to show that the higher levels of cyanide are not being discharged but are manufactured via the sampling process by an unknown chemical mechanism.

The objectives of the proposed SEP are to:

- Perform chlorination and dechlorination of water samples that have not undergone this type of disinfection in our laboratories at CSUSB to verify and better understand the importance of this chemical process in the generation of cyanide in wastewater samples.

- Perform an additional holding time study to further verify the time in which cyanide is not lost without preservation.
- Investigate the possibility of further lowering the detection limit of the free cyanide method and whether gas diffusion separation can be coupled with colorimetric detection.

The chlorination/dechlorination experiments will investigate the effect of chlorine concentration (breakthrough concentration) on the results as well as the dechlorinating agent used. Different sources of unchlorinated wastewater effluent will be used; within the SARDA group we are working with, this will be samples from San Bernardino and Yucaipa.

Holding time studies utilize matrix spikes of one low and one high concentration after initial analysis of the unpreserved sample. The samples are immediately analyzed, and then at regular intervals afterwards. This brings up the statistical issue of day-to-day reproducibility, which we suspect is a major contributor to inter-laboratory as well as inter-method reproducibility, and hope to further quantify.

The two free cyanide methods incorporate colorimetric and amperometric detection. We have found in our laboratory that the colorimetric method is more precise overall (day-to-day reproducibility), and therefore in the interest of time we propose conducting the above two studies with the colorimetric method only, since we have already shown equivalency. However, it is recognized that the colorimetric free cyanide method is the least accepted method and is not considered a standard method. The main problem is that it has no protection against interferences: no distillation or gas diffusion membrane separation of hydrogen cyanide from the rest of the sample.

We have recently acquired a 2-cm flow cell for the colorimetric detection and will install and characterize it to see if the detection limit is decreased. We are also proposing an instrumental variation that combines the gas diffusion cell used for separation in the amperometric method with colorimetric detection. We will determine the detection limits and the day-to-day reproducibility to see if any improvement is gained. If successful, a new colorimetric free cyanide method will be developed.

4. Total Project Cost: \$19,586 to fund one student, materials and supplies for 13 months.

Student salary:	
1080 hours at \$10/hr	\$10,800
Benefits (11.4%)	\$1,231
Material and Supplies:	\$5,000
Direct Costs:	\$17,031
Indirect Costs @ 15% of Direct Costs:	\$2,555
Total:	\$19,586

5. Project Schedule: Start Date: August 1, 2011. End Date: August 31, 2012.

Tasks:	Due Dates:
Task 1: Chlorination/dechlorination studies	June 30, 2012
Task 2: Holding time study	December 31, 2011
Task 3: Instrument/method modification and assessment	August 31, 2012

6. Expected Results: The results of the project will be to better understand the role of chlorination/dechlorination in the increased cyanide observed upon preservation in wastewater effluent testing for cyanide, the holding time allowed without preservation for cyanide testing, and whether it is possible to couple gas diffusion separation with colorimetric detection and observe comparable or better detection limits and whether a longer 2-cm path length flow cell is advantageous.

Task Budget

Task	Description	Cost
1	Chlorination/dechlorination studies	\$7,834
2	Holding time study	\$3,918
3	Instrument/method modification and assessment	\$7,834
	Total Project Cost	\$19,586

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