

Central Valley Regional Water Quality Control Board
31 January/1 February 2013 Board Meeting

Response to Comments
for the
El Dorado Irrigation District
El Dorado Hills Wastewater Treatment Plant
Tentative NPDES Permit Renewal

The following are Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements for NPDES Permit No. CA0078671 (NPDES Permit) renewal for the El Dorado Irrigation District (hereinafter Discharger), El Dorado Hills Wastewater Treatment Plant (Facility).

The tentative NPDES Permit was issued for a 30-day public comment period on 2 November 2012 and comments were due 7 December 2012. The Central Valley Water Board received public comments regarding the tentative NPDES Permit by the due date from the following interested parties:

- El Dorado Irrigation District (Discharger)
- United States Environmental Protection Agency (USEPA)
- Central Valley Clean Water Association (CVCWA)

Changes were made to the tentative NPDES Permit based on public comments received. The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses.

DISCHARGER COMMENTS

Discharger Comment No. 1. I. Effluent Limitations and Discharge Requirements, p. 10, A. Effluent Limitations

The Discharger comments that the proposed NPDES Permit should retain the less stringent secondary treatment effluent standards for biochemical oxygen demand (BOD), total suspended solids (TSS), turbidity, and total coliform organisms contained in the existing NPDES Permit (Order R5-2007-0069) when the flow in the receiving water, Carson Creek, has at least a 20:1 dilution ratio of stream flow to effluent discharge. Order R5-2007-0069 requires tertiary treatment standards when the ratio is less than 20:1, but allows secondary treatment standards when the ratio is 20:1 or above.

RESPONSE: Central Valley Water Board staff does not concur. The California Department of Public Health (DPH) has a general recommendation that secondary treatment standards may be adequate to protect public health when a dilution of 20:1 or greater is available in the receiving water. However, the Facility no longer has the ability to bypass the tertiary treatment facilities and discharge secondary treated municipal wastewater to Carson Creek. The treatment plant is plumbed for municipal wastewater to flow from the secondary treatment facilities to the tertiary treatment facilities prior to being discharged to surface water. Additionally, the

Facility has been treating its wastewater to the levels of the water quality based effluent limits (WQBELs) contained in the proposed NPDES Permit for BOD, TSS, and coliform (and the proposed turbidity operational specifications). Staff discussed the issue further with the Discharger and the Discharger agrees that the proposed WQBELs contained in the proposed NPDES Permit are appropriate under all conditions. Therefore, the proposed NPDES Permit was not changed.

Discharger Comment No. 2. I. Effluent Limitations and Discharge Requirements, p. 11, B. Land Discharge Specifications.

The Discharger requests minor typographical changes. The proposed NPDES Permit incorrectly stated the capacity of the storage reservoir and included the wrong cross-reference section number.

RESPONSE: Central Valley Water Board staff concurs and changes were made to the proposed NPDES Permit, as shown in underline/strikeout format below, and throughout the proposed NPDES Permit as appropriate:

B. Land Discharge Specifications – Storage Reservoir Discharge Point No. 002

The unlined storage reservoir temporarily stores secondary treated effluent prior to tertiary treatment. The reservoir capacity is ~~8270~~ million gallons utilizing a six-inch freeboard measured vertically from the water surface to the top of the overflow spillway pipe in the control structure. The Discharger shall maintain compliance with the following land discharge specifications.

1. The discharge of waste classified as “hazardous” as defined in section 2521(a) of Title 23, California Code of Regulations (CCR), or “designated”, as defined in section 13173 of the CWC, to the treatment ponds is prohibited.
2. Storage reservoir freeboard shall never be less than 6 inches (measured vertically from the water surface to the top of the overflow spillway pipe located in the control structure). This requirement ensures that the minimum 2 feet of freeboard, as required by the Division of Dam Safety, shall be maintained because the top of the spillway pipe is 2 feet below the lowest point of overflow of the reservoir levee. See the Fact Sheet section IV.~~D~~.E.2.

**Discharger Comment No. 3. II. Special Provisions,
p. 20, VI.C.2.a.i. Toxicity Reduction Evaluation (TRE) Workplan**

The Discharger comments that the existing NPDES Permit required submittal of a TRE Workplan and that a TRE Workplan was submitted and approved. The Discharger requests that language be added to allow the Discharger to resubmit the prior approved TRE Workplan to fulfill the requirements of this provision.

RESPONSE: Central Valley Water Board staff concurs and changes were made to the proposed NPDES Permit as shown in underline format below:

- i. **Toxicity Reduction Evaluation (TRE) Workplan.** Within 90 days of the effective date of this Order, the Discharger shall submit to the Central Valley Water Board a TRE Workplan for approval by the Executive Officer. Resubmission of a prior approved TRE Workplan, updated as necessary, is an acceptable means of complying with this requirement. The TRE Workplan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Workplan must be developed in accordance with USEPA guidance¹ and be of adequate detail to allow the Discharger to immediately initiate a TRE as required in this Provision. [Footnote 1 - See the Fact Sheet (Attachment F, section VII.B.2.a. for a list of USEPA guidance documents that must be considered in the development of the TRE Workplan.)]

Discharger Comment No. 4. II. Special Provisions, p. 21/22, a. Turbidity and b. UV Disinfection System Operating Specifications and other related sections

The Discharger comments that the Ultraviolet light (UV) disinfection system operating specification in the Tentative Permit are prescriptive, impermissibly specifies the manner of compliance with the disinfection requirement, and does not allow the Discharger to operate the Facility in a manner that is both cost-effective and meets the prescribed effluent limitations. Thus, the Discharger requests the following seven changes in the proposed NPDES Permit:

- a) Change Turbidity and UV Disinfection System Operating Specification in the Limitations and Requirements with suggested language,
- b) Add language within the Compliance Determination section within the Limitations and Requirement for Title 22 Disinfected Tertiary Recycled Water;
- c) Modify Table E-1 within Attachment E, Monitoring and Reporting Program, with suggested monitoring locations,
- d) Replace Table E-8 within Attachment E, Monitoring and Reporting Program, with suggested monitoring locations,
- e) Modify the findings in Attachment F, Fact Sheet, with the suggested language,
- f) Replace the Turbidity and UV Disinfection System Operating Specifications findings in Attachment F, Fact Sheet, with suggested language, and

- g) Modify the Other Special Provisions in Attachment F, Fact Sheet, with the suggested language.

RESPONSE: Central Valley Water Board staff does not concur. Compliance with the Total Coliform effluent limitations (Title 22 disinfection requirements) and the UV disinfection system operating specifications contained in the proposed NPDES Permit are necessary to protect public health from contact with undiluted treated municipal wastewater. The National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWRF's "Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse" first published in December 2000 and revised as a Second Edition dated May 2003 (NWRI Guidelines) includes UV operating specifications for compliance with Title 22 disinfected tertiary recycled water. For water recycling in accordance with Title 22, California Department of Public Health (DPH) requires that the UV system shall be an approved system included in the Treatment Technology Report for Recycled Water, December 2009 (or a later version, as applicable) published by the DPH. The UV system shall also conform to all requirements and operating specifications of the NWRI Guidelines. A Memorandum dated 1 November 2004 issued by DPH to Regional Water Board executive offices recommended that provisions be included in permits for water recycling treatment plants employing UV disinfection requiring Dischargers to establish fixed cleaning frequency of lamp sleeves, as well as, include provisions that specify minimum delivered UV dose that must be maintained (per the NWRI Guidelines).

The proposed NPDES Permit UV operating specifications contain UV dosage, UV transmittance, and lamp cleaning/replacement in accordance with the NWRI Guidelines, and as required by DPH in a letter to the Discharger dated 4 March 2010. These requirements are necessary for UV disinfection systems to ensure the facility adequately disinfects the wastewater for virus inactivation as required by Title 22. Compliance with the Title 22 disinfection requirements (Total Coliform effluent limitations) alone does not ensure that pathogens (e.g. giardia or cryptosporidium) in the treated municipal wastewater have been deactivated by the UV disinfection system. The UV operating specifications is needed to demonstrate compliance with the equivalency to Title 22

Additionally, the UV Disinfection System Operating Specifications section within the proposed NPDES Permit allows the Discharger to submit a site-specific UV Engineering study that demonstrates modified UV specifications, approved by DPH or the Board's Executive Officer, will achieve the virus inactivation required by Title 22. Staff met with the Discharger to discuss their comments and subsequently, the Discharger accepts the UV Disinfection System Operating Specifications section in the proposed NPDES Permit because it does allow modification of the UV operating specifications that will allow them to operate the Facility in a manner that is cost-effective and ensures adequate disinfection of the treated municipal wastewater for virus inactivation. Changes were not made to the UV Disinfection System Operating Specifications within the Limitations and Requirements of the proposed

NPDES Permit; however, the Fact Sheet was modified to add this rationale as shown below:

- a. Turbidity and UV Disinfection System Operating Specifications.** This Order requires disinfection, while discharging to Carson Creek, at a level equivalent to Title 22 disinfected tertiary recycled water to protect the public from contact with undiluted treated municipal wastewater. The Discharger utilizes tertiary filtration and ultraviolet (UV) disinfection to meet this level of disinfection.

The California Department of Public Health developed requirements for turbidity and total coliform organisms to demonstrate that the desired pathogen removal is achieved for Title 22 disinfected tertiary recycled water. Therefore, this Order includes effluent turbidity specifications and total coliform organisms effluent limits. However, for UV disinfection additional operating specifications are necessary. DPH developed the total coliform organisms levels based on the use of chlorine disinfection. UV disinfection does not disinfect the wastewater in the same manner as chlorine. For facilities that utilize UV disinfection, DPH requires compliance with additional operating specifications to ensure adequate disinfection is provided. Therefore, in addition to turbidity specifications and total coliform organisms effluent limits, this Order includes UV disinfection system operating specifications (e.g., UV dose, UV transmittance, etc.) as recommended by DPH.

**Discharger Comment No. 5. III. Compliance Determination,
p. 29, E. Total Coliform Organisms Effluent Limitations**

The Discharger requests a minor typographical change. In the last sentence of section VII.E. of the proposed NPDES Permit, “23” should be changed to “2.2”.

RESPONSE: Central Valley Water Board staff concurs and changes were made to the proposed NPDES Permit as shown in underline/strikeout format below:

- E. Total Coliform Organisms Effluent Limitations (Section IV.A.1.e).** For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7 day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7 day median of total coliform organisms exceeds a most probable number (MPN) of 232.2 per 100 milliliters, the Discharger will be considered out of compliance.

**Discharger Comment No. 6. III. Compliance Determination,
p. 29, I. Chronic Whole Effluent Toxicity Effluent Limitation.**

The Discharger requests a minor typographical change. In section VII.I. of the proposed NPDES Permit, "TIE" is incorrectly referenced and should be removed.

RESPONSE: Central Valley Water Board staff concurs and changes were made to the proposed NPDES Permit as shown in ~~strikeout~~ format below:

I. Chronic Whole Effluent Toxicity Effluent Limitation (Section IV.A.1.d).

Compliance with the accelerated monitoring and ~~TRE/TIE~~ provisions of Provision VI.C.2.a shall constitute compliance with the effluent limitation.

Discharger Comment No. 7. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-5, Table E-3. Effluent Monitoring.

In its written comments, the Discharger requests the effluent sampling frequency for total coliform organisms be reduced to three days per week since the Facility consistently provides a high level of treatment of total coliform. The Discharger comments that the frequency reduction will reduce monitoring costs. Through additional staff discussions with the discharger, to address concerns discussed below in Comment No. 9, Discharger requested the frequency to be reduced to 2/week. (See Comment and Response No. 9 below.)

RESPONSE: Central Valley Water Board staff has reviewed the data and concurs that the facility has consistently complied with its effluent limitations for total coliform. Due to the consistency in treatment, 2/week sampling provides the same value of information as the existing 5/week monitoring frequency. To address further issues discussed in Discharger Comment No. 9 below, changes were made to Table E-3 in the MRP, Attachment E, of the proposed NPDES Permit, as shown in underline/strikeout format below:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Coliform Organisms	MPN/100 mL	Grab	<u>5</u> 2 /Week ¹³	¹

See Comment and Response to Comment No. 9 for further discussion.

Discharger Comment No. 8. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-6, Table E-3. Effluent Monitoring.

The Discharger requests a minor typographical change. Footnotes #7 and #8 should be deleted from Table E-3 of the proposed NPDES Permit because the footnotes are not cross-referenced in the table.

RESPONSE: Central Valley Water Board staff concurs that the footnotes are not applicable. Footnotes #7 and #8 have been removed from Table E-3 in the MRP, Attachment E, of the proposed NPDES Permit, as shown in strikeout format below:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
⁷ Volatile constituents shall be sampled in accordance with 40 CFR Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.				
⁸ Concurrent with receiving surface water sampling.				

Discharger Comment No. 9. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-6, item 2.

The Discharger strives to maximize the use and/or storage or recycled municipal wastewater, which depends on operational flexibility to route the treated wastewater to either the recycled water facilities or to surface water. The Discharger comments that when a surface water discharge must be initiated late in the day or in the middle of the night, conducting the necessary monitoring within the remaining work hours or during night-time hours can result in additional staff burdens and/or is infeasible. Allowing sampling within the first two days gives the Discharger operational flexibility and achieves the desire to assess compliance soon after a discharge is initiated. Therefore, the Discharger requests the proposed NPDES Permit be changed regarding monitoring of intermittent discharges, as shown in underline/strikeout format below:

2. If the discharge is intermittent rather than continuous, then ~~on the first day~~within the first two days of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, except for aluminum, priority pollutants and constituents with monitoring frequencies less frequent than monthly, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule. The Discharger is not required to conduct acute or chronic toxicity monitoring if the discharge is intermittent rather than continuous.

RESPONSE: Central Valley Water Board staff does not concur with the Discharger's proposed changes. The Discharger and staff met and agreed that the following proposed changes to the Monitoring and Reporting Program, Attachment E

of the proposed NPDES Permit, as shown in underline/strikeout format below, will address the Discharger's concern regarding intermittent discharges:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	<u>A location where a representative sample of effluent can be collected following tertiary treatment and disinfection.</u> Downstream from the last connection through which wastes can be admitted to the outfall before being discharged to Carson Creek. 38° 38' 13" N, 121° 3' 40" W

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hr Composite ²	3 2 /Week	1
	lbs/day	Calculate	3 2 /Week	--
Total Suspended Solids	mg/L	24-hr Composite ²	3 2 /Week	1
	lbs/day	Calculate	3 2 /Week	--
Total Coliform Organisms	MPN/100 mL	Grab	3 2 /Week ¹¹	1

² 24-hour flow proportional composite. If the duration of the effluent discharge is less than 24 hours, the sample type shall be a grab sample and must be taken within 24 hours of when the discharge initiated.

IV. EFFLUENT MONITORING REQUIREMENTS

- ~~A. 2. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, except for priority pollutants and constituents with monitoring frequencies less frequent than monthly, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule. The Discharger is not required to conduct acute or chronic toxicity monitoring if the discharge is intermittent rather than continuous.~~

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

- A. Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform acute toxicity testing once every two months, concurrent with effluent ammonia sampling, during periods of discharge to Carson Creek. The bi-monthly monitoring periods shall be defined as the following: December and January; February and March; April and May; June and July; August and September; and October and November.

B. Chronic Toxicity Testing. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform quarterly three species chronic toxicity testing during periods of discharge to Carson Creek. The quarterly monitoring periods shall be defined as the following: December through February; March through May; June through August; and September through November. Chronic toxicity shall not be required more than once per quarter. Chronic toxicity is only required when effluent is discharged to Carson Creek continuously for more than 72 hours during a quarter.

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
<u>Bi-monthly</u>	<u>Permit effective date</u>	<u>1 December through 31 January;</u> <u>1 February through 31 March;</u> <u>1 April through 31 May;</u> <u>1 June through 31 July;</u> <u>1 August through 30 September;</u> <u>1 October through 30 November</u>	<u>Submit with monthly SMR</u>
1/Quarter	Permit effective date	1 January <u>December through 31</u> 28 (or 29) March <u>February;</u> 1 April <u>March through 30</u> June <u>31 May;</u> 1 July <u>June through 30</u> September <u>31 August;</u> 1 October <u>September through 30</u> December <u>30 November;</u>	<u>1 May</u> April; <u>1 August</u> July; <u>1 November</u> October; 1 February <u>2 January (of the following year);</u>

Discharger Comment No. 10. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-8, V.B.7. Dilutions.

The Discharger comments that a TRE is a site-specific study conducted in a stepwise manner with the objective of identifying the source of observed toxicity and identifying measures to control the identified toxicity. When triggered, a TRE is broadly guided by a TRE Workplan, but specifically guided by the toxicity event specific TRE Action Plan. Thus the Discharger contends that the execution of the specific TRE is reserved to the TRE Action Plan based upon the relevant information pertaining to observed toxicity

and recent plant performance. Therefore, the Discharger requests modifying the language regarding Dilutions in section V.B.7. in the MRP, Attachment E, of the proposed NPDES Permit.

RESPONSE: Central Valley Water Board staff concurs and changes were made to section V.B.7. in the MRP, Attachment E, of the proposed NPDES Permit, as shown in underline/strikeout format below:

7. Dilutions – For regular and accelerated chronic toxicity monitoring, it is not necessary to perform the test using a dilution series. The test may be performed using 100% effluent and two controls. For TRE monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below, unless an alternative dilution series is detailed in the submitted TRE Action Plan. The receiving water control shall be used as the diluent ~~(unless the receiving water is toxic)~~ unless use of an alternative diluent is detailed in the submitted TRE Action Plan, or when the receiving water is toxic.

Discharger Comment No. 11. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-9, V.D.3. TRE Reporting.

The Discharger comments that a TRE Action Plan may recommend a TRE reporting schedule that is different from that previously detailed in the TRE Workplan. For reasons similar to Discharger Comment No. 10, the Discharger requests modifying the language regarding TRE Reporting in section V.D.3. in the MRP, Attachment E, of the proposed NPDES Permit.

RESPONSE: Central Valley Water Board staff concurs and changes were made to section V.D.3. in the MRP, Attachment E, of the proposed NPDES Permit, as shown in underline format below:

3. **TRE Reporting.** Reports for TREs shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan, or as amended by the Discharger's TRE Action Plan.

Discharger Comment No. 12. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-11, Table E-6. Receiving Water Monitoring Requirements – Fecal Coliform.

The Discharger requests the receiving water monitoring requirement for fecal coliform organisms in Table E-6 in the MRP, Attachment E, of the proposed NPDES Permit be removed since the high quality discharge will not cause an exceedance of the fecal coliform receiving water objective.

RESPONSE: Central Valley Water Board staff concurs and changes were made to the MRP, Attachment E, of the proposed NPDES Permit, as shown in strikeout format below:

Table E-6 Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Fecal Coliform Organisms	MPN/100mL	Grab	1/Month	†

Discharger Comment No. 13. IV. Attachment E, Monitoring and Reporting Program (MRP), p. E-19, D. Other Reports. item #4.

The Discharger requests the section regarding reporting of sanitary sewer overflows in the MRP, Attachment E, of the proposed NPDES Permit, be removed because operation of the collection system is permitted under, and reports are submitted in accordance with Order 2006-0003-DWQ, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

RESPONSE: Central Valley Water Board staff concurs and section X.D.4. in the MRP, Attachment E, of the proposed NPDES Permit, has been removed, as shown in strikeout format below:

~~4. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.~~

Discharger Comment No. 14. V. Attachment F - Fact Sheet, p. F-10, E.1.a. 82 Million Gallon Reservoir.

The Discharger requests minor typographical changes. The proposed NPDES Permit incorrectly stated the capacity of the storage reservoir.

RESPONSE: See Response to Discharger Comment No. 2.

**Discharger Comment No. 15. V. Attachment F - Fact Sheet,
p. F-73, E.3 Pond Monitoring.**

The Discharger comments that the MRP does not require pond monitoring. The Discharger requests that the Pond Monitoring section in the Fact Sheet, Attachment F, of the proposed NPDES Permit, be removed to be consistent with the rest of the permit.

RESPONSE: Central Valley Water Board staff concurs that pond monitoring is not required and the section regarding Pond Monitoring in the Fact Sheet, Attachment F, of the proposed NPDES Permit, has been removed as shown in strikeout format below:

~~3. Pond Monitoring~~

~~Treatment pond monitoring is required to ensure proper operation of the drain ponds and storage reservoir. Monthly monitoring for dissolved oxygen, pH, electrical conductivity, freeboard, color, odor, and levee condition and annual monitoring for standard minerals and Title 22 Metals has been retained from Order No. R5-2007-0069.~~

**Discharger Comment No. 16. V. Attachment F – Fact Sheet,
p. F-73, E.4 Effluent and Receiving Water Characterization.**

The Discharger comments that the monitoring requirement in section VI.E.4. Effluent and Receiving Water Characterization Study of the Fact Sheet does not match the requirements of Attachment I in the proposed NPDES Permit. The Discharger requests a minor typographical change in section VI.E.4., regarding the Effluent and Receiving Water Characterization Study, in the Fact Sheet, Attachment F, to be consistent with Attachment I, of the proposed NPDES Permit.

RESPONSE: Central Valley Water Board staff concurs that Attachment I includes the correct monitoring requirements and changes were made to section VI.E.4. in the Fact Sheet, Attachment F, of the proposed NPDES Permit, as shown in strikeout format below:

4. Effluent and Receiving Water Characterization Study

An effluent and receiving water monitoring study is required to ensure adequate information is available for the next permit renewal. The Discharger is required to conduct ~~monthly~~ monitoring of the effluent at Monitoring Location EFF-001 and of the receiving water at Monitoring Location RSW-001 during the 3rd or 4th year of this permit term for all priority pollutants and other constituents of concern as described in Attachment I.

Discharger Comment No. 17. VI. Attachment I, Effluent and Receiving Water Characterization Study, p. I-1, II.C. Sample Type

The Discharger comments that Attachment I of the proposed NPDES Permit requires all effluent samples be taken as 24-hour flow proportioned composite samples, which is not appropriate for all sample analyses due to analytical hold time requirements and the nature of the constituent to be analyzed. Therefore, the Discharger requests modifying section II.C., regarding Sample Type, in Attachment I, of the proposed NPDES Permit.

RESPONSE: Central Valley Water Board staff concurs and changes were made to section II.C. in Attachment I, of the proposed NPDES Permit, as shown in underline format below.

C. Sample Type. All effluent samples shall be taken as 24-hour flow proportioned composite samples, unless not appropriate to meet analytical holding time requirements per 40 CFR 136. Samples for bis (2-ethylhexyl) phthalate analysis shall be collected as a grab sample, due to the potential for sample contamination from composite sampler tubing. The effluent sample collection type and rationale shall be defined in the study work plan. All receiving water samples shall be taken as grab samples.

USEPA COMMENTS

USEPA Comment. Effluent limits for bis (2-chloroethyl) ether cannot be removed due to federal antibacksliding requirements.

USEPA comments that in order to backslide from an existing effluent limitation, the Regional Board must make the determination that removal of the limit meets the requirements of section 303(d)(4) of the Clean Water Act (CWA), which provides exceptions based on whether the receiving water is an attainment or nonattainment water. USEPA contends that, since receiving water lab analysis was conducted at method detection limits greater than the water quality standard, the Central Valley Water Board does not have enough information to determine if the receiving water is an attainment or nonattainment water and therefore, the exceptions cannot be used and the proposed NPDES Permit must contain water quality based effluent limitations for bis (2-chloroethyl) ether.

RESPONSE: Central Valley Water Board staff does not concur. The removal of the bis (2-chloroethyl) ether effluent limitations does meet federal antibacksliding requirements, specifically, CWA sections 303(d)(4) and 402(o)(2)(B)(i) that provide separate and individual grounds for removal of the bis (2-chloroethyl) ether effluent limitations.

CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy. California's final 2010 303(d) listing for Carson Creek, as described in section III.D.1 of the Fact Sheet, does not include bis (2-chloroethyl) ether. California's final 2010 303(d) listing for Carson Creek was approved by USEPA on 11 October 2011. Previously, on 12 November 2010, USEPA contended that California's proposed 2010 303(d) listing omitted several water bodies and associated pollutants that meet federal listing requirements, and therefore disapproved this initial listing. Subsequently, on 11 October 2011 USEPA approved the final 2010 303(d) list since it included all the water bodies and associated pollutants USEPA contended (12 November 2010 letter) met federal listing requirements. USEPA did not contend that bis (2-chloroethyl) ether was not listed for Carson Creek. Thus, Carson Creek is an attainment water for bis (2-chloroethyl) ether since it is not listed on California's 2010 303(d) list.

Concentrations of bis (2-chloroethyl) ether have not been detected in the effluent during the past ten (10) years that the single exceedance occurred on 20 June 2011. Additionally, removal of the WQBELs will not result in an increase in pollutant concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Thus, removal of WQBELs for bis (2-chloroethyl) ether is consistent with antidegradation requirements and State Water Board Resolution No. 68-16.

CWA section 402(o)(2)(B)(i) also provides separate grounds for removal of the bis (2-chloroethyl) ether effluent limitation.

CWA section 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

Order R5-2007-0069 contains bis (2-chloroethyl) ether effluent limitations based on one analytical monitoring result obtained on 20 June 2001, that indicated the effluent discharge contained concentrations (3.2 µg/L) that exceed the water quality criterion for human health (0.031 µg/L) protection. During the next five and half years, following the June 2001 detection (October 2001 through April 2007), 13 additional samples were analyzed before adoption of the existing permit on 22 June 2007; documenting that all analytical results indicated the effluent discharge did not contain concentrations (referred to as Non-Detects) of bis (2-chloroethyl) ether (minimum method detection limit of 0.12 µg/L).

Since issuance of Order R5-2007-0069, four (4) additional receiving water samples and 29 additional effluent samples for bis (2-chloroethyl) ether were obtained during

The Fact Sheet, Attachment F, of the proposed NPDES Permit was modified to include this graph and the additional rationale for removal of the bis (2-chloroethyl) ether effluent limitations.

CVCWA COMMENTS

CVCWA Comment A. Findings Respecting Ammonia Should Be Revised to Reflect Proper Consideration of the SIP's Procedure for Determining Reasonable Potential.

CVCWA requests that the findings for ammonia should be revised to reflect proper consideration of the SIP's stepwise (Steps 1-8) procedure in Section 1.3 for determining whether a pollutant requires WQBELs. Given the lack of findings, it is unclear whether the use of Step 7 is appropriate. Such a lack of findings runs afoul of the Central Valley Regional Water Board's (Central Valley Water Board) duty in establishing permit conditions to "set forth findings to bridge the analytic gap between the raw evidence and the ultimate decision or order."¹ If the use of Step 7 is appropriate, the reasonable potential determination should not be based on facility type alone. Rather, the determination should also include evaluation of other factors, such as technology-based effluent limitations, other controls, and compliance history.² [Footnote 1 - *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515. This duty serves to "conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate decision" and "facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions." (Id. at p. 516.) Findings must be supported by evidence in the record. (Id. at pp. 514-515.) Footnote 2 - See e.g., 40 C.F.R. § 122.44(d)(1)(ii); *Technical Support Document for Water-Quality Based Toxics Control, U.S. Environmental Protection Agency* (March 1991), pp. 49-50.]

RESPONSE: Central Valley Water Board staff concurs, in part. The findings within the Fact Sheet of the proposed NPDES Permit regarding ammonia do not reflect proper consideration of the SIP's stepwise procedures. Instead, the findings in the Fact Sheet, Attachment F, of the proposed NPDES Permit, regarding ammonia, and other non-CTR constituents, erroneously stated that the SIP procedure, Step 7 of Section 1.3, for determining whether a pollutant requires a WQBEL was used in conducting the reasonable potential analysis (RPA). This is incorrect. The SIP dictates the procedures for conducting the RPA for CTR constituents (also referred to as priority pollutants). Ammonia is not a CTR constituent. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the facility type and the site-specific conditions of the discharge, Central Valley Water Board staff is using professional judgment concerning the appropriate method for conducting the RPA for ammonia. USEPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "*State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent*

monitoring data or when such data are not available...A permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for ammonia for protection of aquatic life)." The Facility is a publicly owned treatment works (POTW) that treats domestic wastewater. Domestic wastewater, unless properly treated, can exceed the applicable water quality objectives for ammonia. Therefore, the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective and WQBELs are required in the proposed NPDES Permit. The proposed NPDES Permit has been updated to include the appropriate rationale in Section IV.C.3.d.ii of the Fact Sheet, as shown in underline/strikeout format below:

ii. Ammonia

(b) RPA Results. Federal regulations at 40 C.F.R. §122.44(d)(1)(i) requires that, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." For priority pollutants, the SIP dictates the procedures for conducting the RPA. Ammonia is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to facility type and site-specific conditions of the discharge, the Central Valley Water Board has used its judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

USEPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available...A permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for pathogens in all permits for POTWs discharging to contact recreational waters)." USEPA's TSD [Technical Support Document] also recommends that factors other than effluent data should be considered in the RPA, "When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility-specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data." With regard to POTWs, USEPA recommends that, "POTWs should also be characterized for the possibility of chlorine and ammonia problems." (TSD, p. 50)

However, per Section 1.3, Step 7, of the SIP, the facility type may be used as information to aid in determining if a water quality based effluent limitation is

~~required.~~ The Discharger Facility is a POTW that treats domestic wastewater. Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger does currently use nitrification to remove ammonia from the waste stream; ~~however,~~ inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia in concentrations that produce detrimental physiological responses to human, plant, animal, or aquatic life would violate the Basin Plan narrative toxicity objective. Although the Discharger nitrifies the discharge, inadequate or incomplete nitrification creates the potential for ammonia to be discharged and provides the basis for the discharge to have a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for ammonia and WQBELs are required.

The Discharger requested in the ROWD that monitoring data collected in December 2008 through January 2009 not be used for the RPA or WQBEL calculations. In a 23 January 2009 letter, the Discharger indicated that the elevated ammonia concentrations observed during this period were caused by toxicity that inhibited nitrification, but went unnoticed until sample results were received on 16 January 2009. Therefore, these results are not representative of effluent quality when the Facility is properly operated. Excluding monitoring data from December 2008 through January 2009, the MEC for ammonia was 1.8 µg/L. ~~Therefore, based on monitoring results, ammonia in the discharge does not demonstrate a reasonable potential to cause or contribute to an in-stream excursion above the water quality criteria.~~

- (c) WQBELs.** Applying 40 CFR section 122.44(d)(1)(vi)(B), effluent limitations for ammonia are included in this Order and are based on U.S. EPA's Ambient Water Quality Criteria for the protection of the beneficial use of freshwater aquatic habitat. ~~The Central Valley Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, USEPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day CCC was calculated assuming a 30-day averaging period. The lowest LTA representing the acute, 4-day CCC, and 30-day CCC is then selected for deriving the AMEL and the MDEL. The remainder of the WQBEL calculation for ammonia was performed according to the SIP procedures. This Order contains a final~~

AMEL and MDEL for ammonia of 1.2 mg/L and 3.1 mg/L, respectively, based on the NAWQC (acute criterion).

CVCWA Comment B. The Findings for BOD and TSS Should Be Modified to Remove Reference to the SIP and Reflect that a Reasonable Potential Analysis is Unnecessary.

CVCWA requests that findings for BOD and TSS be revised to remove the reference to the SIP and reflect that no potential analysis was necessary to include the BOD and TSS WQBELs in the proposed NPDES Permit.

RESPONSE: Central Valley Water Board staff concurs. The proposed NPDES Permit has been updated to include the appropriate rationale in Section IV.C.3.d.iv of the Fact Sheet, as shown in underline/strikeout format below:

iv. Biochemical Oxygen Demand/Total Suspended Solids

(a) WQO. Federal regulations, 40 CFR Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD₅ and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream. The principal design parameter for wastewater treatment plants is the daily BOD₅ and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR Part 133, the application of tertiary treatment processes results in the ability to achieve lower levels for BOD₅ and TSS than the secondary standards currently prescribed; the minimum 30-day average, weekly average, and maximum daily level of effluent quality attainable by a tertiary system are 10 mg/L, 15 mg/L, and 30 mg/L, respectively.

(b) RPA Results. Federal regulations at 40 C.F.R. §122.44(d)(1)(i) requires that “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” ~~Per Section 1.3, Step 7, of the SIP, the facility type may be used as information to aid in determining if a water quality based effluent limitation is required.~~ BOD₅ is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. BOD₅ and TSS are oxygen depleting substances that can lower dissolved oxygen levels in the receiving water causing toxicity to fish if not controlled; such discharges would violate the Basin Plan narrative toxicity objective. BOD₅ and TSS are inherent in the wastestream of a POTW. The Discharger is a POTW that treats domestic wastewater. The principal design parameter for wastewater treatment plants is the daily BOD₅ and TSS loading rates and

the corresponding removal rate of the system. The application of tertiary treatment processes results in the ability to achieve lower levels for BOD₅ and TSS than the secondary standards currently prescribed as technology-based effluent limits. Levels of BOD₅ and TSS discharged without adequate treatment are toxic and must be controlled. Standard secondary wastewater treatment does not adequately remove BOD₅ and TSS to levels that are protective of fish and other aquatic life. Therefore it is appropriate to control BOD₅ and TSS for the protection of aquatic life by protecting water quality. This Order contains effluent limitations for BOD₅ and TSS that are determined based on the capability of a tertiary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD₅ and TSS is also included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities.The secondary and tertiary treatment standards for BOD₅ and TSS are indicators of the effectiveness of the treatment processes.

CVCWA Comment C. The UV Disinfection Requirements Should Be Revised and Compliance Determination Language Added to Ensure Adequate Disinfection Without Dictating the Manner of Permit Compliance.

CVCWA comments that the Tentative Order contains highly prescriptive UV Disinfection System Operating Specifications for the Facility¹. These specifications are inconsistent with the Water Code's prohibition against dictating the manner of permit compliance. In particular, Water Code section 13360(a) states:

No waste discharge requirement or other order of a regional board or the state board or decree of a court issued under this division shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner.

CVCWA continues to state that Water Code section 13360 "preserves the freedom of persons who are subject to a discharge standard to elect between available strategies to comply with that standard."² Under this section, "[t]he discharger *must* be allowed to comply with the permit in any lawful manner."³ Accordingly, the Tentative Order and

¹ Tentative Order at pp. 23-24.

² *Tahoe-Sierra Preservation Council v. State Water Resources Control Board* (1989) 210 Cal.App.3d 1421, 1438.

³ *In the Matter of the Review on Own Motion of Waste Discharge Requirements Order No. 5-01-044 for Vacaville's Easterly Wastewater Treatment Plant*, Order WQO 2002-0015 (Oct. 3, 2002) at p. 37, emphasis added.

adopted permit must “allow[] the dischargers to select the manner of compliance.”¹ However, in this case, the Tentative Order would establish requirements that impermissibly dictate the Discharger’s manner of permit compliance. For example, the Tentative Order would require the Discharger to “operate the UV disinfection system to provide a minimum UV dose per channel of 100 millijoules per square centimeter (mJ/cm²) at peak daily flow[.]”² In addition, the Tentative Order contains detailed requirements related to UV transmittance, flow, lamps, quartz sleeves, and other parameters.³

RESPONSE: Central Valley Water Board staff does not concur. For protection of the direct recreational contact (REC-1) beneficial use, the proposed Permit requires disinfection of the discharge, prior to discharge to the receiving water, at a level equivalent to California Code of Regulations, Title 22, division 4, chapter 3 (Title 22) disinfected tertiary recycled water. This requirement is necessary to protect public health from contact with undiluted treated municipal wastewater. The proposed Permit includes effluent limits and operating specifications to ensure this level of disinfection, including effluent limits for total coliform organisms, and operating specifications for the ultraviolet (UV) disinfection system (e.g., turbidity, UV dose, and UV transmittance). Compliance with the effluent limits and operating specifications demonstrates compliance with the equivalency to Title 22 disinfection requirement. The operating specifications are not subject to Mandatory Minimum Penalties (MMPs).

CVCWA comments that the specifications violate Water Code 13360 and that turbidity specifications and total coliform organism effluent limits are sufficient to ensure compliance with the Title 22 disinfected tertiary recycled water requirement. Central Valley Water Board staff does not concur. The California Department of Public Health developed the requirements for turbidity and total coliform based on the use of chlorine disinfection. For facilities that utilize UV disinfection, DPH requires compliance with additional specifications to ensure adequate disinfection is provided.

The National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWRF’s “Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse” first published in December 2000 and revised as a Second Edition dated May 2003 (NWRI Guidelines) includes UV operating specifications for compliance with Title 22 disinfected tertiary recycled water. For water recycling in accordance with Title 22, DPH requires that the

¹ *In the Matter of Petition of Citizens for a Better Environment (CBE), et al.*, Order No. WQ 90-5 (Oct. 4, 1990) at p. 87; see *In the Matter of the Petition of the United States Department of Agriculture, Forest Service of Review of Order No. 6-82-123*, Order No. WQ 83-3 (April 21, 1983) at p. 4 [Water Code section 13360 “allows the Regional Board to regulate discharges of waste fully, so long as it does not tell the discharger precisely how to meet the established limits.”].

² Tentative Order at p. 23.

³ *Id.* at pp. 23-24.

UV system shall be an approved system included in the Treatment Technology Report for Recycled Water, December 2009 (or a later version, as applicable) published by the DPH. The UV system shall also conform to all requirements and operating specifications of the NWRI Guidelines. A Memorandum dated 1 November 2004 issued by DPH to Regional Water Board executive officers recommended that provisions be included in permits for water recycling treatment plants employing UV disinfection requiring dischargers to establish fixed cleaning frequency of lamp sleeves, as well as, include provisions that specify minimum delivered UV dose that must be maintained (per the NWRI Guidelines).

The proposed Permit includes UV specifications for UV dosage, UV transmittance, and lamp cleaning/replacement in accordance with the NWRI Guidelines. These requirements are necessary for UV disinfection systems to ensure the facility adequately disinfects the wastewater for virus inactivation as required by Title 22.

Since the UV specifications are based on the NWRI Guidelines, a reopener provision included in the proposed Permit to allow modification of the UV operation specifications in the event the Discharger conducts a site-specific UV Engineering study that demonstrates modified UV specifications will achieve the virus inactivation required by Title 22 for disinfected tertiary recycled water.

Legal arguments concerning the Central Valley Water Board's purported failure to comply with Water Code section 13360 are similarly misplaced. For example, as the court noted in *Tahoe-Sierra Preservation Council v. State Water Resources Control Board* (1989) 210 Cal.App.3d 1421, 1438, "Section 13360 is not a sword precluding the regulation of discharges of pollutants. . . .If, under present conditions of knowledge and technology, there is only one manner in which compliance may be achieved, that is of no moment" (citing *Pacific Water Conditioning Assn., Inc. v. City Council* (1977) 73 Cal.App.3d 546, 554). The court went on to say that "Where the lack of available alternatives is a constraint imposed by present technology and the laws of nature rather than a law of the Water Board specifying design, location, or type of construction or particular manner of compliance, there is no violation of Section 13360."

In this case, the proposed permit requirements (i.e., total coliform effluent limits, turbidity specifications, and UV operating specifications) are merely ensuring compliance with DPH disinfection requirements. Furthermore, the Discharger specifically has chosen a UV disinfection system as opposed to other treatment technologies (such as chlorine). With the Discharger's choice of selecting UV disinfection comes the corresponding obligation to comply with DPH disinfection requirements. The Discharger's choice of a UV disinfection system requires UV operating specifications as reflected in the Central Valley Water Board's proposed permit, in part, because the Discharger has not submitted a site-specific UV disinfection study demonstrating that modified UV specifications will achieve virus inactivation equivalent to Title 22 for disinfected tertiary recycled water. Finally, even assuming for the sake of argument that the proposed permit requirements

were the only manner in which to comply with DPH disinfection requirements, this argument also fails. See, e.g., *Tahoe-Sierra Preservation Council*, 73 Cal.App.3d at p. 1438 (dismissing Plaintiff's claim that there is a violation of Water Code section 13360 even if there is only one manner of meeting a discharge standard is feasible).

For additional staff response to the UV operating specifications issue, see Response to Discharger Comment No. 4.

CVCWA Comment D. The Tentative Order's Provisions Related to Priority Pollutant Reporting and Compliance Determination Should Be Modified to Be Consistent With the SIP.

CVCWA contends that the Tentative NPDES Permit includes provisions related to reporting and compliance determinations for priority pollutants that are inconsistent with the SIP. Therefore, CVCWA requested the following four (4) changes in the proposed NPDES Permit:

- a) Modify Reporting Level definition in proposed NPDES Permit, Attachment A – Definitions, as follows:

Reporting Level (RL)

RL is the value that the Discharger must report with each sample result for priority pollutants consistent with Sections 2.4.1 and 2.4.4 of the SIP and that is used in determining whether the Discharger has complied with effluent limitations established in this Order. The RL is selected from the MLs listed in Appendix 4 of the SIP in accordance with Section 2.4.2, or established in accordance with Section 2.4.3, of the SIP. If there is more than one ML listed in Appendix 4, or if deviation from the MLs listed in Appendix 4 occurs, the Discharger must agree to the ML selected in order for it to apply. RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Central Valley Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP.

RESPONSE. Central Valley Water Board staff concurs, in part, and section VII.H. Priority Pollutant Effluent Limitations and Attachment A. Definitions, were changed in the proposed NPDES Permit as shown in underline/strikeout format below:

H. Priority Pollutant Effluent Limitations. Compliance with effluent limitations for priority pollutants shall be determined in accordance with section 2.4.5 of the SIP, as follows: using sample reporting protocols defined in Attachment A and Attachment E of this Order. For purposes of reporting and administrative enforcement by the Central Valley Water Board and the State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the

~~concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).~~

1. Dischargers shall be deemed out of compliance with an effluent limitation, if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).
2. Dischargers shall be required to conduct a Pollutant Minimization Program (PMP) in accordance with section 2.4.5.1 of the SIP when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:
 - a. A sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the RL; or
 - b. A sample result is reported as not detected (ND) and the effluent limitation is less than the method detection level (MDL).
3. When determining compliance with an average monthly effluent limitation (AMEL) and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - a. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
4. If a sample result, or the arithmetic mean or median of multiple sample results, is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a PMP (as described in section 2.4.5.1), the discharger shall not be deemed out of compliance.

Attachment A. Definitions.

Reporting Level (RL)

~~RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Central Valley Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The MLRL must be established in accordance with section 2.4.2, section 2.4.3, and Appendix 4 of the SIP and must be based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the MLRL depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.~~

- b) Modify section X.B. Self Monitoring Reports (SMRs), Attachment E – Monitoring and Reporting Program, of the proposed NPDES Permit as follows:

- 3. Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) ~~reported Minimum Level (ML)~~ and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the reported RL ~~ML~~ shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

RESPONSE. Central Valley Water Board staff concurs, and the proposed NPDES Permit was changed accordingly. In addition, the following section was deleted as shown in strikethrough format below:

- 4. Compliance Determination.** ~~Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Valley Water Board and the State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).~~

- c) Modify section X.D. Other Reports, Attachment E – Monitoring and Reporting Program, of the proposed NPDES Permit as follows:

3. Within 60 days of permit adoption, the Discharger shall submit a report outlining reporting levels ~~minimum levels~~, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. ~~The~~ At a minimum, the Discharger shall comply with the monitoring and reporting requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the SIP, respectively. This includes the selection of MLs from the MLs listed in Appendix 4 of the SIP unless the Central Valley Water Board and Discharger agree to deviate from the MLs listed in Appendix 4 in accordance with Section 2.4.3 of the SIP.

RESPONSE. Central Valley Water Board staff concurs, in part, and the proposed NPDES Permit was changed as shown in underline/strikeout format below:

3. Within 60 days of permit adoption, the Discharger shall submit a report outlining minimum reporting levels (RLs), method detection limits, and analytical methods for approval, ~~with a goal to achieve detection levels below applicable water quality criteria.~~ At a minimum tThe Discharger shall comply with the monitoring and reporting requirements for CTR constituents as outlined in section 2.3 and 2.4 of the SIP. The maximum required reporting levels for priority pollutant constituents shall be based on the Minimum Levels (MLs) contained in Appendix 4 of the SIP, determined in accordance with Section 2.4.2 and Section 2.4.3 of the SIP. In accordance with Section 2.4.2 of the SIP, when there is more than one ML value for a given substance, the Central Valley Water Board shall include as RLs, in the permit, all ML values, and their associated analytical methods, listed in Appendix 4 that are below the calculated effluent limitation. The Discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the Central Valley Water Board shall select as the RL, the lowest ML value, and its associated analytical method, listed in Appendix 4 for inclusion in the permit. Table I-1 (Attachment I) provides required maximum reporting levels in accordance with the SIP.

- d) Modify Attachment I- Effluent and Receiving Water Characterization Study of the proposed NPDES Permit as follows:

I. Background. Sections 2.4.1 through 2.4.4 of the SIP provide the minimum standards for analyses and reporting related to compliance determination. (Copies of the SIP may be obtained from the State Water Resources Control Board, or downloaded from <http://www.waterboards.ca.gov/iswp/index.html>). The Discharger is to follow the reporting protocol established in Section 2.4.4 of the SIP and Section II (Monitoring Requirements) below for purposes of compliance determination. To implement the SIP, effluent and receiving water data are needed for all priority pollutants. Effluent and receiving water pH and hardness are required to evaluate the toxicity of certain priority pollutants (such as heavy metals) where the toxicity of the constituents varies with pH and/or hardness. Section 3 of the SIP prescribes mandatory monitoring of dioxin congeners. In addition to specific requirements of the SIP, the Central Valley Water Board is requiring the following monitoring solely for purposes of effluent and

receiving water characterization related to reasonable potential determinations for the next permit renewal:

B. Criterion Quantitation Limit (CQL). The criterion quantitation limits will be equal to ~~or lower than~~ the minimum levels (MLs) in Appendix 4 of the SIP or the detection limits for purposes of reporting (DLRs) below the controlling water quality criterion concentrations summarized in Table I-1 of this Order, or lower upon the Discharger's agreement. In cases where the controlling water quality criteria concentrations are below the detection limits of all approved analytical methods, the best available procedure will be utilized that meets the lowest of the MLs and DLR. Table I-1 contains suggested analytical procedures. The Discharger is not required to use these specific procedures as long as the procedure selected achieves the desired minimum detection level.

RESPONSE: Central Valley Water Board staff does not concur. Attachment I – Effluent and Receiving Water Characterization Study of the proposed NPDES Permit was changed as shown in underline/strikeout format below:

Section II. Monitoring Requirements.

D. Additional Monitoring/Reporting Requirements. The Discharger shall conduct the monitoring and reporting in accordance with the General Monitoring Provisions and Reporting Requirements in Attachment E.

Table I-1 Priority Pollutants and Other Constituents

CTR #	Constituent	CAS Number	<u>Minimum Level from SIP</u> <u>Maximum Reporting Level</u> µg/L or noted
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¹ The reporting levels required in these tables for priority pollutant constituents are established based on Section 2.4.2 and Appendix 4 of the SIP.

~~III. Additional Study Requirements~~

~~**A. Laboratory Requirements.** The laboratory analyzing the monitoring samples shall be certified by the Department of Health Services in accordance with the provisions of Water Code 13176 and must include quality assurance/quality control data with their reports (ELAP certified).~~

~~**B. Criterion Quantitation Limit (CQL).** The criterion quantitation limits will be equal to or lower than the minimum levels (MLs) in Appendix 4 of the SIP or the detection limits for purposes of reporting (DLRs) below the controlling water quality criterion concentrations summarized in Table I-1 of this Order. In cases here the controlling water quality criteria concentrations are below the detection limits of all approved analytical methods, the best available procedure will be utilized that meets the lowest~~

~~of the MLs and DLR. Table I-1 contains suggested analytical procedures. The Discharger is not required to use these specific procedures as long as the procedure selected achieves the desired minimum detection level.~~

~~**C. Method Detection Limit (MDL).** The method detection limit for the laboratory shall be determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).~~

~~**D. Reporting Limit (RL).** The reporting limit for the laboratory. This is the lowest quantifiable concentration that the laboratory can determine. Ideally, the RL should be equal to or lower than the CQL to meet the purposes of this monitoring.~~

~~**E. Reporting Protocols.** The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:~~

- ~~1. Sample results greater than or equal to the reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).~~
- ~~2. Sample results less than the reported RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.~~
- ~~3. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may shortened to "Est. Conc."). The laboratory, if such information is available, may include numerical estimates of the data quantity for the reported result. Numerical estimates of data quality may be percent accuracy (+ or - a percentage of the reported value), numerical ranges (low and high), or any other means considered appropriate by the laboratory.~~
- ~~4. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.~~

~~**F. Data Format.** The monitoring report shall contain the following information for each pollutant:~~

- ~~1. The name of the constituent.~~
- ~~2. Sampling location.~~
- ~~3. The date the sample was collected.~~
- ~~4. The time the sample was collected.~~

- ~~5. The date the sample was analyzed. For organic analyses, the extraction data will also be indicated to assure that hold times are not exceeded for prepared samples.~~
- ~~6. The analytical method utilized.~~
- ~~7. The measured or estimated concentration.~~
- ~~8. The required Criterion Quantitation Limit (CQL).~~
- ~~9. The laboratory's current Method Detection Limit (MDL), as determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).~~
- ~~10. The laboratory's lowest reporting limit (RL).~~
- ~~11. Any additional comments.~~