

Central Valley Regional Water Quality Control Board  
25/26 April 2007 Board Meeting

Response to Comments  
City of Placerville – Hangtown Creek Wastewater Treatment Facility  
Tentative Waste Discharge Requirements and Cease and Desist Order

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The following are Regional Water Quality Control Board, Central Valley Region (Regional Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (proposed NPDES Permit renewal) and Cease and Desist Order for the City of Placerville Hangtown Creek Wastewater Treatment Facility. Public comments regarding the proposed Orders were required to be submitted to the Regional Water Board by 10 March 2008 in order to receive full consideration.

The Regional Water Board received timely comments regarding the proposed permit from the City of Placerville (Discharger). The comments were all accepted into the record, and are summarized below, followed by staff responses.

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**CITY OF PLACERVILLE (DISCHARGER) COMMENTS**

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**Discharger Comment No. 1. *Water Quality Based Effluent limitations vs. Technology-Based Effluent Limitations (Page 5, Section II.G).*** This permit finding states: *“This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The Regional Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet Section IV.C.2.”*

- First, effluent limitations are either technology-based or water quality-based. Neither federal nor State regulations prescribe a “technology equivalence requirement.” In addition, this section states that these requirements are “*necessary to meet applicable water quality standards*” and, as such, are water-quality based. Therefore, the City requests the following edit: *“This Order contains requirements, expressed as a water quality-based ~~technology equivalence~~-requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards.”*
- Second, this finding states: *“The Regional Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements.”* There is inadequate discussion and findings relating to the section 13241 factors in the Order and the Fact Sheet and thus no evidentiary basis to support the statement that the factors have been considered is presented. As such, the Order does not adequately consider the 13241 factors when imposing limitations more stringent than federal standards. This same comment applies to finding “M” (p. 8) and to Attachment F.

- Third, this finding states: “*The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet Section IV.C.2.*” It is an exceedance of the Regional Water Board’s authority to prescribe a treatment process. Rather, the Order is to define effluent limitations only, and it is up to the Discharger to design, construct, and operate treatment facilities to comply with the limitations. The City requests that this text be edited accordingly.

**RESPONSE:** The proposed Order requires a Title 22 tertiary level of treatment, or equivalent, because such treatment is necessary to protect the beneficial uses of the receiving water. The limitations based on tertiary treatment are therefore required by the Clean Water Act even though they are more stringent than the technology-based secondary treatment standard. Therefore, Finding M of the tentative permit has been modified to read as follows:

**M. “*Stringency of Requirements for Individual Pollutants.* This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD<sub>5</sub> and TSS. The water quality-based effluent limitations consist of restrictions on turbidity and pathogens. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations for BOD, TSS, turbidity, and pathogens to meet numeric objectives or protect beneficial uses. The Regional Water Board considered the requirements of CWC section 13241 during adoption of the previous NPDES permit which contained limitations above the federal secondary requirements for nitrate, turbidity, and total coliform organisms. The previous Order required a tertiary level of treatment, or equivalent, necessary to protect the beneficial uses of the receiving water. The Facility is currently undergoing construction of improvements that will increase the tertiary treatment capability and reliability of treatment to comply with the previous Order requirements. Additional improvements beyond the current construction will not be necessary to comply with Title 22-quality criteria (or equivalent) as required in this Order.”**

*Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 1 May 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives*

*and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the [Clean Water] Act” pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.”*

Additionally, the Fact Sheet language has been modified to correspond with the modified wording regarding water quality-based effluent limitations and CWC Section 13241 requirements included in the previous NPDES permit.

Lastly, Section VI.C.6 of the tentative NPDES Permit requires that the wastewater be oxidized, coagulated, filtered, and adequately disinfected, or equivalent. This section of the tentative permit is prescribing the required level of treatment within the Regional Water Board’s authority. (See, City of Woodland, State Water Board Order 2004-0010, p. 10.) The Discharger has the discretion to provide an equivalent level of treatment to comply with the Title 22-level effluent limitations.

**Discharger Comment No. 2. Effluent Limitations for Persistent Chlorinated Hydrocarbon Pesticides (Page 11, Section IV.A.1.a. Table 6 and throughout the Permit).** The Discharger requests that the proposed effluent limitation for Persistent Chlorinated Hydrocarbon Pesticides be revised to contain water quality-based effluent limitations for only those pesticides exhibiting reasonable potential, instead of all persistent chlorinated hydrocarbon pesticides.

The Discharger further states that relevant language in the Basin Plan, the State’s *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) and federal regulations do not require water quality-based effluent limitations for all persistent chlorinated hydrocarbon pesticides (individually or collectively) when one pesticide from this class exhibits reasonable potential. Thus, at the very least, effluent limitations for “persistent chlorinated hydrocarbon pesticides” should be removed and instead effluent limitations only for the following pesticides exhibiting reasonable potential be included, “Table 6. Effluent Limitations” be modified accordingly.

- beta endosulfan,
- dalapon,
- 2,4-D, 4,4’-DDD,
- dinoseb,
- endrin,
- endrin aldehyde,
- heptachlor, and

- 2,4,5-TP

This same change should be made to the Fact Sheet and on the compliance schedule Table on p. 31. In addition, the current table applies the effluent limitation as an “instantaneous maximum.” This is an inappropriate time period for compliance as it is routinely associated with metered data. Instead, the effluent limitation needs to be applied as a “daily maximum.” By permitting only the persistent chlorinated hydrocarbon pesticides that have reasonable potential, there is no need to define the list of persistent chlorinated hydrocarbon pesticides on p. A-4. Thus, this list should be deleted.

**RESPONSE:** Regional Water Board staff concurs with the Discharger and has modified the tentative NPDES permit to include eight separate effluent limitations specifically for the persistent chlorinated hydrocarbon pesticides that were detected in the WWTP effluent, in place of the one originally-proposed effluent limitation for these pesticides as a group. However, since the water quality objective for persistent chlorinated hydrocarbon pesticides in the Central Valley Regional Water Board Basin Plan (page III-6.0) reads “*Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column...*”, Regional Water Board staff believes this objective applies at any time, not only as a daily maximum. Therefore, the proposed instantaneous maximum effluent limitations for the detected pesticides remains unchanged.

The tentative NPDES permit does not require metered monitoring for pesticides. Regional Water Board staff believes metered monitoring is excessive. The tentative permit requires grab samples to be analyzed for these pesticides, which must result in “non-detected” concentrations of the specified pesticides for the Discharger to be in compliance with the corresponding instantaneous effluent limitation.

**Discharger Comment No. 3. *Interim Effluent Limitation for Electrical Conductivity (EC) (Page 15, Table 7.f. of Permit).*** The Discharger requests that the interim limit for EC be increased from 825 to 900 umhos/cm. Based on review of effluent data, the average annual electrical conductivity for 2007 was approximately 820 umhos/cm.

**RESPONSE:** The originally-proposed interim EC effluent limitation, established as an annual average, was based on the maximum 12-month average EC level. This maximum 12-month average resulted in an EC level of 825 umhos/cm. The Discharger is concerned that the maximum 12-month average provided by the limited amount of data does not provide a buffer for a potential higher annual average that may take place in the near future, and is requesting a statistically-projected interim limitation. Regional Water Board staff does not believe that a statically-projected interim limit is appropriate for establishing an interim “cap” on the salinity in this discharge because it may allow the Discharger to actually

increase the amount of salinity discharged. However, staff does believe it is reasonable to increase the proposed interim limitation to 850 umhos/cm to account for unforeseen peaks in salinity in the near future while the Discharger implements some immediate salinity reduction measures in its wastewater treatment process. This staff conclusion is based on the factors that (1) this limitation is interim until a final limitation is established based the proposed Site-Specific Salinity Study to determine the appropriate EC level to be maintained in the receiving water for protection of beneficial uses, and (2) the Discharger is progressively eliminating its addition of constituents containing salt in its treatment process by converting to ultraviolet disinfection and minimizing additives for pH adjustment to the effluent. Therefore, the interim EC effluent limitation in the tentative NPDES permit has been changed to 850 umhos/cm.

**Discharger Comment No. 4. *Dissolved Oxygen Receiving Water Limits (Page 15, Section V.A.5 of Permit).*** The permit receiving water limitations are stated as follows:

- The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
- The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
- The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

The Discharger states that in order to assess compliance with “a” and “b” above, receiving water dissolved oxygen (DO) would need to be measured hourly or continuously. This is not practical or necessary to assure protection of aquatic life uses, nor is it required of any other discharger. Consequently, the Discharger requests that the “a” and “b” components of this limitation be eliminated from the permit, leaving only “c”, which can be assessed based on the 1/week monitoring specified in the Monitoring and reporting Program.

**RESPONSE:** The receiving water limitations in the tentative NPDES permit are the same as the applicable receiving water limitations in the Central Valley Regional Water Board Basin Plan. The tentative NPDES permit prescribes receiving water monitoring that is practicable for the Discharger to quantify the impact the effluent is having on the receiving stream. Regional Water Board staff does not believe that the required level of receiving water monitoring warrants the removal of the receiving water limitation from the NPDES permit. Regardless, receiving water limitations for the receiving stream are in effect through the Regional Water Board’s implementation of the Basin Plan.

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**Discharger Comment No. 5. Accelerated Monitoring Specifications (Page 25, Section VI.C.2.a.iv. of Permit).** The Discharger requests the following modifications to clearly allow for the circumstances discussed in Item b. of this section and described in other recently adopted NPDES permits (i.e., City of Lodi Order No. R5-2007-013):

*“c) If the result of any accelerated toxicity test exceeds the monitoring trigger and the source(s) of the toxicity are not easily identified as described in item b of this subsection, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum.”*

**RESPONSE:** The Discharger is correct in that the language in the tentative NPDES permit does not correspond with other recent permits and the appropriate steps that lead to the requirement for the Discharger to conduct a Toxicity Reduction Evaluation (TRE). The language in the tentative permit has been modified as suggested above.

**Discharger Comment No. 6. BPTC Evaluation Tasks (Pages 25-26, Section VI.C.2.b of the Permit).** The Discharger states that this provision triggers a BPTC work plan and evaluation based on the results of groundwater monitoring. The Order does not require groundwater monitoring (see p. F-66). Furthermore, the City is underway with a major upgrade that is anticipated to provide BPTC. The Facility upgrades are due to be completed in early 2009. Thus, the City requests that the BPTC evaluation provision be removed from the Order. If this provision is retained, the purpose of and need for this comprehensive technical evaluation needs to be justified in the Fact Sheet. Furthermore, the term “component” needs to be defined. Also, the relevance of “compliance with groundwater limitations” in Task 5 is also unclear.

**RESPONSE:** Section VI.C.2.b of the tentative NPDES permit states that the Discharger shall propose a work plan and schedule for providing BPTC if groundwater monitoring or sampling shows that any constituent concentrations are increased above background groundwater quality. The tentative NPDES permit does not require groundwater monitoring because the Discharger is not storing or disposing wastewater and/or sludge on land. However, this does not discount any potential situation in which, if any available groundwater monitoring data indicates potential degradation of groundwater quality, a BPTC workplan may be necessary for the potential cause of the degradation contributed by the collection, treatment and discharge of the municipal wastewater.

To further address the Discharger’s comment, the word “component” refers to a component of the wastewater collection, treatment and/or disposal system that

may be contributing to groundwater degradation. Lastly, compliance with groundwater limitations refers to the Discharger's compliance with Section V.B. of the tentative permit titled Groundwater Limitations.

**Discharger Comment No. 7. *Supplemental Evaluation of Temperature (Pages 26-27 Section VI.C.2.c of the Permit)*.** The Discharger states that Task 1 should be modified as follows:

*"Submit ~~technical report~~ study work plan..."*

**RESPONSE:** Regional Water Board staff concurs with the recommendation to modify the wording of Task 1, and made the following edits.

*"Submit ~~technical report~~ work plan and schedule for comprehensive evaluation"*

**Discharger Comment No. 8. *Pollutant Minimization Program (Page 27, Section VI.C.3.a of Permit)*.** The Discharger requests that this section be removed from the Order. This section is not included in other Tentative Orders prepared by Central Valley RWQCB (see Roseville Preliminary Draft Orders, Vacaville Tentative Order, and City of Brentwood adopted Order). Moreover, the City does not believe the section is implementable due to its broad scope and vague requirements.

**RESPONSE:** Regional Water Board staff concurs with the recommendation to delete this section from the permit and did so. A Pollution Minimization Program is required in NPDES permit for a constituent(s) in which the numeric value of an effluent limitation is below the minimum detectable level of the constituent. This is not the case for the effluent limitations in the tentative permit. Therefore, the requirement for a Pollution Minimization Plan has been removed.

**Discharger Comment No. 9. *Other Special Provisions (Page 30, Section VI.C.6 of the Permit)*.** The City requests that the following wording be added at the beginning of the sentence.

*"If the City reclaims its wastewater, the wastewater ~~Wastewater~~ shall be oxidized, coagulated, filtered, and adequately disinfected..."*

Since the City does not currently reclaim its effluent, the Title 22 reclamation criteria do not apply.

**RESPONSE:** The provisions specified in the section of the tentative NPDES permit referenced above are for the protection of the receiving stream's beneficial uses that involve protection of public health. The tentative NPDES permit is

proposing Department of Public Health, Title 22-level effluents for protection of the municipal water supply, direct and indirect public contact and recreation, and agricultural water supply beneficial uses of the receiving stream. Therefore, Regional Water Board staff does not concur with the Discharger's comment. However, to address the discharger's concern that the full spectrum of the Title 22 regulation is not required to meet the Title-22-level effluent limitations specified in the permit for discharge to surface water, the language in Section VI.C.6. has been revised to read as follows:

Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the ~~DPH (Department of Public Health) reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22),~~ or equivalent, for the Discharger to comply with Department of Public Health Title 22-level effluent limitations in this Order.

**Discharger Comment No. 10. *Ammonia Compliance Schedules (Page 30, Section VI.C.7.b of the Permit)*.** The Discharger states that, as *“requested previously (City’s Infeasibility Report dated September 2006 and discussed at our September 6 and 11, 2007 meetings [with Regional Board staff]), the City requests that Total Ammonia be included in the compliance schedule. The proposed limits were exceeded in December 2006.”*

**RESPONSE:** The Discharger submitted additional recent ammonia data to accompany its public comments regarding the tentative Cease and Desist Order. Regional Water Board staff reassessed the need for an ammonia compliance schedule and found that the Discharger cannot immediately comply with the more stringent ammonia final effluent limitations. Therefore, the final ammonia effluent limitations have been included in the lists of limitations with compliance schedules and has been given a final compliance date of 1 June 2009 in the NPDES permit.

**Discharger Comment No. 11. *Pollution Prevention Plan (Page 31, Section VI.C.7.b, Task ,1 of the Permit)*.** The Discharger requests that the individual sections in the Fact Sheet in which the Water Quality Based Effluent Limitations (WQBELs) for Cyanide, Dibromochloromethane, Dichlorobromomethane, MTBE, Sulfide, and THMs are derived be changed to delete language referring to pollution prevention plan development. As stated on p. F-57 of the Fact Sheet, *“Reducing the concentrations of Cyanide, Dibromochloromethane, Dichlorobromomethane, MTBE, Sulfide, and THMs in the discharge is primarily dependent upon completion of the treatment plant upgrades and not on pollution prevention and source control. The treatment plant upgrades are scheduled for completion on 28 February 2009. This Order provides 90 days after upgrade completion for the Discharger to comply with the effluent limitations for Cyanide, Dibromochloromethane, Dichlorobromomethane, MTBE, Sulfide, and THMs.”*

[emphasis added by the Discharger] Since pollution prevention and source control are not the avenues for compliance for these constituents, the pollution prevention plan (PPP) requirement in Task 1, and elsewhere in the Order, should exclude these constituents.

**RESPONSE:** California Water Code (CWC) section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan (PPP), as appropriate, pursuant to section 13263.3 of the CWC. Therefore, a pollution prevention plan will be necessary for all constituents for which the Discharger cannot immediately comply with a corresponding final effluent limitation. For constituents for which source control measures are not appropriate, such as those inherent to municipal wastewater or chlorine byproducts, the Discharger shall prepare a PPP that addresses the factors in CWC section 13263.3 and include a discussion of the non-applicability of effectively reducing the effluent concentrations by source control measures.

**Discharger Comment No. 12. Compliance Determination (Page 32, Section VII of the Permit).** The Discharger states that this section omits a key aspect of compliance determination established in the SIP. The Discharger requests that the Tentative Order should include a new item “A.” within Section VII, in accordance with Section 2.4.5 of the SIP, that reads as follows:

*“A. Use of Laboratory Analytical Results. The Discharger 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).”*

In addition, the City requests that subsequent items in Section VII be re-lettered:

The Reporting Protocols (p. E-11) require that only sample results less than the laboratory method detection limit (MDL) may be reported as “non-detectable” or “ND.” Sample results less than reporting level (RL), but greater than the MDL must be reported with an estimation of the sample concentration. Per the SIP, this “detect” at an estimated concentration may not be used for compliance determination, because Section 2.4.5 specifies that the sample concentration must be greater than the RL (and greater than the effluent limitation) for a discharger to be deemed out of compliance. To avoid estimated concentrations from being erroneously considered a “detection” for compliance determination purposes, this additional language above is needed in the Order. This is particularly important for correct assessment of the “ND” effluent limitation for persistent chlorinated hydrocarbon pesticides.

**RESPONSE:** Regional Water Board staff does not agree with the proposed change to the tentative NPDES permit’s Compliance Determination Language. The Monitoring and Reporting requirements contained in Attachment E of the

tentative permit include the required Reporting Levels as required in Appendix 4 of the State Implementation Policy. However, the ND (non-detect) effluent limitations for certain constituents, such as ND water quality objectives in the Basin Plan for persistent chlorinated hydrocarbon pesticides, means that the constituent is not to be detected in the effluent. Therefore, including compliance determination language stating that such constituent concentrations must be both detected and quantifiable to be out of compliance with an ND limitation, is not appropriate.

**Discharger Comment No. 13. Pesticide Compliance Determination (Page 32, Section VII.A of the Permit).** The Discharger states that the following edits are necessary for the existing Section VII.A text to ensure that compliance with the “ND” final effluent limitations for chlorinated pesticides is properly assessed and terminology is consistent with the definitions in Attachment A:

*“Persistent Chlorinated Hydrocarbon Pesticides Effluent Limitations. The nondetectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at ~~detectable~~ concentrations greater than or equal to the reporting level (RL). The Discharger shall use USEPA standard analytical techniques with the lowest possible detectable level for persistent chlorinated hydrocarbon pesticides with a ~~minimum~~ maximum acceptable ~~reporting level (RL)~~ as indicated in appendix 4 of the SIP. If the analytical result of a single effluent grab sample ~~is detected~~ for any persistent chlorinated hydrocarbon pesticide exceeds its respective RL, a violation will be flagged and the discharger will be considered out of compliance for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation).”*

**RESPONSE:** The final effluent limitation for persistent chlorinated hydrocarbon pesticides is ND (non-detect), it is **not** “not-quantifiable”. The changes proposed in the Discharger’s comment would raise the pesticide limitation to a quantifiable level, which is not in accordance with the Central Valley Regional Water Board Basin Plan. Therefore, Regional Water Board staff does not concur with the proposed edits.

**Discharger Comment No. 14. Pesticide Compliance Determination (Page 32, Section VII.A of the Permit).** *Compliance Determination A. Persistent Chlorinated Hydrocarbon Pesticides.* The Discharger requests the following text edit:

*“The Discharger shall use USEPA standard analytical techniques with the lowest possible detectable level for persistent chlorinated hydrocarbon pesticides with a*

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~~minimum maximum acceptable reporting detection level as indicated in appendix 4 of the SIP of 0.05 ug/L.”~~

According to the Discharger, this way, the narrative “ND” objective is quantitatively interpreted for the Discharger. The Discharger states that the language in the administrative draft fails to define the narrative objective for regulatory compliance purposes, and would result in a limitation that would continuously change over time, and by laboratory selected, which would not be appropriate.

**RESPONSE:** Regional Water Board staff does not concur with the proposed edits. The intent of referencing Appendix 4 of the SIP is to maintain the most current reporting levels throughout the term of the proposed permit, rather than to include a fixed number that remains in effect after any potential policy reporting level requirement updates. The Discharger’s proposed language suggests raising the detection level to the currently-required reporting level in the SIP. Staff does not believe the proposed edits provide for appropriate detection of persistent chlorinated hydrocarbon pesticides.

**Discharger Comment No. 15. Attachment A – Definitions and Acronyms (Page A-2, Estimated Chemical Concentration).** The Discharger requests the following change to maintain consistency in terminology used in other definitions (e.g., DNQ) and to avoid confusion, the City requests the following change: “Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ~~ML~~ RL value. Additionally, the City requests similar changes to *Page A-4, Not Detected (ND)* per the following edit to this definition: “are those sample results less than the laboratory’s MDL, or the Minimum Levels (MLs) specified in Appendix 4 of the SIP for persistent chlorinated hydrocarbon pesticides.”

**RESPONSE:** Regional Water Board staff does not agree with the suggested edits. A Minimum Level is the level in which the a constituent can be accurately measured in a laboratory sample, and it is the intent of Regional Water Board staff to define “Estimated Chemical Concentration” as a concentration that is given an estimated value below the Minimum Level.

Laboratory detection of a constituent above the Minimum Detection Level but below the Minimum Level confirms that the pollutant exists even though it may not be quantified. Therefore, for compliance with a Non-Detect effluent limitations, the lab analysis results must demonstrate that the pollutant concentration is below the minimum detection level.

Therefore, the tentative NPDES permit remains unchanged based on this public comment.

**Discharger Comment No. 16. Attachment A – Definitions and Acronyms (Page A-2, Not Detected.)** The Discharger requests the following edit to this definition: “... are those sample results less than the laboratory’s MDL, or the Minimum Levels (MLs) specified in Appendix 4 of the SIP for persistent chlorinated hydrocarbon pesticides.”

**RESPONSE:** See Regional Water Board staff response to Comments No. 13 through 15.

**Discharger Comment No. 17. Attachment E – Monitoring and Reporting Program (Page E-2, Table E-1. Monitoring Station Locations).** The Discharger requests clarification. From the description in the table for SPL-001 in Table E-1, it is not clear that this represents an appropriate municipal water supply monitoring location.

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Composite sampler after grit chamber and before the Parshall flume.
001	EFF-001	Downstream from the last connection through which wastes can be admitted into the outfall. (Discharge point 001 is at Latitude 38° 43' 40" N and Longitude 120° 51' 04" W.)
--	RSW-001	100 feet upstream from the point of discharge and not influenced by the discharge of effluent.
--	RSW-002	1320 feet downstream from the point of discharge.
--	BIO-001	Sludge cake from Sludge Belt Presses #1 and #2.
--	SPL-001	Inside <u>municipal water supply</u> tap on pre-deionized water before the filters.

**RESPONSE:** The purpose of this table is to indicate the general location of monitoring points. Regional Water Board staff verified the Discharger’s suggested edits and made the following modifications to the tentative NPDES permit:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Composite sampler after grit chamber and before the Parshall flume.
001	EFF-001	Downstream from the last connection through which wastes can be admitted into the outfall. <del>(Discharge point 001 is at Latitude 38° 43' 40" N and Longitude 120° 51' 04" W.)</del>
--	RSW-001	100 feet upstream from the point of discharge and not influenced by the discharge of effluent.
--	RSW-002	<del>1320</del> 1000 feet downstream from the point of discharge.
--	BIO-001	Sludge cake from Sludge Belt Presses #1 and #2.
--	SPL-001	<del>Inside municipal water supply tap on pre-deionized water before the filters.</del> Municipal water supply tap in Operations Control Building.

**Discharger Comment No. 18. Attachment E – Monitoring and Reporting Program - Effluent Monitoring (Page E-3, Table E-3).** The Discharger reports that there appear to be some incorrect assignment of footnotes as follows:

- a) Hardness – Footnote 14 does not apply
- b) Methyl mercury – there is no effluent limitation for this parameter, so Footnote 12 does not apply
- c) Footnote #16 – this footnote (CTR Priority Pollutants) is only used in this table for certain pesticides, but applies to other parameters in Table E-3 (e.g., mercury, copper). Suggest deleting this footnote, since its inclusion does not clarify any monitoring protocols.

**RESPONSE:** Regional Water Board staff reviewed Table E-3 and its footnotes. The Discharger’s comments a) and b) are correct and the suggested corrections were made to the tentative NPDES permit. Additionally, the Discharger’s comment 3) resulted in modifications to Footnotes 10 and 16 for clarification purposes and subsequent changes to footnote references within the table.

**Discharger Comment No. 19. Attachment E – Chronic Toxicity Testing - Dilutions (Page E-5, Section V.B.7).** The Discharger requests the following modifications to clarify the appropriate dilution water when there is no upstream water:

*“The chronic toxicity testing shall be performed using the dilution series identified in Table E-5, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic or there is no upstream water).”*

*If the receiving water is toxic or there is no upstream receiving water flow, laboratory control water may be used as the diluent, in which case, the receiving water should still be sampled and tested to provide evidence of its toxicity.”*

**RESPONSE:** Regional Board staff concurs that clarification to the above reference section of the permit is necessary. However, rather than the changes suggested by the Discharger, Regional Water Board staff made the following clarifications:

*“The chronic toxicity testing shall be performed using the dilution series identified in Table E-5, below. The receiving water control shall be used as the diluent, (unless the receiving water is toxic or ~~there is no dry~~ upstream water) of the discharge. In such cases, laboratory control water may be used as the diluent.”*

*~~If the receiving water is toxic, laboratory control water may be used as the diluent, in which case, the receiving water should still be sampled and tested to provide evidence of its toxicity.”~~*

**Discharger Comment No. 20. Attachment E – Reporting Requirements for Special Provisions Progress Reports (Page E-16, Table E-11).** The Discharger requests the following corrections to Table E-11:

- a) BPTC Evaluation Tasks – should reference Section VI.C.2.b, not VI.C.2.c
- b) Compliance Schedules for Final Effluent Limitations – the two line items with this title should be combined into one and labeled consistent with Section VI.C.7.a. In addition, the reference should be to Section VI.C.7.a.ii
- c) Pollution Prevention Plan – the two line items with this title should be combined into one. In addition, the reference should be to Section VI.C.7.a.ii.
- d) Treatment Feasibility Study – these two line items should be deleted, as there are no such provisions in the Order.

**RESPONSE:** Regional Water Board staff concurs with the Discharger comments and consolidated the reporting requirements to reduce repetitiveness while maintaining the same reporting requirements originally proposed in the tentative NPDES permit.

**Discharger Comment No. 21. Attachment E – Other Reports, Section X.D.2 (Page E-16/17).** This provision states: *“Within 60 days of the Effective Date of this Order, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the Policy for*

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*Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, adopted 2 March 2000 by the State Water Resources Control Board. **All peaks identified by analytical methods shall be reported.*** [emphasis added by the Discharger]

The Discharger states that the last sentence is out of place in this section, and requests that it be deleted from the Order. The Discharger further states that the last sentence is beyond the reporting requirements specified in the SIP, and if it is intended to remain in the Order, the sentence should be located in Reporting Protocols (p. E-11).

**RESPONSE:** The monitoring and reporting language identified above is part of the NPDES permit boilerplate and included in all recently adopted NPDES permits. Regional Water Board staff acknowledges that the requirement is above and beyond the SIP requirements yet believes that all information collected during a laboratory analysis, including peaks, potential identification of constituent(s) causing the peaks, and/or abnormalities are to be reported as part of the lab analysis report.

**Discharger Comment No. 22. Attachment F (Section IV.C.3.e through Section IV.C.3.dd, Page F-20 through Page F-45).** The Discharger reports that there appear to be typographical errors. The last two sentences of many sections describing the derivation of WQBELs state: “*As part of the compliance schedule, this Order requires the Discharger to submit a corrective action plan and implementation schedule to assure compliance with the final [parameter] effluent limitations. In addition, the Discharger shall submit an engineering treatment feasibility study and prepare and implement a pollution prevention plan in compliance with CWC section 13263.3(d)(3).*” [emphasis added by the Discharger] Page 31 of the Order requires a pollution prevention plan, but does not require a corrective action plan, implementation schedule, or an engineering treatment feasibility study. No such requirement appears anywhere in the Order.

**RESPONSE:** Regional Water Board staff concurs and has made the following edits where they occur in Sections IV.C.3.e through IV.C.3.dd on Pages F-20 through F-45:

*“As part of the compliance schedule, this Order requires the Discharger to ~~submit a corrective action plan and implementation schedule to assure compliance with the final [parameter] effluent limitations. In addition, the Discharger shall submit an engineering treatment feasibility study and prepare and implement a pollution prevention plan in compliance with CWC section 13263.3(d)(3).~~”*

**Discharger Comment No. 22. Attachment F, Ammonia (Section IV.C.3.f, Page F-20 to Page F-22).** The Discharger requests that changes be made to the chronic Ammonia effluent limitations and provided the methodology to demonstrate the calculation of alternative Ammonia effluent limitations. The Discharger states that the procedure they used follows EPA guidance, is protective of aquatic life, and is the approach used in the City of Atwater's NPDES permit adopted in June 2007 (R5-2007-0063) and for the City of Brentwood's recently adopted NPDES permit. In the Discharger's methodology, the chronic criteria were calculated using the CMC equation (salmonids present) in the 1999 Ammonia Update. For each season, the 1/10th percentile of the calculated chronic criteria was determined. According to the Discharger, this assures protection at the 99.9 percentile level, which is a "reasonable worst-case" scenario that is consistent with the 1-in-3 year average frequency for criteria excursions recommended by the U.S. EPA. Accordingly, the Discharger requested a number of modifications to the tentative permit.

**RESPONSE:** There are several different methods that ammonia-related parameters can be calculated to provide protective effluent limitations. Regional Water Board staff concurs with the Discharger's methodology provided in the above comment and the request for alternative chronic Ammonia effluent limitations. Regional Water Board staff concurs that the methodology suggested by the Discharger is applicable to the ephemeral receiving water and modified the tentative NPDES permit as follows:

"Effluent limitations for ammonia in this Order are fixed year-round limitations that are based on reasonable worst-case conditions. Hangtown Creek is an effluent dominated waterbody, therefore, effluent temperature and pH data, from the Discharger's monthly monitoring reports between June 2004 and June 2007, were used for the calculation of the new "fixed" effluent limitations.

The Discharger's data show that the highest pH values occur in the receiving water in February and March and the highest temperatures occur in the effluent in August. The highest reported receiving water pH was 9.3 in March 2007 and the highest reported effluent temperature was 79.1 °F (22.17 °C) from August 2005.

The CMC for ammonia varies only with pH. The Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5. However, the treatment facility discharge has never exceeded a pH of 8.0. To calculate an effluent limitation based on acute criteria, the pH of 8.0 was used to determine the CMC for ammonia is 5.62 mg N/L as a 1-Hour Average.

The CCC for ammonia varies with pH and temperature. As a chronic criterion, long-term conditions were assessed. ~~The highest 30-day rolling average effluent temperature was 78.2 °F (25.67 °C).~~

Because The pH scale has been devised to express the concentration of  $H_3O^+$  in logarithmic form. By definition:

$$pH = -\log[H_3O^+] \quad \text{or} \quad [H_3O^+] = 10^{-pH}$$

is expressed as a logarithm, direct calculation of While an average temperature can be easily calculated, an average pH is not mathematically possible. cannot be calculated directly. In order to represent chronic conditions, the 1/10<sup>th</sup> percentile of the calculated chronic criteria was determined to assure protection at the 99.9 percentile level. This approach represents a "reasonable worst-case" scenario that is consistent with the 1-in-3 year average frequency for criteria excursions recommended by the USEPA and is an approach used in other Orders recently adopted by the Regional Water Board. For this method, the CCC for ammonia was calculated for each day that temperature and pH data were collected. The 30-day average CCC was calculated and the lowest 99.9% 30-day average was selected, which is 2.86 mg/L

The 30-day average CCC is calculated using the temperature and pH of the effluent. Using effluent data from June 2004 through June 2006, the CCC was calculated for each day when temperature and pH were measured. The lowest 99.9% 30-day average CCC was 2.86 mg/L during this period. The effluent pH has never exceeded a pH of 8.0. The pH of 8.0 and the maximum 30-day rolling average temperature result in a CCC for ammonia of 1.19 mg N/L as a 30-Day Average. The USEPA recommended maximum 4-Day Average concentration is 2.5 times the CCC or 2.987.16 mg N/L as a 4-Day Average.

Concentration-based effluent limitations for ammonia are included in this Order to assure the treatment process adequately nitrifies the waste stream to protect the aquatic habitat beneficial uses. The effluent limitations were calculated using the CMC, CCC, and 2.5 times the CCC. The ammonia effluent limitations are 1.552.80 mg/L (as N) as the AMEL and 2.005.62 mg N/L as the MDEL. (See Attachment F, Table F-7 for WQBEL calculations.)

The nitrification process that changes ammonia to nitrate requires oxygen. Depleted oxygen in the receiving stream is detrimental to aquatic life. Therefore, a mass-based Effluent Limitation is also included in this Order in accordance with the Code of Federal Regulations 40CFR 122.45(f). The mass-based Effluent Limitations were calculated using the AMEL and MDEL and the Average Dry Weather Flow of 2.3mgd.

The ammonia data reported by in the Discharger's monthly monitoring reports between June 2004 and June 2007 indicate a MEC of 5.4 mg/L consisted of 12 samples collected for 12 months in 2002 and 2003. The MEC was 0.56

mg/L, which is less than exceeds the chronic criteria and the proposed AMEL effluent limitations. Based on the sample results in the effluent, it appears that the Discharger is able to comply with the effluent limitations for ammonia. Based on the sample results in the effluent, it appears that the Discharger may have difficulty in complying with AMEL for ammonia upon issuance of the permit. Therefore, no interim effluent limitations are appropriate in this Order. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days. The Basin Plan includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives adopted after 25 September 1995 (See Basin Plan at page IV-16). The water quality-based effluent limitations for ammonia are based on a new interpretation of the narrative standard for protection of receiving water beneficial uses. Therefore, a compliance schedule for compliance with the ammonia effluent limitations is established in the Order.

**Discharger Comment No. 23. Attachment F, Ammonia (Table F-7, page F-46).** The changes suggested directly above in Discharger Comment No. 22 require corresponding changes to Table F-7.

**RESPONSE:** Regional Board staff concurs and modified the tentative NPDES permit Table F-7 are shown below:

**Table F-7. Total Ammonia - WQBEL Calculations**

	Acute <sup>(1)</sup>	Chronic (30-day)	Chronic (4-day)
pH <sup>(1)</sup>	8.0	8.0	N/A
Temperature °C <sup>(2)</sup>	N/A	25.67	N/A
Criteria (mg/L) <sup>(3)(2)</sup>	5.62	<del>1.19</del> 2.86	<del>2.98</del> 7.16
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	5.62	2.86	7.16
ECA Multiplier	0.321	0.780	0.527
LTA <sup>(4)</sup>	1.80	2.23	3.77
AMEL Multiplier (95 <sup>th</sup> %)	<sup>(5)</sup> 1.55	<del>1.27</del> <sup>(4)</sup>	<sup>(5)</sup>
<b>AMEL (mg/L)</b>	<sup>(5)</sup> <b>2.80</b>	<b>1.30</b> <sup>(4)</sup>	<sup>(5)</sup>
MDEL Multiplier (99 <sup>th</sup> %)	<sup>(5)</sup> 3.11	<del>1.91</del> <sup>(4)</sup>	<sup>(5)</sup>
<b>MDEL (mg/L)</b>	<sup>(5)</sup> <b>5.62</b>	<b>2.00</b> <sup>(4)</sup>	<sup>(5)</sup>

<sup>(1)</sup> Acute design pH = 8.5 (max. allowed effluent pH)

Chronic design Calculated at pH = 8.0 (effluent pH maximum)

<sup>(2)</sup> Temperature = 78.2 °F (25.67 °C) Maximum 30-day rolling average seasonal effluent temperature

<sup>(3)(2)</sup> USEPA Ambient Water Quality Criteria

<sup>(4)(3)</sup> LTA developed based on Acute and Chronic ECA Multipliers calculated at 99th percentile level per sections 5.4.1 and 5.5.4 of the TSD.

<sup>(5)(4)</sup> ~~30-Day Chronic LTA < Acute LTA < 30-Day Chronic LTA~~ (and < 4-Day Chronic LTA), therefore, limitations based on ~~30-Day Chronic~~ Acute LTA

**Discharger Comment No. 24. Attachment F, Bis (2-ethylhexyl) phthalate (Page F-22).** The Discharger requests that this section be deleted since there is no effluent limit for this constituent.

**RESPONSE:** The Section in the fact sheet that contains an explanation regarding the reasonable potential analysis results for Bis (2-ethylhexyl) phthalate must remain in the tentative permit. The section of text explains that monitoring data indicates that reasonable potential exists for this constituent. However, due to the possibility of sample contamination from plastic containing monitoring equipment, the monitoring data may not be representative of the actual concentration of Bis (2-ethylhexyl) phthalate in the effluent. Regional Water Board staff believe it is important to document the basis of why an effluent limitation is not included for a constituent that may posed reasonable potential to cause or contribute to an exceedance of a water quality criteria.

**Discharger Comment No. 25. Attachment F, MTBE (Page F-30).** The Discharger requests clarification. The text indicates the final MTBE limit is an annual average. Table 6 in the Tentative WDRs indicates the limit is an AMEL.

**RESPONSE:** The proposed MTBE final effluent limitation is a monthly average effluent limitation. The fact sheet has been corrected to be consistent with Table 6 of the tentative NPDES permit.

**Discharger Comment No. 26. Attachment F, Salinity Effluent Limitations (Page F-38).** The Discharger quotes from the Fact Sheet: *“To regulate salinity, this Order includes an interim annual average EC effluent limitation of 825 umhos/cm based on the maximum annual average that occurred between June 2006 and June 2007.”* The Discharger states that setting an annual performance based limit equal to the highest annual average observed over a 2-year period is inappropriate and would result in a high probability of interim limit exceedance. The Discharger states that a more appropriate way to set this interim limit would be to calculate annual running averages for the 2-year period, then take the mean of the running annual averages + 3.3 standard deviations.

**RESPONSE:** The proposed Order contains an interim annual average effluent limitation for Electrical Conductivity (EC) of 850 umhos/cm. The originally proposed interim limitation of 825 umhos/cm was established using the highest observed 12-month average of 821 umhos/cm using the most recent five years

of data. Data from 2001 to 2007 indicates that the EC level in the discharge has been slowly increasing. The Discharger requests that the interim limit for EC be increased to 900 umhos/cm based on the possibility of continued increase in salinity. Regional Water Board staff believes that 850 umhos/cm serves as a reasonable “cap” for the salinity level in the Discharger, yet requires the Discharger to put immediate attention to the reduction of salt-containing additives added to the wastewater for treatment purposes.

**Discharger Comment No. 27. Attachment F, Temperature Limitations (Page F-41).**

The Discharger suggests deleting the table in this section. The table and the 2nd through 5th bullets state the same thing. Having them both presented is confusing.

**RESPONSE:** Regional Water Board staff concurs that the text in this section of the Fact Sheet is repetitive and has consolidated the information for clarification purposes.

**Discharger Comment No. 28. Attachment F, THMs (Page F-42).** The Discharger quotes from Attachment F on Page F-42: *“This cancer potency factor is equivalent to a chloroform concentration in drinking water of 1.1 µg/L (ppb) at the 1-in-a-million cancer risk level with an average daily consumption of two liters of drinking water over a 70-year lifetime. This risk level is consistent with that used by the DPH to set de minimis risks from involuntary exposure to carcinogens in drinking water in developing MCLs and Action Levels, and by OEHHA to set negligible cancer risks in developing Public Health Goals for drinking water. The one-in-a-million cancer risk level is also mandated by USEPA in applying human health protective criteria contained in the NTR and the CTR to priority toxic pollutants in California surface waters.”*

The Discharger asserts that the latter statements are incorrect and unnecessary and, therefore, should be deleted. The 1-in-a-million cancer risk level is not used by DPH in setting MCLs. If it were, then the total THM MCL would be 6.7 ug/L – equal to the sum of the individual constituent criteria that are based on a 1-in-a-million cancer risk level. The fact that DPH issued an MCL of 100 ug/L is largely due to working with a risk level greater than 10<sup>-6</sup>.

**RESPONSE:** Regional Water Board staff concurs that that the Department of Public Health did not use the 1-in-a-million cancer risk level in setting MCLs, however, the Department considered this risk level. To correct the factual error, Regional Water Board staff has made the following edit to the text in the fact sheet:

*“This cancer potency factor is equivalent to a chloroform concentration in drinking water of 1.1 µg/L (ppb) at the 1-in-a-million cancer risk level with an average daily consumption of two liters of drinking water over a 70-year lifetime. This risk level*

*is consistent with that ~~used~~considered by the DPH to set de minimis risks from involuntary exposure to carcinogens in drinking water in developing MCLs and Action Levels, and by OEHHA to set negligible cancer risks in developing Public Health Goals for drinking water. The one-in-a-million cancer risk level is also mandated by USEPA in applying human health protective criteria contained in the NTR and the CTR to priority toxic pollutants in California surface waters.”*

**Discharger Comment No. 29. Attachment F, Zinc (Page F-44).** There appears to be a typographical error. The interim limitation cited in this section should be 87.3 ug/L, not 76.8 ug/L (see p. F-59).

**RESPONSE:** In response to the Discharger’s comment, Regional Water Board staff revisited the interim zinc limit calculation and discovered that the originally proposed interim zinc limit of 76.8 ug/L was calculated using dissolved zinc data rather than total recoverable zinc data. Regional Water Board staff reanalyzed the total recoverable zinc dataset and identified a maximum observed total recoverable zinc concentration of 111 ug/L measured in December 2002. Recalculating this performance-based effluent limitation using the maximum observed zinc concentration of 111 ug/L resulted in an interim zinc effluent limitation of 125 ug/L. Therefore, the interim zinc limitation in the tentative NPDES permit has been modified accordingly.

**Discharger Comment No. 30. Attachment F, WQBEL Calculations (Section IV.C.4.b, Pages F-44 and Page F-45).** The Discharger states that the presentation of the equations for the effluent concentration allowance (ECA) is incorrect.  $ECA_{acute}$  and  $ECA_{chronic}$  are shown as being directly equal to the CMC and CCC, respectively, whereas the  $ECA_{HH}$  equation is shown to have a dilution credit allowance. Furthermore, the sentence above the  $ECA_{HH}$  equation implies that dilution credit is only applicable to “human health, agriculture, or other long-term criterion/objective.” Dilution credit may be applied to aquatic life criteria-based ECAs, as provided for in the general equation for calculating ECAs on p. 8 of the SIP:  $ECA = C + D(C-B)$ . It only happens that the  $ECA_{acute}$  and  $ECA_{chronic}$  are equal to the CMC and CCC, respectively, because no dilution credit is being applied. However, this should not be the default presentation of the fundamental equations for the  $ECA_{acute}$  and  $ECA_{chronic}$ . If the intent is to leave the equations as presented in the Order, then a statement must be added to this section explaining the reason for the presentation of the equations in this form (i.e., no dilution credit is being applied) and the  $ECA_{HH}$  must also be shown as directly equal to the HH for this same reason (i.e., no dilution credit is being applied).

The Discharger requests that the explanation of the derivation of AMELs based on human health criteria be modified as follows to reflect the fact that AMELs are derived from ECAs, not vice versa: “Human health ECAs AMELs based on human health criteria are set equal to the AMEL human health ECAs and a statistical multiplier is used

to calculate the MDEL.” There appears to be a typographical error in the last sentence of this section; the reference should be to Tables F-6 through F-14. The Discharger requests that the text and equations for the  $ECA_{acute}$  and  $ECA_{chronic}$  be modified and made suggested edits.

**RESPONSE:** The effluent limitations proposed in the tentative NPDES permit do not take dilution in account because the receiving stream is, at time, ephemeral. Therefore, Regional Water Board staff concurs with the Discharger’s comments regarding (1) dilution is not taken in account in the effluent limitation calculations, and (2) the equations in the Fact Sheet do not demonstrate the applicable calculations for water quality based effluent limitations. The following changes have been made to the tentative NPDES permit.

**“b. Effluent Limitation Calculations.** In calculating ~~maximum~~ effluent limitations, the effluent concentration allowances (ECAs) were ~~set equal to the criteria/standards/objectives.~~ calculated as follows:

$$ECA_{acute} = CMC + D(CMC-B) \quad \text{when } CMC > B$$

$$ECA_{chronic} = CCC + D(CCC-B) \quad \text{when } CCC > B$$

$$ECA_{acute} = CMC \quad \text{when } CMC \leq B \quad \text{and when } D = 0$$

$$ECA_{chronic} = CCC \quad \text{when } CCC \leq B$$

~~$ECA_{acute} = CMC$~~   
where:

- $ECA_{acute}$  = effluent concentration allowance for acute (one-hour average) toxicity criterion
- $ECA_{chronic}$  = effluent concentration allowance for chronic (four-day average) toxicity criterion
- $CMC$  = criteria maximum concentration (one-hour average)
- $CCC$  = criteria continuous concentration (four-day average, unless otherwise noted)
- $D$  = dilution credit
- $B$  = maximum receiving water concentration

For the human health, agriculture, or other long-term ~~criteria/objectives~~, a dilution credit can be applied. ~~The~~ ECA is calculated as follows:

$$ECA_{HH} = HH + D(HH - B)$$

where:

~~$ECA_{acute}$  = effluent concentration allowance for acute (one hour average) toxicity criterion~~

~~$ECA_{chronic}$  = effluent concentration allowance for chronic (four day average) toxicity criterion~~

$ECA_{HH}$  = effluent concentration allowance for human health, agriculture, or other long-term criterion/objective

~~$CMC$  = criteria maximum concentration (one hour average)~~

~~$CCC$  = criteria continuous concentration (four day average, unless otherwise noted)~~

$HH$  = human health, agriculture, or other long-term criterion/objective

$D$  = dilution credit

$B$  = maximum receiving water concentration

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL).

~~Human health ECAs~~ AMELs based on human health criteria are set equal to the ~~AMEL~~ human health ECAs, and a statistical multiplier is used to calculate the MDEL.

$$\begin{aligned}
 AMEL &= mult_{AMEL} \left[ \min \left( \overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic} \right) \right] \\
 MDEL &= mult_{MDEL} \left[ \min \left( M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}} \right) \right] \\
 MDEL_{HH} &= \left( \frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH}
 \end{aligned}$$

where:  $mult_{AMEL}$  = statistical multiplier converting minimum LTA to AMEL  
 $mult_{MDEL}$  = statistical multiplier converting minimum LTA to MDEL  
 $M_A$  = statistical multiplier converting CMC to LTA  
 $M_C$  = statistical multiplier converting CCC to LTA

Water quality-based effluent limitations were calculated for aluminum, ammonia, copper, cyanide, dibromochloromethane, dichlorobromomethane, lead, ~~persistent chlorinated hydrocarbon~~

pesticides, sulfide, total nitrate plus nitrite, and zinc, as follows in Tables F-6 through F-15~~4~~, below.”

**Discharger Comment No. 31. Attachment F, Summary of Water Quality-Based Effluent Limitations, Persistent Chlorinated Hydrocarbon Pesticides, Table F-15 (Page F-51).** The Discharger contends that this presentation of the effluent limitation for persistent chlorinated hydrocarbon pesticides is inconsistent with footnote # 11 on p. 11 and the compliance determination explanation on p. 32. The Discharger requests that these be made consistent with the language on p. 32, and reiterates its request for the additional modifications to the compliance determination explanation on p. 32, as described in our above comment on this section, to ensure proper interpretation of analytical results for compliance determination purposes.

**RESPONSE:** Regional Water Board staff modified the tentative NPDES permit and Fact sheet for consistency regarding the compliance determination language for persistent chlorinated hydrocarbon pesticides. In particular, the tentative NPDES permit requires the Discharger to use USEPA standard analytical techniques with the lowest possible detectable level for persistent chlorinated hydrocarbon pesticides with a minimum acceptable reporting level as indicated in appendix 4 of the SIP. The intent of this proposed requirement is to verify, through monitoring, whether the pesticides exist in the effluent, not whether the pesticide exists and is quantifiable. Regional Water Board staff does not concur with the Discharger’s prior suggestion to use the Reporting Level in place of the lowest detection level for compliance determination purposes. Therefore, the NPDES permit has been revised to clarify the required use of the lowest detection level to determine compliance with effluent limitations for the identified set of pesticides.

**Discharger Comment No. 32. Compliance Schedules for Turbidity and Total Coliform Organism Instantaneous Maximum Effluent Limitations.**

- **Cease and Desist Order (CDO), Table Final Effluent Limitations, Finding 5 and 6, Page 2.** The Discharger requests that Findings No. 5 and 5 and table of effluent limitations in Finding No. 5 be revised to include the final instantaneous maximum effluent limitations for turbidity and total coliform organisms specified in Table 6 in the tentative NPDES permit. Additionally, the compliance schedules proposed on Page 4 of the CDO should be revised to add Final Effluent Limitations IV.A.1.a. for turbidity and total coliform organisms.

**RESPONSE:** The proposed compliance schedules in the CDO for turbidity and total coliform organism final effluent limitations did not include the

instantaneous maximum effluent limitations because available monitoring data demonstrated compliance with both these instantaneous effluent limitations. With its public comments, the Discharger submitted additional data including sample results that demonstrated non-compliance with the proposed instantaneous limitations. With several monitoring events demonstrating potential non-compliance with the proposed Total Coliform Organism instantaneous maximum effluent limitation, Regional Water Board staff concurs that the Discharger may not immediately comply, and has modified the NPDES permit to include a corresponding compliance schedule. However, the newly available monitoring data only includes a one-time monitoring event in which the turbidity reading was above the proposed turbidity instantaneous maximum limitation, with other measured turbidity results well below the proposed instantaneous limitation. Therefore, Regional Water Board staff believes the Discharger is able to immediately comply with the proposed turbidity instantaneous maximum turbidity limitation, and made no modifications to the proposed compliance schedules for turbidity.

Note that the instantaneous maximum limitation for total Coliform organisms is a more stringent limitation compared to the existing NPDES permit; therefore, the corresponding compliance schedule is included in the permit. The Cease and Desist Order remains unchanged relative to the Discharger's comments regarding turbidity and total Coliform organism limitations.

**Discharger Comment No. 33. Compliance Schedule for Receiving Water**

**Temperature Limitation, Cease and Desist Order, Page 4.** The City requests that the schedule for full compliance with the receiving water temperature limit be changed from June 1, 2009 to October 1, 2009. The extended schedule is required to allow the City to startup and test the cooling towers during the summer of 2009.

**RESPONSE:** The shortest most practicable compliance schedules for constituents/parameters that are dependent on the current treatment plant upgrade project, including receiving water temperature, are proposed to allow the Discharger to complete construction and have a 90-day start up period. Since the projected completion of construction date for the treatment process upgrades, including an effluent cooling process is March 2009, the proposed compliance schedule is 1 June 2009. Regional Water Board staff does, however, concur with the Discharger that testing of the cooling process units during summer months is necessary to make important operational adjustments for compliance purposes. Therefore, the proposed time schedule in the CDO for compliance with receiving water temperature has been extended from 1 June 2009 to 1 September 2009.

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**Discharger Comment 34. Typographical Errors.** The Discharger has noted the following typographical errors and suggested changes to the following sections of the tentative NPDES permit:

- **Salinity (Page 10, Section II.U).** There appears to be a typographical error here, with the following change warranted: “*U. ~~Salinity~~—Salinity (Electrical Conductivity or EC).*”
- **Footnotes Table 6 (Page 11, Section IV.A.1.a).** There appear to be typographical errors:
  - Superscript 4 for BOD 5-day and TSS refers to Footnote 4, which states: “*See following page for additional Effluent Limitations*”. This footnote does not apply to BOD and TSS and the superscripts should be deleted.
  - Footnote 5 should be revised to read “... *Tables 7.a through 7.f.*”
- **Turbidity (Page 17, Section V.A.17).** There appears to be a typographical error in limitation 17.a and the following change is warranted:

*“a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs. (When wastewater is treated to a tertiary level, including coagulation, a one-month averaging period may be used when determining compliance with Receiving Water Limitation ~~48.a-17.a~~ 17.a for turbidity.)”*
- **Supplemental Evaluation of Temperature (Pages 26-27, Section VI.C.2.c of the Permit).** The Discharger states that Task 4 date should be changed to 1 March 2011 (rather than 2010).
- **Compliance Schedules (Page 30, Section VI.C.7 of the Permit).** There appears to be a typographical error in the numbering of items in this section. The first item “Compliance Schedules for Final Effluent Limitations for Aluminum...” should be numbered “7.a.” instead of “7.i.” This will partially address incorrect references to this section in Table E-11.
- **Compliance Schedules (Page 31, Section VI.C.7.a of the Permit).** The City requests that the second sentence be revised as follows (see underline) to clarify the report date:

*“In a Supplemental Infeasibility Report dated 31 August 2007, the Discharger submitted a compliance schedule justification for Aluminum and Atrazine.”*
- **Compliance Determination for Total Trihalomethanes Limitations (Page 32, Section VII.B).** There appears to be a typographical error in the THMs listed.

The City requests the following change: “Total Trihalomethanes include the sum of concentrations of Bromoform, Chloroform, Dibromochloromethane, and Dichlorobromomethane.”

- **Average Dry Weather Flow Effluent Limitations (Page 32, Section VII.B).** There appears to be a typographical error. This section should reference Section IV.A.1.g, not IV.A.1.i.
- **Attachment C, New Facility Flow Schematic (Page C- 2, Figure C-2).** There is the following typographical error: “filtered effluent storage” is incorrectly labeled “secondary storage”.
- **Attachment F (Page F-20 and throughout Fact Sheet).** There appear to be typographical errors. Statements in the Fact Sheet provide an incorrect reference to the section containing the interim effluent limitations derivation, which is Section IV.E.1, not Section IV.E.3 (no such section exists).
- **Attachment F, Dibromochloromethane (Page F-26).** There appears to be a typographical error. The interim limitation cited in this section should be 2.66 ug/L, not 2.74 ug/L (see p. F-59).
- **Attachment F, Dichlorobromomethane (Page F-27).** There appears to be a typographical error. The interim limitation cited in this section should be 15.7 ug/L, not 2.74 ug/L (see p. F-59).
- **Attachment F, EC (Table F-4, Page F-36).** There appears to be typographical error. The average and maximum EC values for the effluent should be 722 umhos/cm and 1186 umhos/cm, respectively, as stated on p. F-37.
- **Attachment F, Salinity Effluent Limitations (Page F-39).** There appears to be atypographical error. In the first full paragraph, the interim limitation cited should be 825 umhos/cm, not 824 umhos/cm.
- **Attachment F, Summary of Water Quality-Based Effluent Limitations, Iron and Manganese, Table F-15 (Page F-51).** The Discharger requests that the MDELs for iron and manganese be removed. The calculation of MDELs are not appropriate for iron and manganese given that the applicable criteria are secondary MCLs. Such a change is consistent with the effluent limitations for iron and manganese reported in Table 6 “Final Effluent Limitations.”
- **Attachment F, Section IV.D.1, Mass-based Effluent Limitations (Page F-54).** There appears to be a typographical error. The last sentence of this section should reference Section IV.A.1.g, not IV.A.1.i.

- **Attachment F, Section IV.D.2, Averaging Periods for Effluent Limitations (Page F-54).** The Discharger requests the following modifications to correctly describe the types of effluent limitations included in the Order, and to reflect the Discharger's assertion that a maximum daily effluent limitation for nitrate + nitrite is not needed, as described in our previous comment above:

*"This Order uses maximum daily effluent limitations in lieu of average weekly effluent limitations for aluminum, ammonia, ~~atrazine, chlorine residual<sup>5</sup>, copper, dichlorobromomethane, dibromochloromethane, cyanide, lead, MTBE, total nitrates plus nitrites, total trihalomethanes,~~ and zinc, as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for BOD, TSS, pH, chlorine residual<sup>5</sup>, coliform, and turbidity, weekly average effluent limitations have been replaced or supplemented with effluent limitations using shorter averaging periods."*

- **Attachment F, Section IV.E.1 (Page F-57, Fourth bullet).** There appears to be a typographical error. The dates should be changed from 18 March 2010 to 18 May 2010, which is the SIP deadline and the compliance date specified elsewhere in the Order.
- **Attachment F, Table F-16, Interim Effluent Limitation Calculation Summary (Page F-59).** There appear to be several typographical errors.
  - The MEC for Endrin Aldehyde is 0.51 ug/L, which occurred in December 2005 (rather than 0.051 ug/L as noted).
  - The MEC for Zinc is 111 ug/L, which occurred in November 2002 (rather than 76 ug/L as noted).
  - The interim limitation for THMs should be presented as 285 ug/L, not 284.6 ug/L, to maintain consistency with the presentation of this interim limitation throughout the Order.
- **Attachment F, Heptachlor WQBEL Calculations (Page F-60).** There appears to be a typographical error. This table should be labeled "Table F-19" to maintain sequential numbering.

**RESPONSE:** Regional Water Board staff concurs and has made the suggested edits.

**Discharger Comment 36. Editorial Comments.** The Discharger has requested editorial changes to the following sections of the proposed permit:

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- **Background (Page 3, Section II.A).** The Discharger requests that the second sentence be modified as follows: “*The Discharger submitted a Report of Waste Discharge, dated 27 September 2005, and supplemental information on 5 May 2006, and applied for a NPDES permit renewal to discharge up to 2.3 million gallons per day (mgd) average dry weather flow (ADWF) of wastewater from the Hangtown Creek Water Reclamation Facility, hereinafter Facility.*”
  - **Effluent Limitations for Aluminum (Page 11, Section IV.A.1.a. Table 6 and Page 15, Section IV.A.2.f Table 7f).** The Discharger states that it would appear that the interim limit of 112 ug/L [in Table 7f] should be an average monthly effluent limit (AMEL), not an MDEL. The interim MDEL (112 ug/L) is lower than the final MDEL [(125 ug/L) shown in Table 6].
  - **Effluent Limitations for Nitrate + Nitrite (Page 11, Section IV.A.1.a. Table 6).** The Discharger requests that the effluent limitation for Nitrate + Nitrite be only an AMEL of 10 mg/L (as N). The basis for the 10 mg/L effluent limitation is the California Department of Health Services (DPH) primary MCL for Nitrate + Nitrite, (which also is the basis for the MTBE, Atrazine, and THM effluent limitations). In NPDES Permits, the RWQCB typically regulates Nitrate + Nitrite based on a monthly average.
  - **Interim MDEL for Zinc (Page 13, Table 7.b).** The Discharger requests that the interim limit for zinc be raised to exceed the maximum observed effluent concentration (MEC). The proposed interim MDEL limit for Zinc of 87.3 ug/L is less than the MEC of 111 ug/L, which was detected in a November 2002 effluent sample.
  - **Interim MDEL for Endrin Aldehyde (Page 13, Table 7.c).** The Discharger requests that the interim limit for Endrin Aldehyde be raised to exceed the maximum observed effluent concentration (MEC). The proposed interim MDEL limit for Endrin Aldehyde of 0.159 ug/L is less than the MEC of 0.51 ug/L, which was detected in a December 2005 effluent sample.
  - **Reclamation Specifications (Page 15, Section IV.C of Permit).** The Discharger requests that the text in this section be replaced with “Not Applicable” to be consistent with the Fact Sheet. The Discharger does not currently reclaim any of the treated effluent.
  - **Water Effect Ratios (WER) and Metals Translators (Page 23 of Permit).** The Discharger states that the second sentence be modified as follows to reflect the fact that the mercury limitation is a performance-based mass limitation and, thus, was not calculated using any default WER or metal translator: “*In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for Aluminum, Copper, Lead, Mercury, and Zinc.*”

- **Attachment E, Methods (Page E-4, Section V.A.4).** The Discharger requests the following modification to the text to account for future updates by EPA to the specified method:

*“4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition, and its subsequent amendments or revisions.”*

- **Attachment E, Methods (Page E-5, V.B.5).** The Discharger requests the following modification to the text to account for future updates by EPA to the specified method. This will also make the reference consistent with item 8.a. on p. E-6.

*“5. Methods – The presence of chronic toxicity shall be estimated as specified in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002, and its subsequent amendments or revisions.”*

- **Attachment E, Receiving Water Monitoring Requirements, Tables E-8a and E-8b, (Pages E-8 and E-9).** The Discharger requests that the monitoring for fecal coliform organisms in the receiving water be removed. Based on effluent total coliform bacteria limitations, it is impossible for the discharge to cause an exceedance of the Basin Plan fecal coliform objective in the receiving water and, therefore, the receiving water monitoring for fecal coliform organisms as required in the Tentative WDRs is not needed.
- **Attachment F, Facility Information, Table F-1 (Page F-3).** The Discharger requests that the table be revised to show that Reclamation Requirements are “Not Applicable.”
- **Attachment F, Historic Effluent Limitations and Monitoring Data, Table F-2 (Page F-6).** The table is not complete. The Discharger requests that the historic monitoring data be added to the table.
- **Attachment F, Section IV.C.3.b (Page F-18).** The City requests that “Persistent chlorinated hydrocarbon pesticides” be deleted from this list, as this is a classification of pesticides, not a specific constituent. The list appropriately identifies the pesticides within this class (e.g., Dalapon, beta Endosulfan) that have been found to have reasonable potential to cause exceedance of the Basin Plan’s pesticide objective.
- **Attachment F, Iron, Section IV.C.3.b (Page F-27).** This section states incorrectly that the discharge has the reasonable potential to cause or contribute

to an in-stream excursion above the MCL for iron. To the contrary, the maximum effluent iron concentration is lower concentration than the receiving water iron concentration, and the maximum effluent iron concentration is lower than the applicable MCL. Thus, it is not possible for the discharge to contribute to an excursion of the MCL. Rather, the SIP procedure requires an effluent limitation when a parameter's background concentration is greater than the water quality objective and that parameter has been detected in the effluent. To accurately reflect the nature of the discharge and the basis for the effluent limitation for iron, the City requests the following modifications to this section: "The MEC for iron was 81.3 ug/L, based on 13 samples collected between February 2002 and January 2005, while the maximum observed upstream receiving water iron concentration was 1570 ug/L, based on 12 samples collected between February 2002 and January 2003. The receiving water concentration exceeds the water quality criteria.

*"The receiving water concentration exceeds the water quality criteria. Therefore, the discharge has reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan Objective and the MCL for iron. Because the maximum receiving water concentration of iron exceeds the MCL and iron has been detected in the effluent, an effluent limitation for iron is required."*

- **Attachment F, Lead, Section IV.C.3.b (Page F-28).** Same comment as above for iron applies here.
- **Attachment F, Manganese, Section IV.C.3.b (Page F-29).** Same comment as above for iron applies here.

**RESPONSE:** Regional Water Board staff concurs with the editorial changes in the Discharger's above comments and has modified the tentative NPDES permit accordingly.

**Discharger Comment 37. Request To Reassess Effluent Limitations.** The Discharger has requested reassessment of the following effluent limitations:

- **Dibromochloromethane Final Effluent Limitation (Page 11, Section IV.A.1.a. Table 6).** The maximum daily effluent limit (MDEL) for Dibromochloromethane (0.98 ug/L) has been made more stringent (decreased from 0.99 ug/L). The City requests that the calculation be reassessed.

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- **Aluminum Final Effluent Limitation (Page 11, Section IV.A.1.a. Table 6 and Page 15, Section IV.A.2.f Table 7f).** The final AMEL (76.7 ug/L) has been made more stringent (decreased from 79.8 ug/L). The City requests that the calculations be reassessed.
  - **Attachment F, Copper (Page F-24).** There appears to be a typographical error. The interim limitation cited in this section should be 13.4 ug/L, not 13.3 ug/L (see p. F-59).

**RESPONSE:** Regional Water Board staff recalculated the final effluent limitations for Dibromochloromethane, Aluminum, and Copper. As originally proposed in the tentative NPDES permit, the correct MDEL for Dibromochloromethane is 0.98 ug/L, the correct AMEL for aluminum is 76.7 ug/L, and the correct interim maximum daily effluent limitation for Copper is 13.3 ug/L. Therefore, the proposed limitations in the tentative NPDES permit remain unchanged.