May 12, 2006

Mr. David LaCaro
Staff Engineer
Regional Water Quality Control Board, Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

SUBJECT: Comments on Revised Waste Discharge Requirements Order No. R3-2006-0037, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0048127 – City of Lompoc Regional Wastewater Reclamation Plant and Indirect Discharges of Vandenberg AFB and Vandenberg Village Community Services District, Santa Barbara County, WDID 3 420105001

Dear Mr. LaCaro:

The City of Lompoc (City) has reviewed the Tentative Order (TO) for the City of Lompoc Regional Wastewater Reclamation Plant (LRWRP) and the accompanying attachments that were released by the Central Coast Regional Water Quality Control Board (Regional Water Board) on April 10, 2006. Based on our review, we are providing the following comments on issues of concern. Our comments correspond to the relevant sections of the TO, as noted. We have also provided a number of editorial comments in an attachment (Attachment 1). We look forward to reviewing these comments with you and other appropriate Regional Water Board staff prior to the July 7, 2006 hearing.

The City notes that the TO is much more expansive than the current permit, would establish a number of new requirements, and involves complexities in regard to its relationship to the current permit. The time for review is extremely short, particularly given other demands on the time of City staff and reviewers. Thus, the City respectfully requests that the Regional Water Board consider further comments that the City may submit, and we will endeavor to furnish any such comments and information as soon as possible. Also, we request the opportunity to provide additional information or comment as appropriate in response to further communication with Regional Water Board staff.

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Tentative Order Comments

General

If adopted in its current form, the TO would result in significant compliance problems and attendant risks of liability for the City. Moreover, effluent limitations and other provisions for which immediate compliance is infeasible are not realistically related to environmental benefit or protection of actual beneficial uses. To a significant degree, the problems are related to inadequacies of the City's existing permit. The City addressed this matter in prior correspondence including, but not limited to, the November 18, 2005 letter accompanying the report of waste discharge (Attachment 2), and the letter to you dated February 2, 2006 (Attachment 3). The City respectfully submits that the Regional Water Board must accept responsibility for the inappropriate and confusing provisions of the prior permit, and, to the maximum extent possible, avoid penalization of the City.

Section I. Facility Information

Throughout the TO, beginning in "Section 1 – Facility Information," the Facility Design Flow is characterized as "5.0 MGD (monthly average)". This is an incorrect characterization of the LRWRP design flow. The LRWRP's design is 5.0 MGD (average dry weather flow – ADWF), which was reported on Form 2A (page 3) of the Report of Waste Discharge submitted to the Regional Board on November 18, 2005. This is consistent with City's existing permit for the LRWRP, which clearly states that "[t]he treatment plant has a design capacity (Average Dry Weather Flow, hereafter ADWF) of 5.0 million gallons per day (mgd) and currently operates at 4.0 mgd." (WDR Order No. 01-87, NPDES No. CA0048127, Finding 6, page 2.) According to the Fact Sheet (page F-13), the flow limitation is retained from Order No. 01-87. However, the change from an ADWF limitation of 5.0 MGD to a monthly average flow limitation of 5.0 MGD is not the same. Changing the LRWRP design capacity from 5 mgd (ADWF) to 5 mgd as an annual average greatly decreases the facility design and permitted capacity. Thus, the City requests that all "monthly average" references be deleted from the TO and be replaced with "average dry weather flow" or "ADWF". Average dry weather flow should be determined over three consecutive dry weather months each year. Please refer to the List of Recommended Editorial Changes at the end of this document for additional occurrences of the improper use of the term "monthly average" with reference to Facility Design Flow.

Findings

Findings J and L

The City appreciates the statements in Finding L of the TO that recognize the submittal of new information as one justification for less stringent effluent

limitations under the federal anti-backsliding requirements. However, this finding and finding J, which precedes finding L, does not accurately capture the historical application of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) to the LRWRP discharge. Language contained in the Fact Sheet better clarifies the improper application of the SIP to the City's previous permit, Order No. 01-87. Because of the unique circumstances surrounding the City's previous permit, the City requests that the Findings be amended to include some of the historical information that is currently contained in the Fact Sheet.

Most importantly, information must be added that recognizes that Order No. 01-87 did not reflect the methodology of the SIP and that therefore Order No. 01-87 improperly established effluent limitations for 138 toxic pollutants. (page F-17.) Based on this fact alone, the upcoming permit must be regarded as the first permit developed based on the SIP. The Fact Sheet indicates that only 10 of the 138 constituents were properly identified as having reasonable potential under Order No. 01-87. Thus, at most, only the final effluent limits for the CTR constituents in this group would be considered final effluent limits pursuant to the SIP. Other CTR constituents that received an effluent limit due to the improper application of the SIP should be disregarded and therefore be eligible for interim limits in this Order.

For example, Order No. 01-87 included effluent limits for chlorodibromomethane and dichlorobromomethane, which were not part of the group of 10 considered to have reasonable potential and therefore did not receive an interim limit. Both of these constituents are now considered to have reasonable potential. The City intends to add Ultraviolet Disinfection, which will address these two constituents but is unable to do so prior to the anticipated effective date of the TO. Apparently, because these two constituents were improperly included in Order No. 01-87, the City is being denied a compliance schedule for these constituents. As a result, the City will likely be in violation of the proposed effluent limits for chlorodibromomethane and dichlorobromomethane until the addition of UV can be completed, which is estimated to be in early 2009. The City submitted the necessary justification for a compliance schedule to the Regional Water Board on February 28, 2006 as requested (Attachment 4).

In summary, the Findings should be amended to clearly articulate the improper application of the SIP in Order No. 01-87 and identify the CTR constituents for which final effluent limits were improperly adopted in Order No. 01-87. Because these constituents improperly received final effluent limits in Order No. 01-87, they should be eligible for compliance schedules and interim limits in this Order pursuant to a proper application of the SIP.

Finding T

Finding T states, in essence, that none of the terms of the TO are more stringent than required to implement the Clean Water Act (CWA). The City disagrees with this finding as written. As an obvious example, none of the TO terms pertaining to groundwater are required by the CWA. As a further example, the various averaging periods proposed by the TO (including changes from the prior permit) are not required by the CWA. More generally, throughout these comments, the City explains that specific terms of the TO are not mandatory.

Water Code section 13263 requires that the Regional Water Board consider the provisions of Water Code section 13241 in adopting WDRs. The TO does not include findings on the section 13241 factors with respect to any of its proposed requirements, and is therefore legally deficient. Rather than the generic finding proposal, the TO must identify specific requirements which are required by the CWA. Compliance with Water Code section 13263 and 13241 is required for the remaining terms.

Section III. Discharge Prohibitions

Discharge Prohibition III.E. is vague and improper. The purpose of the Basin Plan is to establish the appropriate level of the protection of beneficial uses. Prohibition III.E. appears to make the basin planning process meaningless. The provision also does not comply with Water Code section 13263 or 13241.

Section IV. Effluent Limitations and Discharge Specifications

Flow – As discussed previously, the LRWRP's design flow is 5 mgd (ADWF), not 5 mgd as an average annual flow. Therefore, footnote (a) must be amended to show that this as the ADWF limit, which is determined over three consecutive dry weather months each year.

TDS/Sodium/Chloride – The City's current permit (Order No. 01-87, NPDES No. CA0048127) allows TDS/Sodium/Chloride effluent limit compliance to be based on a 12-month running mean with quarterly sampling. The City supports this as the proper averaging period for these constituents. Thus, the City requests that Table IV-1 – Final Effluent Limitations of the Tentative Order be revised to designate that the TDS, Sodium and Chloride effluent limits are based on a 12-month running mean instead of a monthly average effluent limitation. In addition, the TO should include a compliance schedule for TDS during the interim while the City prepares a Salt Management Plan. The City is concerned that it may not be able to consistently comply with the proposed effluent limit for TDS. At the very least, the TO should be accompanied by a time schedule order for compliance with the proposed TDS limit.

The Water Quality Control Plan for the Central Coast Region (Basin Plan) clearly anticipates the potential need to use time schedule orders for meeting some NPDES permit requirements. The Implementation Provision relevant to NPDES permits states, "Regional Water Boards are authorized to take a variety of enforcement actions to obtain compliance with an NPDES permit. Enforcement actions the Regional Board may take are described below." (Basin Plan, IV-3, September 8, 1994.) Under the enforcement action provisions, the Basin Plan identifies a time schedule as an appropriate action. A "Time Schedule" is described as "[a] time schedule for specific actions a discharger shall take to correct or prevent violations of requirements. A time schedule is issued by the Regional Board for situations in which the Regional Board is reasonably confident that the problem will be corrected." (Basin Plan, IV-4-5, September 8, 1994.)

The TO already includes a provision for a "Salt Management Study." The City intends to develop a Salt Management Study that reduces salt in the LRWRP effluent to the extent possible. Until that time, the City requests a time schedule order with a proposed interim limit of 1313 for TDS, which is the maximum effluent concentration recorded by the City over the last five years for TDS.

Nitrate as N – The LRWRP's current treatment process cannot achieve Nitrate levels below the new 10 mg/L effluent limit contained in the TO. Because Nitrate is not a CTR constituent, the Regional Board is not constrained by the five year compliance schedule contained in the SIP. Furthermore, there does not currently exist a Nitrate effluent limit in the City's current permit and therefore this is a new permit limit. The Regional Board may adopt a compliance schedule in accordance with the Water Code and the Basin Plan. Thus, the City requests that the Regional Board adopt a five year compliance schedule for Nitrate in the TO to allow the City sufficient time to implement denitrification as part of the treatment plant's many scheduled upgrades. This schedule should allow the City sufficient time to complete all of its scheduled treatment plant upgrades, including the addition of denitrification and adjustment of the treatment system as necessary before final effluent limits go into effect.

At the very least, the Regional Water Board should adopt a time schedule order that allows the City sufficient time to complete its plant upgrade (which includes the addition of denitrification) and avoid unnecessary penalties.

In the meantime, the Regional Water Board should adopt an interim limit of 60 mg/L in the permit or in a time schedule order. The 60 mg/L is equal to the maximum effluent concentration for Nitrate as N over the last five years.

Total Residual Chlorine – Footnote e, which applies to the proposed final effluent limit for Total Residual Chlorine, appears to contain an error. As currently drafted, the footnote appears to reflect the City's effluent limit for total residual chlorine in Order No. 01-87 (Permit provision B-9), except that it changes the

instantaneous maximum value in sub-paragraphs (a) and (b) from 0.02 mg/L to 0.01 mg/L. It also adds provisions for grab samples and sets the instantaneous maximum value to 0.01 mg/L. The City does not believe that the 0.01 mg/L limitation is correct. The City is concerned that the total residual chlorine limits in the current permit may have been taken from an incorrect copy of the City's Order No. 01-87. After the Regional Board adopted the City's permit in 2001, a typographical error was discovered in the City's permit, which had the time-based chlorine limit set at 0.01 mg/L instead of the 0.02 mg/L. The Regional Board quickly corrected this error and issued a correction to the City on June 14, 2001 (Attachment 5).

In addition, the Fact Sheet provides no information as to the Regional Board's basis for the 0.01 mg/L. Thus, based on the history of the total residual chlorine limitation and the lack of any information indicating why the Regional Board would adopt a more stringent limitation in this permit, the City requests that the time-based limits for both continuous monitoring and grab samples be changed to reflect the 0.02 mg/L limit, which is in Order No. 01-87.

Acute Toxicity - Footnote f of Table IV-1 states that "[s]urvival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared, using a t-test, to the survival of organisms." The specific referral to the use of the t-test in this manner is not consistent with the U.S. EPA *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to the Freshwater and Marine Organisms*, Fifth Edition, U.S. EPA Office of Water, EPA-821-R-02-012 (2002). Figure 12 (Attachment 6) from this U.S. EPA *Methods* publication shows that the t-test is only used in some circumstances but not in all. There are other tests that are recommended for use to determine pass or fail depending on the laboratory sample results. Thus, the City recommends that footnote f be amended to delete the reference to "t-test" and instead refer to the methods specified in the publication referenced above.

Chronic Toxicity – The TO proposes a chronic toxicity effluent limit of 1.0 TUc. Instead of adopting a numeric limit of 1.0 TUc, the City recommends that the chronic toxicity limit be changed to a narrative limit with a numeric monitoring trigger, which is consistent with U.S. EPA's approved options and Option 3 of the State Water Resource Control Board's *Informational Document for Proposed Revisions to the Toxicity Control Provisions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (December 2005)* (Attachment 7). The SIP currently requires the inclusion of chronic toxicity effluent limits in NPDES permits for all discharges that will cause or have reasonable potential toxicity in receiving waters. However, the SIP does not state if the effluent limit must be a numeric limit or a narrative limit with a numeric monitoring trigger. (*Information Document*, December 2005, page 3, Attachment 7.)

Due to the lack of clarity currently existing in the SIP, the State Water Board staff have begun the process to revise the toxicity control provisions in the SIP. One of the primary purposes of this effort is to clarify the appropriate form of effluent toxicity limits in NPDES permits. One option under consideration is a separate requirement for POTWs because POTW effluent can be highly variable. More specifically, the State Water Board is considering the use of narrative toxicity limits exclusively for POTWs. The State Water Board is also considering the use of narrative toxicity limits for all NPDES permittees. Thus, out of three options, two involve the use of narrative limits for POTWs.

Because the State Water Board is currently considering these amendments to the SIP, the City requests that the Regional Water Board refrain from adopting a numeric effluent limit for chronic toxicity at this time. Instead, the Regional Water Board should state that if the LRWRP discharge exceeds 1 TUc, then the City will conduct accelerated testing as outlined in the Whole Effluent Toxicity Testing Requirements contained in section V. of the Monitoring and Reporting Program.

Molybdenum – The TO contains an effluent limit for Molybdenum based on the water quality objective in Table 3-4 of the Basin Plan. Table 3-4 is applicable only to water used for irrigation and livestock. The TO does not contain findings, and we are not aware of evidence that the receiving water is used for irrigation and livestock. Accordingly, there is no basis for the proposed effluent limit. The additional comments following assume in the alternative that Table 3-4 water quality objectives do apply.

As stated previously in the City's report of waste discharge submitted to the Regional Board on November 18, 2005 (Attachment 2), molybdenum is not a priority pollutant and is therefore not subject to the provisions of the CTR or the SIP. However, molybdenum continues to be an issue of concern because the level of molybdenum in the groundwater, which is the source of the City's water supply, is above the water quality objective for agricultural water use (Section III, Table 3-4 of the Basin Plan), and the final effluent limit contained in the TO. As expressed in our October 11, 2004, communication to Mr. Gerhardt Huber (Attachment 8), the existing treatment facilities do not affect the influent molybdenum concentration, and in fact the influent and effluent concentrations of molybdenum are equivalent. To this end, the City has identified the need for a site specific objective or other appropriate Basin Plan amendment for molybdenum.

The City is concerned that the Regional Water Board staff has concluded that the City may not develop a site specific objective in conjunction with the Regional Water Board for molybdenum because a specific site specific objective was not included in the City's Report to the Regional Water Board, which was submitted by January 1, 2006 (Attachment 9). The City disagrees with the Regional Water Board's current interpretation of the City's submittal. In that correspondence, the City clearly indicated that it would not have a problem with complying with the

CTR heavy metal objectives for which final effluent limits would become effective on May 18, 2006, with the exception of Mercury.[1] That Report also clearly indicated that molybdenum was not a CTR constituent, compliance was a major issue of concern, and that there is a need to develop a site specific objective, or other appropriate Basin Plan amendment.

Furthermore, the City disagrees with the Regional Water Board's interpretation of the applicable permit provisions contained in Order No. 01-87. First, Provision K of Order No. 01-87 states that "Section 5.2 of the Policy for Implementation of Toxics Standards for Inland Surface Waters specifies the procedure for establishing site-specific objectives when the best available technology can not meet the specified water quality criteria." As mentioned previously, molybdenum is not a CTR constituent and therefore the provisions of the SIP, including Section 5.2, do not apply.

Second, provision L.1.g states that "[a] final report and specific proposal (including timeline, not to exceed May 18, 2006) on the recommended method for achieving compliance with the CTR heavy metals objectives will be submitted by January 1, 2006. If at this time, the discharger determines that compliance cannot be achieved by any practicable means, the City will provide site-specific objectives for those constituents, as required by and specified in section 5.2 of the Inland Surface Waters Implementation Policy." The application of this permit provision to molybdenum is clearly in doubt since molybdenum is not a CTR heavy metal. In addition, the development of a site specific objective takes considerable time and resources and an agreement from the Regional Water Board to consider its development. Provisions L of Order No. 01-87 is confusing in some respects. Overall, however, it plainly contemplated a process for evaluating the feasibility of compliance with certain limitations, and the opportunity to seek relief if compliance is infeasible. It reflects an awareness of the five year compliance period under the SIP, but this is not applicable to molybdenum. In other words, the development of the site specific objective can occur after January 1, 2006, not before.

The City did indicate in its report in response to this provision that the City could not comply with the final effluent limit for molybdenum and that it intends to seek a site specific objective. However, because molybdenum is not subject to Section 5.2 of the SIP, the City needs direction from the Regional Water Board on how it would like the City to proceed with developing a site specific objective for molybdenum. We look forward to exploring this option with Regional Water Board in the very near future.

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[1] With regard to mercury, the City identified the need to conduct additional sampling at lower detection levels using ultra-clean sampling and analysis techniques to determine if the LRWRP effluent would comply with the mercury final effluent limit. Based on recent results obtained from Frontier GeoSciences, the City concludes that compliance with mercury final effluent limits using lower detection limits and ultra-clean techniques will not be a problem. (See Attachment 10 for recent results.)

In the meantime, the City seeks an extension of its current interim limit of 30 ug/L in order to allow the City sufficient time to work with the Regional Board for the development and adoption of a site specific objective and Basin Plan Amendment for molybdenum. In other words, the City seeks extension of a compliance schedule in the permit; based on the historic application of the Board's regulatory requirements, such a schedule is allowed. The City firmly believes that a site specific objective is appropriate in this situation because the crops grown that utilize the groundwater recharge from the Santa Ynez River does not include forage plants that are used by livestock, which is the issue of concern. Therefore, the level of molybdenum in the irrigation water would not be a local concern. Further, the relationship between irrigation water quality and concentration of molybdenum in forage plants has not been established. In addition, the City will undertake more extensive monitoring of influent, effluent, and local drinking water supplies for molybdenum to further verify that the source of molybdenum is from the drinking water supply and is not being contributed by industrial dischargers to the LRWRP.

In the alternative, if the Regional Water Board concludes that the current interim limit cannot be extended in the permit, the City requests that the time schedule order with interim limits be issued. Such an order should be developed in order to protect the City from mandatory penalties.

Trihalomethanes (Chlorodibromomethane and Dichlorobromomethane) – As stated in the Infeasibility Analyses document provided to the Regional Board (Attachment 4), and as discussed above, immediate compliance with final effluent limits for Chlorodibromomethane and Dibromochloromethane is not feasible. The City has not previously identified either Chlorodibromomethane or Dibromochloromethane as problem pollutants, and therefore has not initiated source control actions targeting these constituents or other trihalomethane compounds. Also, no influent data are available at this time because the trihalomethanes have not been previously identified as a problem. The lack of a source control program or influent data for trihalomethanes is not unusual because trihalomethanes are typically undetected in the influent as they are usually a by-product of the chlorination process. Thus, influent data for trihalomethanes rarely indicate that these constituents are coming into the wastewater plant as part of the influent waste stream. Furthermore, the creation of trihalomethanes by the chlorination process will be eliminated at the LRWRP when chlorination disinfection is replaced by ultraviolet (UV) light disinfection in early 2009.

At this time, however, the City cannot meet the final effluent limits contained in the TO until the new ultraviolet disinfection system is in place. Thus, the City requests interim limits for Chlorodibromomethane and Dibromochloromethane until the City completes the addition of an ultraviolet disinfection system to its treatment train. The City believes the granting of interim limits is permissible

under the SIP as this TO is the first permit given to the City which properly applies the SIP.

As discussed above, procedures provided in the SIP to determine which toxic pollutants show a reasonable potential to cause or contribute to excursions above applicable water quality standards were not employed when establishing effluents limits in Order No. 01-87; in fact, the TO is the first permit given to the City in which SIP prescribed reasonable potential analysis procedures were used by the Regional Water Board to develop effluent limits.

Therefore, the City requests that interim performance-based limits with which the City can comply for Chlorodibromomethane and Dibromochloromethane be in effect until the end of May 2009. This schedule should allow the City sufficient time to complete all of its scheduled treatment plant upgrades, including the addition of a UV disinfection system and adjustment of the treatment system as necessary before final effluent limits go into effect. During this interim period the City will conduct quarterly influent monitoring for Chlorodibromomethane and Dibromochloromethane to determine if influent sources contribute to the trihalomethanes measured in the effluent. Should significant levels of Chlorodibromomethane and Dibromochloromethane be observed in the influent (i.e., if more than half of the samples have detected levels above the respective AMELs), the City will initiate source identification efforts.

Total Coliform Bacteria – Final Effluent Limitations – Discharge Point 001: Item c.: The language used to describe the second and third conditions of the Total Coliform Bacteria effluent limitation (included in the second sentence of the paragraph) make the conditions mutually exclusive of each other. The second condition, "The number of total coliform bacteria shall not exceed an MPN of 200 per 100 mL in more than one sample in any calendar month,...", if satisfied, would necessarily prevent the third condition, "...and no more than 10% of total samples during any calendar month shall exceed 400 MPN per 100 mL.", from being a provision that could ever be satisfied. Hence, the third condition is nonsensical in the context of compliance with the second condition.

The City's current permit (Order No. 01-87, NPDES No. CA0048127) contains effluent total coliform bacteria limitation provisions stating that a 7-day total coliform median "shall not exceed a log mean of 200/100 mL, or shall more than 10% of the total samples during any 30-day period exceed 400/100 mL." To this end, the statement made on page F-19 of the Fact Sheet in the TO that states, "Water quality effluent limitations for chlorine, coliform bacteria, and pH are retained and remain unchanged from Order No. 01-87", is factually incorrect as it relates to coliform bacteria. The City requests that the language used to describe the Total Coliform Bacteria effluent limitation in the TO be revised to be consistent with the language contained in Order No. 01-87.

Section V. Receiving Water Limitations

General – The current introductory language to the Surface Water Limitations incorrectly identifies the SIP as a source of water quality objectives for which receiving water limitations are based. The SIP is an implementation policy for toxic standards for priority pollutants that are adopted in the California Toxics Rule and Basin Plans. The primary goal of the SIP is to establish a "standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters," (SIP, page 3). The SIP does not contain water quality objectives that apply to receiving waters. Thus, the reference to the SIP must be deleted from the introductory portion of this permit provision.

Furthermore, as currently drafted, the introductory language does not clearly recognize the fact that there are factors other than the LRWRP discharge that could cause an exceedance of applicable water quality standards. The City is concerned that it may be held responsible for the actions of others and that any violation of the receiving water limitations will automatically constitute a violation of the City's permit. To provide clarity and certainty with regard to this issue, the City recommends that the introductory language to the Receiving Water Limitations be amended to state the following:

> "A receiving water condition not in conformance with a specific receiving water limitation is not necessarily a violation of this Order. The Board may require an investigation to determine cause prior to asserting a violation has occurred. The discharge shall not cause the following in the receiving water:"

Finally, the introductory paragraph applies the receiving water limits to the Santa Ynez River as well as San Miguelito Creek. The City does not discharge directly into the Santa Ynez River. The Regional Board applies the Santa Ynez water quality objectives to San Miguelito Creek. Thus, it is not necessary to include receiving water limits for both waterbodies in the TO. The application of the receiving water limits to the Santa Ynez River should be deleted from this paragraph.

Dissolved Oxygen – The proposed receiving limit for dissolved oxygen appears to be the combination of two different dissolved oxygen water quality objectives from the Basin Plan. The first portion of the limit is associated with the Cold Freshwater Habitat beneficial use while the second sentence is a general objective that applies to all beneficial uses. In the application of the Basin Plan, the more specific water quality objective supercedes the more general objective. Therefore, in this case, the limit pertaining to reducing dissolved oxygen concentrations below 7 mg/L is the more specific objective and is associated with a specific beneficial use designation. As such, the second portion of this receiving water limit must be eliminated for it does not apply.

pH - The pH range of 7.0 – 8.3 standard units appears to be a hybrid of the Basin Plan's General Objectives (Basin Plan page III-3, II.A.2.a.) with a lower limit of 7.0 and the MUN Objectives with an upper limit of 8.3. The City disagrees with the practice of using portions of the general objective with a more specific objective. Under the rules of construction of statutes or regulations, a more specific requirement supersedes a more general requirement. Therefore, in this case, the more specific pH requirement for MUN designations supersedes the more general pH requirement. Thus, the appropriate receiving water limit for pH should be 6.5 – 8.3 standard units.

Temperature – The TO includes a receiving water limitation for temperature that states, "[n]atural temperature of receiving waters shall not be altered unless it can be demonstrated to the satisfaction of the Central Coast Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature be increased by more than 5° F above natural receiving water temperature." The application of this Basin Plan objective to San Miguelito Creek and subsequently the Santa Ynez River is problematic. The flow in San Miguelito Creek at any given time of the year is minimal as compared to the flow of the City's discharge from LRWRP. In addition, there is at times no flow in San Miguelito Creek at the City's discharge point and therefore no natural receiving water temperature at the point that effluent is discharged to San Miguelito Creek. (See State Board Order WQO-2002-0003). Thus, the volume of the City's discharge greatly influences the temperature of the minimal natural flows in San Miguelito Creek.

Because of the unique characteristics of San Miguelito Creek, the narrative temperature standard from the Basin Plan does not easily apply to this waterbody. In the alternative, the City recommends that the Regional Board adopt language that is similar to that which was adopted into the San Luis Obispo permit. San Luis Obispo's discharge into San Luis Obispo Creek is similar to that of the LRWRP discharge into San Miguelito Creek and therefore the language is applicable in this case as well. The City recommends the following language:

> "Temperature to increase more than 5 deg F above receiving water temperature. If, due to the Creek's low temperature as determined by early-morning monitoring, the discharge causes the Creek's temperature increase to exceed the limit, the Discharger must ensure the discharge shall not cause the receiving water to exceed 72.5 deg F (22.5 deg C). The Discharger shall monitor the Creek again four hours after discovering the exceedance and shall report both results to the Executive Officer in the monthly self-monitoring report."

Primary MCLs for Inorganic Chemicals - The TO includes a receiving water limitation for inorganic chemicals based on primary MCLs contained in Table 64431-A of Title 22, California Code of Regulations. However, this section

of Title 22 has not been incorporated by reference into the Basin Plan. Therefore, this receiving water limit must be removed from the TO.

Chemical Constituents – Receiving water limitation No. 21 is intended to protect the agricultural beneficial use of the receiving water, which is consistent with the intent of the Basin Plan. However, as currently drafted, much of this receiving water limitation is not consistent with the Basin Plan. This first portion of this limitation, including the reference to Table 3-3 of the Basin Plan, is consistent with the Basin Plan and therefore is an appropriate receiving water limitation. In addition, the reference to Table 3-4 is also an appropriate receiving water reference. However, the additional language is not necessary and needs to be deleted.

Also, receiving water limitation No. 22 repeats the same receiving water objective expressed in No. 21. Therefore, it is duplicative and should be removed from the TO.

Table V-2 – Surface Water Quality Objectives: Table V-2 as incorporated into the TO eliminates an important footnote that is part of Table 3-7 of the Basin Plan, which is the impetus for Table V-2 in the TO. Table 3-7 of the Basin Plan contains footnote (a) that states the objectives are "annual mean values." Therefore, Table V-2 must be amended to add a similar footnote (a). Otherwise, the objectives may be applied as an instantaneous maximum, which is not a true characterization of the objectives as they appear in the Basin Plan.

Groundwater Limitations

General – As discussed above in relationship to surface water limitations, the City is concerned that the introductory language currently proposed may expose the City to liability for the actions of others. Therefore, the City requests that the language be amended to be consistent with the suggested language for surface water limitations. The suggested language is as follows:

> "Groundwater Limitations are based on water quality objectives contained in the Basin Plan. However, a groundwater condition not in conformance with the limitation is not necessarily a violation of this Order. The Board may require an investigation to determine cause prior to asserting a violation has occurred. The discharge shall not cause the following in the groundwater:"

Statistically Significant Increase – The proposed Groundwater Limitation expressed in B.2 is does not reflect an adopted Basin Plan Objective. Therefore, it must be deleted from the T.O.

Primary MCLs for Inorganic Chemicals – The TO includes a groundwater limitation for inorganic chemicals based on primary MCLs contained in

Table 64431-A of Title 22, California Code of Regulations. However, this section of Title 22 has not been incorporated by reference into the Groundwater Objectives section of the Basin Plan. Therefore, this Groundwater Limitation must be removed from the TO.

Table V-3 – Groundwater Objectives: Table V-3 as incorporated into the TO fails to correctly characterize the objectives contained in Table 3-8 of the Basin Plan. Table 3-8 is clearly labeled "Median Ground Water Objectives" and Table 3-8 contains footnote (a), which states that the objectives shown are median values based on data averages. Therefore, Table V-3 of the TO must be revised to clearly indicate that the objectives are median values and not instantaneous maximums. Without this clarification, the Groundwater Limitations are far more restrictive then the underlying Basin Plan objectives.

Section VI. Provisions

C. Special Provisions – Toxicity Reduction Evaluation Workplan –
As currently drafted, the Toxicity Reduction Evaluation (TRE) provisions create confusion as to when the City might be required to conduct a TRE. More specifically, the second to the last sentence in the paragraph following sub-section (c) implies that the City would be required to conduct a TRE each time that the acute toxicity in the effluent exceeds the limit. The Fact Sheet clarifies that the Regional Board's intent is to require the City to maintain a TRE Workplan, which describes the steps that the City would follow in the event that there were exceedances; however, the Regional Board's executive officer makes the determination if a TRE is actually implemented according to the Workplan after the effluent has been resampled and re-tested.

In order to ensure that the TRE provisions in the permit are correctly interpreted, the City recommends that the following language be amended as identified:

> "When the EO requires the Discharger to conduct a TRE, the TRE shall be conducted giving due consideration to guidance provided by the U.S. EPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (EPA document nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036)."

C. Special Provisions, 4. Biosolids Handling and Disposal

The City is concerned that the language contained in 4.b.iii. would require the City to control entities to which the City has no contractual relationship or obligation. Thus, the City recommends that the language be amended as identified:

"The Discharger is responsible for informing subsequent preparers, appliers and disposers with whom the Discharger contracts of the requirements that they must meet under 40 CFR 257, 258, and 503."

In addition, the City is concerned that the biosolids provisions in sub-sections 4.d. – 4.f. and 4.h. – 4.j. may be interpreted to apply to all biosolids generated at the LRWRP even after it is no longer in the City's possession and control. The City's report of waste discharge clearly indicates that the City's biosolids are hauled off-site to a privately owned composting facility. Once the biosolids have been delivered to the composting facility with all of the required information and notification, the City is unable to control or regulate the composting facilities handling of the material. Such requirements are more appropriately placed directly on the composting facility. To the extent that these provisions are intended to apply to biosolids that are contained at the LRWRP until they are hauled away to the composting facility, the City does not object. However, to ensure that the permit provisions are intended to apply in this manner, we recommend that the provisions be revised as follows:

"d. No biosolids at the Dischargers' facility shall be allowed to enter wetlands or other waters of the United States.

e. Biosolids treatment, storage, use, or disposal at the Dischargers' facility shall not contaminate groundwater.

f. Biosolids treatment, storage, use, or disposal at the Dischargers' facility shall not create a nuisance such as objectionable odors or flies.

h. If biosolids are stored at the Dischargers' facility for over two years from the time they are generated, the Discharger must ensure compliance with all the requirements for surface disposal under 40 CFR 503 Subpart C, or must submit a written notification to U.S. EPA with the information in Section 503.20(b), demonstrating the need for longer temporary storage.

i. Any biosolids treatment, disposal, or storage site at the Dischargers' facility shall have facilities adequate to divert surface runoff from adjacent areas, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials at the site to escape from the site. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal state that may occur.

j. The discharge of biosolids at the Dischargers facility shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the State."

C. Special Provisions, 6. Salt Management Study

As currently drafted, sub-section (d) of the Salt Management Study would require the City to develop a "Salt Management Plan" that ensures that discharges from the LRWRP do not interfere with the attainment of water quality objectives for salts. The City is not opposed to developing a Salt Management Plan that strives towards meeting salinity based water quality objectives applicable to the Santa Ynez River Basin. However, the City does not believe that it can ensure the attainment of water quality objectives. Thus, the City requests that the study language in questions be amended as follows:

> "The Discharger shall develop a Salt Management Plan that reduces salt concentrations in discharges from the wastewater treatment facility to the extent reasonable and feasible ~~to ensure that discharges from the wastewater treatment facility do not interfere with attainment of applicable, concentration-based water quality objectives for salts in the Lompoc Plain Sub-Area of the Santa Ynez River Basin~~. The Plan shall include a schedule of not more than five years of full implementation of the Plan."

C. Special Provisions, 7. Wastewater Collection System Requirements

On May 2, 2006, the State Water Resources Control Board (State Water Board) adopted *Statewide General Waste Discharge Requirements for Sanitary Sewer Overflows* (Order No. 2006-0003). The City of Lompoc is required to comply with the terms of the Order. As such, the special provisions contained here regarding wastewater collection systems, including Attachment G of the TO, are no longer applicable and must be removed from the permit.

Monitoring and Reporting Program Comments

Effluent Monitoring Requirements

Oil and Grease – As stated previously in the City's Report of Waste Discharge submitted to the Regional Board on November 18, 2005, the effluent monitoring requirement for Oil and Grease should be associated with a minimum sampling frequency of annual instead of monthly. The City's current, effluent Oil and Grease detected results are all below the 5 mg/L Average Monthly Effluent Limit (AMEL), and therefore monthly monitoring of the constituent is not necessary. The City requests that the Monitoring and Reporting Program be revised to allow an increase in the minimum sampling frequency for Oil and Grease from monthly to annual, with a provision that the minimum sampling frequency could be increased if the annual Oil and Grease datum exceeded the AMEL.

Acute Toxicity - The units for acute toxicity in Table IV-A are inconsistent with the units as expressed in the effluent limits table in the TO. We recommend that the units in the MRP be changed to be consistent with the effluent limits in the permit, which is "% survival" in this case.

Footnote d Table IV-A – This footnote does not apply to CTR constituents. More likely, it applies to Title 22 pollutants. As it applies to Title 22 pollutants, it is inconsistent with the Basin Plan. Through this footnote, the MRP requires that the City monitor for Title 22 Inorganic Chemicals from Table 64431-A. These Title 22 chemicals have not been incorporated into the Basin Plan by reference. Therefore, it is not appropriate to include them as a required constituent for monitoring in the City's MRP. In addition, many of these constituents may already be covered by the monitoring requirement for CTR pollutants.

Footnote e Table IV-A – This reference does not appear to apply to the constituent to which it is associated.

Whole Effluent Toxicity Testing Requirements

As discussed previously above, the reference to the t-test for acute toxicity does not accurately reflect U.S. EPA Methods. Therefore, this language must also be amended to be consistent with the language in footnote f to the Effluent Limits table in the TO.

Receiving Water Monitoring

Phthalate Esters – The CTR includes a number of phthalate esters as identified toxic pollutants. Thus, the CTR monitoring requirement for pollutants in surface waters will result in the monitoring of the following phthalate esters: Bis(2-ethylhexyl)phthalate, Butyl benzyl phthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butylphthalate, and Di-n-octylphthalate. Because the CTR receiving water monitoring requirement will cover the monitoring of phthalate esters, we recommend that this monitoring requirement be removed from MRP.

Title 22 Pollutations – As discussed above, the Basin Plan does not incorporate by reference the Inorganic Chemicals in Table 64431-A. Therefore, this monitoring requirement must be removed from the MRP in footnote c to table VI-A and footnote a to table VIII-B.

Sewage Spill Reporting

The State Water Board's WDR for Sanitary Sewer Overflows encompasses requirements regarding sewage spill reporting. The provisions contained in the MRP are no longer applicable and have been replaced by the WDR. Thus, these requirements must be deleted from the MRP.

Fact Sheet

Section D, Compliance Summary – As currently drafted, the compliance summary contained in the Fact Sheet is misleading. The language implies that the City had a significant number of exceedances that in fact are not the case.

First, the bullet regarding ammonia is incorrect. There was only one (1) exceedance of Unionized Ammonia in April 2005, not four. There were four samples collected for one exceedance of the 7-day average of 0.025 mg/L (the reported 7-day average was 0.0418 mg/L). There is no Daily Max effluent limitation for Unionized Ammonia in the current permit (Order No. 01-87, NPDES No. CA0048127). Thus, the bullet must be modified to correctly state that the City had only one exceedance for unionized ammonia.

Second, the bullet regarding TDS implies that the City had 62 exceedances of the TDS effluent limit. This is not the case. The City's effluent limit for TDS in its current permit is a 12-month running mean. When the data are evaluated based on this running mean, there are only 2 instances in 2004 (June and July) during which the 1100 mg/L – 12-month running mean was exceeded. The 62 samples identified in the Fact Sheet are individual results, which do not equate to a violation of the City's TDS effluent limit. Thus, the bullet must be modified to correctly identify that the City violated the TDS effluent limit in its current permit only two times.

The City appreciates this opportunity to provide comments on the Regional Water Board's TO. We look forward to continuing to work with the Regional Water Board to try and address many of our concerns that have been expressed above. We intend to contact you in the near future to schedule a meeting to discuss the City's comments. In the meantime, if you have any questions regarding the information submitted, please call me at (805) 875-8405.

Sincerely,

Susan Halpin
Wastewater Superintendent

cc: Jim Beck
Roger Briggs
Vandenberg Village CSD
Vandenberg Air Force Base

Attachment 1 – List of Recommended Editorial Changes

I. Facility Information

1. Page 3: Mailing Address should be corrected to read: P.O. Box 8001, Lompoc, CA 93438-8001.

2. Page 3: Facility Design Flow should be corrected to read: 5.0 MGD (ADWF)

II. Findings

3. Page 4: Item A. Background: second sentence should be corrected to read: "... and applied to renew its NPDES permit to discharge up to 5.0 million gallons per day (MGD, average dry weather flow) of treated wastewater from the LRWRP." The sentence needs to specify "average dry weather flow".

4. Page 4: Item B. Facility Description: second sentence should be corrected to read: "...mechanical bar screens, two primary clarifiers, one biotower, one aeration tank, ...". The sentence needs to include the mention of "one biotower" in order to accurately describe the facility's present treatment system.

5. Page 6: Table II-1 – Beneficial Uses: Beneficial Uses and their acronyms should be corrected to read:
   - Industrial Process Supply (**PROC**) – not (IND)
   - Industrial Service Supply (**IND**) – not (PROC)
   - Commercial and Sport Fishing (**COMM**) – not (COM)

6. Page 8: Item T. Requirements Necessary to Comply with Federal Law: fourth sentence should be corrected to read: "... as discussed in Fact Sheet, Section IV.B. and the technology-based pollutant restrictions...". There is no need to refer to the Fact Sheet parenthetically as is done in the current Tentative Order.

IV. Effluent Limitations and Discharge Specifications

7. Page 10: Table IV-1 – Final Effluent Limitations footnote "a": The footnote should be corrected to read: average dry weather flow (ADWF). The design specification for the plant is 5.0 MGD average dry weather flow, not average annual flow.

8. Page 10: Table IV-1 – Final Effluent Limitations: The City requests that parameter names be consistent throughout the Tentative Order and the following changes be made:

- Unionized Ammonia changed to **Unionized Ammonia (as N)**

V. Receiving Water Limitations

9. Page 16: V.B.8. Table V-3: Re: Nitrogen – values for Unit and Objective are in wrong columns.

VI. Provisions

10. Page 23: Item f.: last sentence: The proposed monitoring program submittal date of December 1, 2006, is not included in Table XI-1 – Management Plan Development Schedule on page G-5 of Attachment G. The City requests that the Wastewater Collection System Monitoring Plan task and December 1, 2006, completion date be included in Table XI-1 – Management Plan Development Schedule.

11. Page 26: Item p.: "iii." sub-item appearing in front of "ii." sub-item should be deleted.

12. Page 26: Item q.: Use of the term "sufficient content" is unreasonably vague. The City requests more detailed guidance on the specific content of a semi-annual report in order to ensure compliance with requirements.

Attachment C – Flow Schematic

13. Page C-1: The flow schematic incorrectly identifies the Santa Ynez River as the receiving water. In fact, the name of the receiving water is San Miguelito Creek. To correct the error, the City has provided a new flow schematic with the correct name of the receiving water (Attachment 11).

Attachment D-1 – Central Coast Water Board Standard Provisions

14. Page D-1-4: Item 2.: There are three references to paragraphs that are not identifiable in the TO or the attachments.

15. Page D-1-8: Item 5.: The last sentence in the paragraph references a "paragraph F.4" that supposedly identifies daily maximum limits. On what page of the Tentative Order is "paragraph F.4" located? If the reference to a "paragraph F.4" is erroneous, then the City requests that the reference be deleted from the sentence.

Attachment E – Monitoring and Reporting Program

16. Page E-5: Table IV-A – Effluent Monitoring Requirements: The Minimum Sampling Frequency for both Maximum Daily Flow and Mean Daily Flow should be corrected to read: daily.

17. Page E-5: Table IV-A – Effluent Monitoring Requirements: Coliform Bacteria should be corrected to read: Total Coliform Bacteria. Total coliform bacteria are the group of organisms monitored in effluent under the current Order.

18. Page E-5: Table IV-A – Effluent Monitoring Requirements: Total Residual Chlorine is assigned a footnote of "f", but the collection of footnotes associated with Table IV-A does not include a footnote "f".

19. Page E-5: Table IV-A – Effluent Monitoring Requirements: CTR Pollutants is assigned a footnote of "d", but it is unclear how footnote "d" applies to CTR Pollutants.

20. Page E-5: Table IV-A – Effluent Monitoring Requirements: Title 22 Pollutants is assigned a footnote of "e", but it is unclear how footnote "e" applies to Title 22 Pollutants.

21. Page E-6: V.A. last paragraph: "teat" organism should be corrected to read: test organism.

22. Page E-8: Item 4: first sentence in last paragraph should be corrected to read: When corrective actions, including a TRE, have not been completed, a schedule under which corrective actions will be completed will be implemented.

23. Page E-8: Table VI-A- Surface Water Monitoring Requirements: The units for Dissolved Oxygen must be changed to eliminate the requirement to report "% saturation." The receiving limit language regarding saturation is not an applicable limit in this instance. Consequently, the MRP must be modified to also eliminate this requirement.

24. Page E-9: Table VI-A – Surface Water Monitoring Requirements: The City requests that the following parameter name be changed in order to specify in a more exact manner the chemical constituent to be analyzed:
    - Ammonia changed to **Total Ammonia (as N)**

25. Page E-9: Table VI-A – Surface Water Monitoring Requirements: The City requests that parameter names be consistent throughout the Tentative Order and the following changes be made:
    - Hardness changed to **Hardness (as $CaCO_3$)**

26. Page E-11: VIII.A.2. Annual Report submittal date of January 30th is inconsistent with February 1 Annual Report submittal date provided in Table VIII-A on Page E-15. The City requests that January 30th date be changed to February 1.

27. Page E-12: VII.A.2.(d)(vii): In order to City's reporting dates consistent, we request that the quarterly reports required under this provision be due on the first of the month instead of the last day of the month. In other words, April 30th would become May 1; July 31st would become August 1st; and, October 31st would be come November.

28. Page E-14: VIII.B.1.: Re: CIWQS electronic reporting – the second sentence in the paragraph is nonsensical and contradicts the third sentence.

Attachment F – Fact Sheet

29. Page F-2: I. Permit Information: Mailing Address and Billing Address should be corrected to read: P.O. Box 8001, Lompoc, CA 93438-8001.

30. Page F-2: I. Permit Information: Facility Permitted Flow and Facility Design Flow should be corrected to read: 5.0 MGD (average dry weather flow).

31. Page F-3: II.A. last paragraph: seventh sentence should be corrected to read: "Waste activated sludge from the clarifiers is co-thickened with the primary sludge from the gravity sludge thickener and pumped to the anaerobic digesters for stabilization."

32. Page F-4: II.A. second paragraph: fifth sentence should be corrected to read: "Waste activated sludge, as well as scum, will be thickened in two dissolved air flotation thickeners before being anaerobically digested in the existing digesters."

33. Page F-5: With regard to the tabularized Summary of Existing Requirements and Self-Monitoring (SMR) Data that appear on page F-5 of the Tentative Order, the Total Residual Chlorine Daily Max Effluent Limitation and footnote "b" provide erroneous information with regard to current permit compliance determination

for Total Residual Chlorine. The following changes should be made in order to accurately describe the Total Residual Chlorine effluent limitation contained in the City's current permit (Order No. 01-87, NPDES No. CA0048127):

- Daily Max Effluent Limitation is 0.02 mg/L (not 0.01 mg/L)
- Footnote "b", bullet #1 – 0.01 mg/L value should be changed to 0.02 mg/L
- Footnote "b", bullet #2 – 0.01 mg/L value should be changed to 0.02 mg/L

34. Page F-6: D. Compliance Summary – third bullet: The date for the end of the 7-day period was December 13, 2004, not December 12, 2006, as currently described in the Tentative Order.

35. Page F-8: Item 5: third sentence should be corrected to read: "State Water Board Resolution No. 68-16..." The word "State" is currently misspelled in the Tentative Order.

36. Page F-13: first paragraph: first sentence should be corrected to read: The monthly average flow limitation (calculated as daily flow averaged over each month) of 5.0 MGD (ADWF) is retained from Order No. 01-87 and is intended to ensure that wastewater flow do not exceed the treatment facility's design capacity. The sentence needs to specify to "average dry weather flow".

37. Page F-13: first paragraph: third sentence should be corrected to read: This upgrade may result in an increased average dry weather flow design capacity of 5.5 MGD (ADWF). The sentence needs to specify "average dry weather flow".

38. Page F-14: first paragraph: third sentence should be corrected to read: "... from the City at Floradale Avenue". The current "Floordale" spelling is incorrect.

39. Page F-15: Table IV-F2 label that currently appears at the bottom of page F-14 needs to be linked to the RPA Results tabular summary that appears on page F-15.

40. Page F-15: 4. WQBEL Calculations label that currently appears at the bottom of page F-15 needs to be linked to the appropriate body text that appears on page F-16.

41. Page F-18: first paragraph: second complete sentence should be corrected to read: The final limitations become effective on May 18, 2006.

42. Page F-19: Table IV-F7: Water Quality Objective for Agricultural Use table header should be assigned a footnote of "b", not footnote "a" as currently presented in the Tentative Order.

43. Page F-21: Table IV-F8 – Final Effluent Limitations: footnote "a" should be corrected to read: Average dry weather flow.

44. Page F-21: Table IV-F8 – Final Effluent Limitations: The City requests that parameter names be consistent throughout the Tentative Order and the following changes be made:
    - Unionized Ammonia changed to **Unionized Ammonia (as N)**

45. Page F-24: D. Receiving Water Monitoring, 1. Surface Water: fourth bullet has no associated text and therefore should be deleted.

46. Page F-27: VIII.A.: Date should be corrected to read: April 10, 2006, not May 12, 2006. The April 10, 2006 date on the "Instructions to Applicant for Reissuance of Waste Discharge Requirements" page, 5th sheet in from the 1st sheet, is correct.

Attachment G – Elements of the Wastewater Collection System Management Plan

47. Page G-1 – G-5: As mentioned previously, Attachment G must be deleted in its entirety due to the adoption of the State Water Board's WDR for Sanitary Sewer Systems.

Attachment F – Sewage Overflow Report

47. Page H-1 – H-4: Attachment H is no longer applicable now that the State Water Board has adopted the Statewide WDR for Sanitary Sewer Overflows.

November 18, 2005

Mr. Todd Stanley
Senior Engineer
Regional Water Quality Control Board, Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

SUBJECT: Submittal of Report of Waste Discharge for City of Lompoc Regional Wastewater Facility (CA0048127)

Dear Mr. Stanley:

The City of Lompoc (City) hereby transmits its Report of Waste Discharge (ROWD) and NPDES renewal application for the City of Lompoc Regional Wastewater Reclamation Plant (LRWRP). The City has prepared the California Environmental Protection Agency Form 200 and the U.S. Environmental Protection Agency (U.S. EPA) forms 1, 2A and 2S. To complete the forms, the City used monitoring data submitted to the Regional Board beginning in July 1999 and some data ending in September 2005. The data range meets and exceeds the requirements of the U.S. EPA forms.

As prepared, the ROWD forms do not include the most recent annual monitoring results, which the City received after it prepared the ROWD forms. Likewise, the Reasonable Potential Analysis (RPA) prepared by the City also does not include this last set of monitoring data. In lieu of including the data in the ROWD and the RPA, the City has attached the data in Part VIII so that the Regional Board can consider the data as it evaluates the City's ROWD and prepares a tentative NPDES permit.

In addition to the information contained in the ROWD, the City would like to summarize the upgrades currently underway at the LRWRP, summarize the Reasonable Potential Analysis, address specific constituents that may be of concern, provide supplemental information as requested by the Central Coast Regional Water Quality Control Board (Regional Board) staff, and identify existing permit and monitoring and reporting program provisions that the City would like changed in the upcoming permit renewal.

Lompoc Regional Wastewater Reclamation Plant Upgrades

The City is currently in the process of upgrading its treatment plant. The City began work on design and engineering of an upgrade project for the LRWRP in September 2004. To date, the 50% design phase of the upgrade project has been completed. Final design is scheduled to be completed in April 2006 and construction mobilization in July 2006. Construction is scheduled to be completed in August 2008 with plant startup and testing in September 2008.

The objectives of the plant upgrade project are to meet more stringent effluent quality requirements, improve the consistency of effluent quality, improve existing facilities, provide state-of-the art instrumentation and control systems and provide redundancy for some existing facilities. The upgraded facility will include treatment units to provide grit handling and disposal, nitrification/denitrification, flow equalization, chemical-free disinfection, solids thickening and stabilization.

Reasonable Potential Analysis

As requested, the City has conducted a reasonable potential analysis (RPA) on all of the constituents for which the city has current permit limits and data. A memorandum summarizing the results of the RPA is provided in Part VIII. In general, the City conducted RPAs by using the State's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) for California Toxic Rule criteria that were adopted by the U.S. EPA on May 18, 2000. For non-CTR constituents, the City conducted the RPA by using the U.S. EPA's recommended RPA approach contained in the *Technical Support Document for Water Quality-based Toxics Control* (TSD). To determine the appropriate applicable criteria, the City used the CTR, the City's current permit, and the Basin Plan.

CTR criteria were used for all priority pollutants (i.e. CTR constituents), except in a few cases were there are no adopted CTR values for specific pollutants. In those cases, alternative available criteria were used. For example, there are no adopted CTR criteria for beryllium. Therefore, the MCL as incorporated into the Basin Plan and identified in the City's current permit was used to determine if there is reasonable potential.

For non-priority pollutants, the City used Basin Plan objectives as expressed in the City's current permit. If there was data but no Basin Plan objective in the current permit, the City used an available MCL to conduct the RPA. The complete results of the RPA are provided on the attached CD labeled *City of Lompoc Reasonable Potential Analysis*. A summary memorandum of the RPA is included in Part VIII of the ROWD submittal. In the summary memorandum, the constituents for which reasonable potential may exist are identified in Tables 1 and 2. Included in tables 1 and 2 are the projected final effluent limits and potential interim limits for those constituents with reasonable potential. Out of the constituents for which the City had data and an RPA was conducted, the City found reasonable potential for only the following 15 constituents: Beryllium, Mercury, Dichlorobromomethane, TDS, Molybdenum, Ammonia-N, Chloride, Fluoride, Nitrate + Nitrite-N, Nitrite (NO2-N), Lithium, Boron, Sodium, Nitrate, and Sulfate.

Based on the results of the City's RPA, the City requests that the new permit include monitoring requirements and effluent limitations only for those constituents for which there is reasonable potential and not for all constituents as the current permit provides. Please note that we believe there were some anomalies in the preparation of the current permit, which are described further below.

Hardness-Dependent Metals Criteria

To calculate the criteria for hardness-dependent metals, the City used the lowest available effluent hardness. The City believes that the lowest effluent hardness is the

appropriate value because the LRWRP discharge receives no dilution at times. In addition, there was no available receiving water hardness data. In short, a review of the hardness-dependent trace metal criteria reveals that the design condition (i.e. most critical to aquatic life) is zero to minimal upstream receiving water flow, meaning the LRWRP effluent almost completely comprises the downstream receiving water. Because the design condition for most metals is zero upstream flow, the effluent hardness should be used to evaluate reasonable potential for calculation of WQBELs. Therefore, the Regional Board should use the lowest effluent hardness as the appropriate measurement for calculating hardness-dependent criteria. When effluent hardness is used to calculate the CTR criteria, there is no reasonable potential for any of these metals.

Constituents with Existing Interim Limits

The City's current permit, adopted in 2001, provided five years for meeting final limits for: Cadmium, Copper, Mercury, Antimony, Beryllium, Lead, Selenium, Silver, Thallium and Molybdenum. According to the permit, the final limits for all of these constituents will become effective on May 18, 2006. Based on the results of the City's RPA, only three of these constituents have reasonable potential. The three constituents for which the City still has reasonable potential (assuming an effluent hardness of 281 $CaCO_3$ and the application of appropriate criteria) are Mercury, Beryllium and Molybdenum. Of these three constituents, Mercury and Beryllium are priority pollutants subject to the SIP and Molybdenum is a non-priority pollutant subject to the Regional Board's Basin Plan provisions.

The Regional Board and the City both understood when the current permit was issued that compliance with certain limits would be infeasible or infeasible within five years. Provision L of the current permit contains various terms related to this issue, including recognition of the need to identify site-specific objectives. In addition, the City is concerned that at the time that these final limits were adopted, the Regional Board did not conduct a RPA according to the SIP for the CTR constituents. The RPA referred to in the City's current permit was prepared and submitted prior to the adoption of the SIP and the CTR. Thus, the consulting engineer that prepared the RPA utilized the TSD approach for all constituents, including the priority pollutants. Since an RPA was not conducted in accordance with the SIP, the Regional Board should view the adoption of the renewed permit as the City's first permit adopted under the provisions of the SIP and the CTR.

Mercury

Under the SIP, the Regional Board is required to identify the effluent data and determine if the data is of sufficient quality and quantity. A review of the City's data for Mercury raises several questions regarding the sufficiency of data quality. Since June of 1999, the City has taken 6 Mercury effluent samples as required on an annual basis. Out of the 6 samples, it appears that only one sample was analyzed at a detection limit below the .050 ug/L criteria. Because most of the City's data was undetected at higher detection levels, it is difficult to actually conduct a true RPA under the SIP. Under Step 8 of the SIP, if all reported detection limits of a pollutant in the effluent are greater than or equal to the criteria, than the Regional Board is supposed to require additional monitoring for that pollutant in the place of a water quality based effluent limit. When the Mercury final limit and interim limit were adopted in 2001, the premise for this limit

appears to be strictly related to compliance with the final effluent limit and not related to the detection limits associated with the Mercury data. Thus, the City should be afforded the same opportunity as others and be allowed to collect additional data to be analyzed at lower detection limits before being subject to a final effluent limit. Also, if the Regional Board considers this to be the first post-SIP permit applicable to the City, then the City should be allowed a five year compliance schedule, not to exceed the sunset date of the SIP, to collect additional data before a final mercury limit goes into effect.

At the very least, the Regional Board should consider amending the current permit to extend the current compliance date for Mercury prior to May 18, 2006. Once the final limit goes into effect on May 18, 2006, the City may be ineligible to receive additional time for compliance for a CTR constituent.

Beryllium

Beryllium raises additional issues besides those discussed above in relationship to Mercury. Like Mercury, Beryllium is a CTR constituent subject to the SIP. However, unlike Mercury, there are no adopted CTR criteria for beryllium. In the CTR, Beryllium is footnoted to state that the permitting authority (i.e. Regional Board) should use the State's existing narrative criteria for Beryllium. In this case, the appropriate applicable criterion appears to the primary maximum contaminant level (MCL), which is incorporated by reference into the Water Quality Control Plan for the Central Coast (Basin Plan). The MCL for Beryllium is 4 ug/L. The City's current permit contains a Beryllium final effluent limit of zero. When 4 ug/L is used to conduct an RPA and calculate effluent limits, the average monthly effluent limit should be 4 ug/L and the maximum daily effluent limit should be 8.0 ug/L. When calculated properly according to the SIP, the City still has reasonable potential for Beryllium if data over three years old are considered. There remains some question as to the validity of data over three years old based on a recent Superior Court decision in the case of *City of Woodland v. California Regional Water Quality Control Board, Central Valley Region.* (Alameda County Superior Court, Order No. RG04-188200, May 16, 2005.) In that case, the Superior Court stated that to find reasonable potential the Regional Board must show that pollutants receiving effluent limitations have been found in the discharger's effluent in the last three years prior to the date of the Regional Board's Order of permit adoption. The City has not exceeded the MCL in the last three years and thus believes it is appropriate to conclude there is not reasonable potential.

Molybdenum

As stated previously, Molybdenum is not a priority pollutant and is therefore not subject to the provisions of the CTR or the SIP. However, Molybdenum continues to be a major issue of concern because the level of Molybdenum in the groundwater which is the source of the City's water supply is above the criterion and the final effluent limit contained in the City's current permit. As we expressed in our October 11, 2004 communication to Mr. Gerhardt Huber (Part VIII), the existing treatment facilities do not affect the influent Molybdenum and the effluent Molybdenum concentrations equal the influent concentrations. In addition, the Basin Plan objective for Molybdenum that is applied to the City is to protect the agricultural beneficial use. According to our research, the potential concern with this issue is not necessarily the level of Molybdenum in the irrigation water but the level of Molybdenum in plants used for livestock forage. Levels of Molybdenum ranging from 10 ppb to 20 ppb in forage can create a copper deficiency in

livestock called molybdenosis. The City's review of the available literature did not find any information regarding the correlation between the amount of Molybdenum in irrigation water as to the amount that may be found in plant tissue. Therefore, it is difficult to determine the appropriate level of Molybdenum in irrigation water. In addition, there is minimal, if any, direct use of surface water for irrigation downstream of the LRWRP.

Furthermore, the City is familiar with the crops that utilize the groundwater recharge from the Santa Ynez River, which is influenced to some degree by the City's effluent. Based on our local knowledge, there are no forage plants grown in this area near the Santa Ynez River and there are no livestock grazing. Therefore, the level of Molybdenum in the irrigation water is not a local concern. As a result, the City anticipates identifying the need for a site specific objective (or other appropriate Basin Plan amendment) to the Regional Board with its January 1, 2006 report submittal that is required by the City's existing permit. The development of a site specific objective for Molybdenum will take more time than is currently allowed by the existing permit (the final effluent limit comes into effect on May 18, 2006). Since Molybdenum is not a CTR constituent, the Regional Board is not constrained by the five year compliance schedule contained in the SIP. Instead, the Regional Board may adopt a compliance schedule in accordance with the Basin Plan. Thus, the City requests that the Regional Board extend the current interim limit and the compliance schedule in the current permit by five years in order to allow the City ample time to work collectively with the Regional Board for the development and adoption of a site specific basin plan revision.

Others

All other constituents with current interim limits should be deleted from the permit for there is no reasonable potential as conducted by the SIP or TSD on the recent applicable data. The elimination of effluent limits for these constituents is consistent with federal regulations governing anti-backsliding. The federal anti-backsliding regulations allow for the adoption of less stringent effluent limitations when "information is available which was not available at the time of permit issuance." (40 CFR §122.44(l)(2)(i)(B)(1).) The new monitoring data as well as the RPA completed in accordance with the SIP qualify as new information that was not available when the 2001 permit was issued by the Regional Board.

Constituents with Reasonable Potential

In addition to the three constituents discussed immediately above, the City's RPA identifies other constituents for which there is reasonable potential. Many of the other constituents will be addressed by the City's planned treatment upgrades. Others have reasonable potential based on the TSD calculation for projected in-stream concentrations: however, most of these constituents do not appear to create a compliance issue for the City. (see graphs of data plots, Part VIII) Finally, the City believes that the Regional Board has used the incorrect water quality criterion for TDS in the current permit. The City has identified the appropriate water quality objective below.

Dichlorobromomethane – Expected to be addressed by replacing existing chemical disinfection system with UltraViolet Disinfection as part of the plant upgrade.

Ammonia-N, Nitrate + Nitrite-N, Nitrite, Nitrate – Expected to be addressed by the addition of denitrification as part of the plant upgrade.

Chloride, Flouride, Lithium, Boron, Sodium, Sulfate – Although there is reasonable potential based on the TSD, which projects in-stream concentrations, the City's effluent has not exceeded (or has rarely exceeded) the applicable criteria for these constituents. Therefore, the City does not anticipate these constituents being a compliance problem.

TDS - The City's effluent can not consistently comply with the current effluent limit of 1100 mg/L for TDS. Like Molybdenum, the TDS levels in the groundwater which is the City's water supply are elevated. In addition, the City does not believe that 1100 mg/L is the appropriate water quality criterion for application to the City's effluent. As we noted in our October 15, 2004 communication to the Regional Board (Part VIII), the City's effluent recharges the Santa Ynez groundwater basin near the Lompoc Plain. According to the Central Coast Basin Plan, the median groundwater objective for the Lompoc Plan for TDS is 1250 mg/L. The City requests that the Regional Board use the applicable groundwater objective 1250 mg/L instead of 1100 mg/L for TDS that exists in the City's current permit.

Supplemental ROWD Information

The Regional Board staff provided the City with an NPDES Supplemental Information Guide at a meeting between the City and staff on October 18, 2005. Most of the information requested is contained within the body of the ROWD forms submitted in Parts I through VII. Additional information requested but not contained within the ROWD are provided here.

- Monitoring Locations – There are (3) three influent monitoring locations. One each on the sewer trunks from Vandenberg Air Force Base and Vandenberg Village Community Services District and one on the sewer trunk into the plant with all influent flow streams. The effluent monitoring location is after the final treatment unit (i.e. dechlorination). Internal monitoring may include primary influent/effluent, biotower influent/effluent, aeration tank contents, secondary effluent, anaerobic digester sludge feed and digester content, and dried biosolids at the sludge drying bed. Upstream surface water is sampled at the V Street and Central Avenue location. Downstream surface water is sampled in San Miguelito Creek approximately 20 yards downstream of the plant's outfall. There are (3) three groundwater monitoring wells with one located at the center of the southern perimeter of the plant property line, one located at the western perimeter of the plant line, and one located at 1641 West Central Avenue. Pretreatment monitoring includes three permitted industrial discharges that are monitored a minimum of once per year at their end of process or end of pipe, as required.

- Sewer Use Ordinance – The City has a sewer use ordinance contained in Chapter 33, Article 2 of the Lompoc City Code, last amended June 2004.

- Reclaimed Water – The City currently has no plans to provide reclaimed water beyond current production and uses, including on site irrigation and off-site construction dust control and landscape irrigation.

- Storm Water Management Plan – The LRWRP operates under Storm Water Permit WDID #3423001622. The City has a general Storm Water Pollution Prevention Program (SWPPP) and the treatment plant has its specific SWPPP. Both plans include best management practices, inspection, and sampling and reporting requirements. The treatment plant facility has a storm water pump station with approximately 10,000 gallons of storage capacity. Unless the capacity is reached, storm water is collected in the pump station and pumped with a small, submersible pump into the plant's activated sludge system for treatment. When the storm water flow rate into the station exceeds the submersible pump's capacity, one of three large storm water pumps will pump the storm water flow into the Santa Ynez River via San Miguelito Creek.

Other Permit Provisions

In addition to the issues related to specific effluent limits identified above, the City would like to identify other current permit provisions that should be addressed in the permit renewal process. The City's current provisions should be updated as follows:

- The facility description should be updated to recognize that the LRWRP no longer adds magnesium hydroxide to activated sludge. In addition, the new permit should include a description of the City's plant processes once the upgrades are complete. For example, the Regional Board should add the following paragraph:

  "The City is in the process of upgrading its wastewater facility treatment process. Upon completion of the upgrades in late 2008, the City's treatment process will include barscreens, influent pumping, grit removal and handling, secondary treatment in oxidation ditches for nitrification/denitrification, secondary clarification, and UV disinfection. Solids will be thickened and reduced in two anaerobic digesters operated in series. Biosolids will be stored in sludge lagoons and batch dewatered in a 4 acre drying bed. All biosolids will continue to be hauled off-site for co-composting."

- The footnotes contained in the hereby ordered section are not applied uniformly throughout the permit.

- Provision A.1 contains an incorrect reference to Finding 7. The appropriate finding regarding the Discharge Location is Finding 8.

- Provision B.3, Table 3 contains effluent concentrations for chronic and acute toxicity. The City does not believe that it is appropriate to express permit provisions regarding acute and chronic toxicity as effluent limitations. Instead, the Regional Board should remove Table 3. The toxicity permit provisions are currently contained in Section E of the City's permit.

- Provision B.8 refers to "any 30-day period;" however, the permit provides no clarification regarding what constitutes a 30-day period. Does this mean 30 sampling days or 30 calendar days?

- Provision B.9(d) contains an outdated permit provision for chlorine residual when there is not continuous monitoring. The City requests that this portion of the chlorine residual permit provision be changed consistent with the provision adopted by the Regional Board in the City of San Luis Obispo's permit, which states, "[i]f grab sampling is used instead of continuous analysis, total chlorine residual shall be less than the Method Detection Limit, as determined by the procedure set forth in 40 CFR Part 136, Appendix B (currently, <0.1 mg/L)."

- Provision C incorrectly references the effluent limits in Table C as numeric receiving water limit concentrations. Table C should not be referenced in the receiving water limits section.

- Provision C.12 includes a receiving water limit for coliform organisms in groundwater. This provision should be moved to the ground water limitations contained in section D of the permit.

- Provision E.1 appears to apply to both chronic and acute toxicity tests. Thus, the reference to chronic toxicity should be placed directly before subsection (a).

- Provision E.1.b. refers to acute toxicity and therefore should be moved to the acute toxicity portions of this provision.

- Provision E.2.b. should be consistent with the toxicity monitoring requirements contained in the Monitoring and Reporting Program.

- Provision F.2.b references Part E.3; however, there is no E.3.

- Provision F.3.c references Part E.2; however, the reference should be Part F.2.

Monitoring and Reporting Program Provisions

In addition to changing some of the existing permit provisions, there are a number of requirements in the City's Monitoring and Reporting Program (MRP) that are excessive, inappropriate or incorrect. The City requests changes to the MRP as follows:

- Table A - Influent sampling frequency for TDS, Na, Cl and total hardness should be changed to match final effluent sampling frequency (i.e. quarterly instead of monthly).

- Table B – Turbidity has a conflict between the "type of sample" and "minimum sampling and analysis frequency." Monitoring for turbidity needs to be amended to reflect requirement for monthly sampling and not weekly.

- Table B –Oil and grease sampling frequency should be annually instead of monthly. The City's current data results are all well below the method detection limit. Therefore, increased monitoring is not necessary. Instead, the monitoring and reporting plan can require increased sampling if the annual sample exceeds some fraction of the limit.

- Tables C and E – The City should only be required to monitoring for those constituents for which there is RPA. The additional annual monitoring for all of these constituents is excessive. At the very least, monitoring for the full suite of priority pollutants should only be required once during the permit term, which is consistent with the SIP. (SIP, Section 1.3, Step 8.)

- Table D – Monitoring frequency for the dioxin congeners should be decreased to annually.

- Reporting for Dioxin Congener should be consistent with the annual monitoring report requirements, which are required no later than 30 January, not 20 January.

- Table E – There is no reporting date specified for this annual sampling. It should be consistent with other annual sampling requirements, which require reporting no later than 30 January.

- Table E - Nitrate + Nitrite and Nitrite sampling is included here with metals. These constituents are not metals and therefore should not be included in this section of the table. In addition, Table B on page 2 already includes nitrite sampling. These two tables appear to be contradictory with this constituent.

- Table F – There is no reporting date specified for this annual sampling. It should be consistent with other sampling requirements, which require reporting no later than 30 January.

- Paragraphs 4 (a) and (b) – Neither of the disposal methods identified applies to the City of Lompoc. The City ships all of its biosolids to a co-composting facility. The monitoring and reporting plan should be modified to reflect the City's biosolids disposal method.

- Paragraph 5 – Incorrectly references Table E instead of Table G. Reference needs to be changed.

- Table G – This table requires grab samples for batch analysis. The City requests clarification regarding why grab samples are required instead of composite samples. The City believes that all samples should be composite samples.

- Table G – There is an astericked footnote at the bottom of the table. However, we are unsure as to what the note following the asterisk is referring?

- Table G – There are some constituents that appear twice in this table. The City requests that all duplicates be removed.

- Toxicity Reporting Requirements – This information should be included with the Toxicity Monitoring section on page 9.

- Toxicity Reporting Paragraph 4 - Only chronic toxicity is referenced. Should acute toxicity results be included?

- Toxicity Reporting Paragraph 4 - The last sentence is incomplete.

- Monthly Monitoring Reports – Results should be incorporated into the quarterly reports, which are submitted in March, June and September, not April, July and October.

The City appreciates this opportunity to provide the Regional Water Board with issues and information to be considered in the City's NPDES permit renewal process. As the Regional Water Board moves forward to renew the permit, the City looks forward to meeting and discussing the issues brought forth in this submittal with Regional Water Board staff. Also, while we have attempted to identify issues requiring special consideration, we may identify other matters, and expect to provide supplementary materials as the need is identified.

If you have any questions regarding the information submitted, please call me at (805) 875-8405.

Sincerely,

Susan Halpin
Wastewater Superintendent

cc. Jim Beck
Kelly Jacques, Tetra Tech

CITY OF LOMPOC

FILE COPY

February 2, 2006

David La Caro
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Re: NPDES No. CA0048127

Dear Mr. La Caro:

As you know, last November, the City of Lompoc submitted its report of waste discharge and NPDES renewal application for the City's Regional Wastewater Facility. We appreciated the opportunity to meet with you and Scott Keen on January 17 to discuss the status of the permit renewal, provide a tour of our plant, and explain our planned improvements. We look forward to our next meeting to discuss specific permit issues in more detail.

In anticipation of that meeting, we wish to identify certain critical concerns related to the existing permit adopted on May 18, 2001 and the need for modification prior to its expiration. We believe that you recognize that there are unfortunate anomalies in that permit which have the potential to produce harsh and unnecessary consequences for the City. We seek to avoid that outcome, and to work constructively with you to ensure that they do not materialize. Given your indication that the permit will not be renewed before its expiration date (i.e., it will be administratively extended), we request, and believe the Regional Board should, prior to May 18, 2006, make certain revisions to the existing permit. The reasons for our conclusion are provided below.

First, the existing permit contains effluent limitations which all would agree were not properly determined. The existing permit was adopted very soon after the adoption of the California Toxics Rule (CTR) and State Implementation Policy (SIP) for the CTR. The SIP was not used to derive the effluent limits in the 2001 permit. In some cases the consequences for the City may be relatively minor. However, to the extent the permit contains final limits which become effective May 18, 2006, and to the extent the Facility may not be able to attain such limits, there are significant problems. Once the final limit has become effective, it may be very difficult to change. Also, of course, the City could be exposed to mandatory penalties and other forms of enforcement. It is perhaps

understandable that the 2001 permit was not developed in accordance with the SIP, due to the relative newness of the CTR and SIP at the time of its adoption. Equally, however, the City's residents should not be penalized in these circumstances. Our November 18, 2005 letter transmitting the report of waste discharge explains in more detail the reasons that the upcoming permit renewal should properly be treated as the "first" post-CTR permit for the City. Board action prior to May 18, to remove limits in the current permit which were not developed according to the SIP, is appropriate to ensure this result.

Second, in many ways the 2001 permit created a process that does not necessarily reflect certain regulatory realities. In particular, it established various interim and final limits (for both CTR and Basin Plan constituents), but simultaneously created a process that assumed compliance with the final limits might not actually ever be required. This process is largely reflected in the "Provisions" of the permit. With respect to limits that the permit assumes the facility cannot attain, a series of steps is required to evaluate source control opportunities, nonstructural changes in treatment processes, speciation of metals, and investigation of available dilution. The final step was a report, due January 1, 2006 on the recommended method for achieving CTR objectives and/or proposals for site-specific objectives. The permit contained no schedule for capital facilities construction. Rather, the understanding at that time, generally reflected in the permit, was that the City would investigate reasonable means of compliance with certain effluent limitations, but the actual decision on the City's ultimate obligation would follow that investigation. Thus, provision L.1.g. provided that a recommendation would be provided for Board approval before the renewal of the permit in 2006.

The extent to which CTR-based effluent limitations in the 2001 permit may present compliance difficulties is somewhat uncertain. Nor do we know what CTR-based effluent limitations the Regional Board may determine to be applicable after consideration of adequate data and a reasonable potential analysis in accordance with the SIP. We do know for certain that the permit provides a final effluent limitation for molybdenum with which compliance is infeasible, and that the compliance deadline is May 18, 2006. In the meantime, the City timely filed a report due by January 1 of this year that identifies the need for a site-specific objective or other basin plan amendment regarding molybdenum. (The deficiencies of the basin plan water quality objective for molybdenum are also identified in our November 18, 2005 letter transmitting the report of waste discharge.) In addition to molybdenum, there are final effluent limits for several CTR constituents set at zero, which the City will not be able to meet consistently.

In summary, there are unfortunate and confounding problems in the 2001 permit which, if not cured, could lead to punitive and potentially irreversible results for the City. At the same time, the 2001 permit does at least recognize the need for attention by the Board prior to renewal of the permit. Because the 2001 permit will be extended beyond its nominal expiration date, and because May 18, 2006 is the currently specified date for compliance with certain limitations, we believe the Board should take action modifying the permit before May 18, 2006.

In sum, there is adequate cause for modification of the 2001 permit. We believe the Board can readily resolve the identified problems and eliminate uncertainty and

unnecessary risk. Because there are obvious, even if understandable, mistakes or oversights in their development, the effluent limitations in Table D of Section B should be vacated, as well as the effluent limit for molybdenum in Table C. Any proper CTR-based effluent limits would then of course be adopted in the permit renewal itself. In addition, the Board should modify the schedule of compliance for molybdenum and extend the interim limit in permit provision B.5. The revised schedule should afford time for consideration of an appropriate basin plan amendment prior to commitments toward capital costs.

At the very least, the current permit must be amended to remove final permit limits for cadmium, copper, mercury, antimony, beryllium, lead, selenium, silver, thallium and molybdenum. The City's current permit contains interim limits for these constituents, which will expire on May 18, 2006. Once the interim limit expires, it becomes very difficult to change final limits that have gone into effect. In addition, the City may not be able to meet the final limits for some of these constituents while the Regional Board continues forward to develop a new permit.

We would like to meet with you, Mr. Packard, Mr. Stanley, and Mr. Briggs, at your earliest convenience, to discuss these matters. Please contact me to make arrangements for us to meet.

Sincerely,

Susan Halpin
Wastewater Superintendent

cc: Roger Briggs
Harvey Packard
Todd Stanley
Jim Beck

Infeasibility Analyses, Lompoc Wastewater Treatment Plant

Introduction

The City of Lompoc (City) received notification from the Central Coast Regional Water Quality Control Board (Regional Board) that the Regional Board's results of its reasonable potential analysis included reasonable potential for two priority toxicity pollutants subject to the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (known as the State Implementation Policy (SIP), effective 4/28/00 and amended 7/13/05). Infeasibility analyses for constituents listed in the SIP are required for the Regional Board to issue interim limits and compliance schedules. The analysis contained herein is submitted to the Regional Board by the City to demonstrate the City's inability to comply with certain proposed water-quality based effluent limits for discharge from the Lompoc Wastewater Treatment Plant (Plant).

Background

The SIP establishes statewide policy for National Pollutant Discharge Elimination System (NPDES) permitting. The SIP provides for the situation where an existing NPDES discharger cannot immediately comply with an effluent limitation derived from a California Toxics Rule (CTR) or more stringent toxic Basin Plan criterion. The SIP allows for the adoption of interim effluent limits and a schedule to come into compliance with the final limit in such cases. To qualify for interim limits and a compliance schedule, the SIP requires that an existing discharger demonstrate that it is infeasible to achieve immediate compliance with the CTR based limit.

The term "infeasible" is defined in the SIP as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors."

The SIP requires that the following information be submitted to the Regional Board to support a finding of infeasibility:

(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
(b) documentation of source control and/or pollution minimization efforts currently under way or completed;
(c) a proposed schedule for additional or future source control measures, pollutant minimization or waste treatment; and
(d) demonstration that the proposed schedule is as short as practicable.

Pollutants to be Evaluated

The pollutants for which an infeasibility analysis or compliance schedule justification was requested by the Regional Board are as follows:

- Chlorodibromomethane
- Dichlorobromomethane

Effluent Limit Attainability

Potential final effluent limits for these constituents, based on the California Toxics Rule, are compared to the maximum observed effluent concentrations at the Plant in Table 1.

Table 1. Proposed Effluent Limits for the City of Lompoc Wastewater Treatment Plant

Pollutant	Water Quality Based Effluent Limits		Effluent Quality
	AMEL[a]	MDEL[b]	MEC[c]
Chlorodibromomethane (µg/L)	0.41	0.82	1.70
Dichlorobromomethane (µg/L)	0.56	1.13	1.59

[a] AMEL: average monthly effluent limit
[b] MDEL: maximum daily effluent limit
[c] MEC: maximum effluent concentration

The final effluent limits shown above are calculated using procedures described in Section 1.4 of the SIP for priority pollutants. No ambient background data were available. Dilution was taken as zero and the receiving water was classified as fresh water with municipal drinking water, aquatic life and agricultural beneficial uses.

Maximum observed (detected) effluent concentrations are based on recent Plant effluent quality data (July 2001-July 2005). As shown in the table above, the City may not be able to comply with proposed effluent limits for the listed constituents. The infeasibility analyses and compliance schedule justifications for the listed constituents are discussed below.

Source Control and Pollution Prevention Efforts

The City's pretreatment program regulates one categorical industry, a semi-conductor manufacturer, and two significant industries, including a water softener regenerator and an Air Force base. The City has not previously identified any pollutants of concern and therefore has not conducted pollution prevention activities targeting the constituents discussed in this analysis. Information about the two priority pollutants under analysis is provided below.

Trihalomethanes

The maximum observed effluent concentration for chlorodibromomethane is 1.7 µg/L (measured in July 2005, out of 5 samples) which would exceed a proposed final MDEL of 0.82 µg/L and AMEL of 0.41 µg/L. Therefore, the City will not be able to immediately comply with potential final limits.

The maximum observed effluent concentration for dichlorobromomethane is 1.59 µg/L (measured in July 2003, out of 5 samples) which would exceed a proposed final MDEL of 1.13 µg/L and AMEL of 0.56 µg/L. Therefore, the City will not be able to immediately comply with potential final limits.

The City has not previously identified either chlorodibromomethane or dichlorobromomethane as problem pollutants and therefore has not initiated source control actions targeting these constituents or other trihalomethanes. Also, no influent data are available at this time because the trihalomethanes have not been previously identified as a problem. There has been no requirement of a source control program or influent data collection for trihalomethanes; this would be unusual because trihalomethanes are typically undetected in the influent as they are usually a by-product of the chlorination process. Thus, influent data for trihalomethanes rarely indicates that these constituents are coming into the wastewater plant as part of the influent.

The creation of trihalomethanes through the chlorination process has been an issue of statewide concern. Because of these concerns related to chlorination by-products, the City has already begun efforts to eliminate chlorination disinfection at its Wastewater Treatment Plant and replace it with an ultraviolet light disinfection system. By eliminating chlorine disinfection, the production of trihalomethanes in the treatment process should also cease.

At this time, however, the City cannot meet the potential effluent limits until the ultraviolet disinfection system is in place. Thus, the City requests interim limits for chlorodibromethane and dichlorobromethane until the City completes the addition of an ultraviolet disinfection system (UV) to its treatment train. The addition of UV is part of the City's original Master Plan for the Regional Wastewater Reclamation Plant, which was approved by the City's planning commission in April of 2003. UV disinfection is the final upgrade of many that the City is currently in the process of making. Because of the number of upgrades currently occurring, the addition of UV is not scheduled to be completed until the beginning of 2009. Therefore, the City requests interim limits for chlorodibromethane and dichlorobromethane be in effect until the end of May 2009. That should allow the City sufficient time to complete all of its scheduled upgrades, add UV and adjust the treatment system as necessary before final limits go into effect.

In the meantime, the City will conduct quarterly influent monitoring for chlorodibromomethane and dichlorobromomethane to determine if influent sources contribute to the trihalomethanes in the effluent. Should significant levels of chlorodibromomethane or dichlorobromomethane be found in the influent (i.e., if more than half the samples have detected levels above the respective AMELs), the City will initiate source identification efforts.

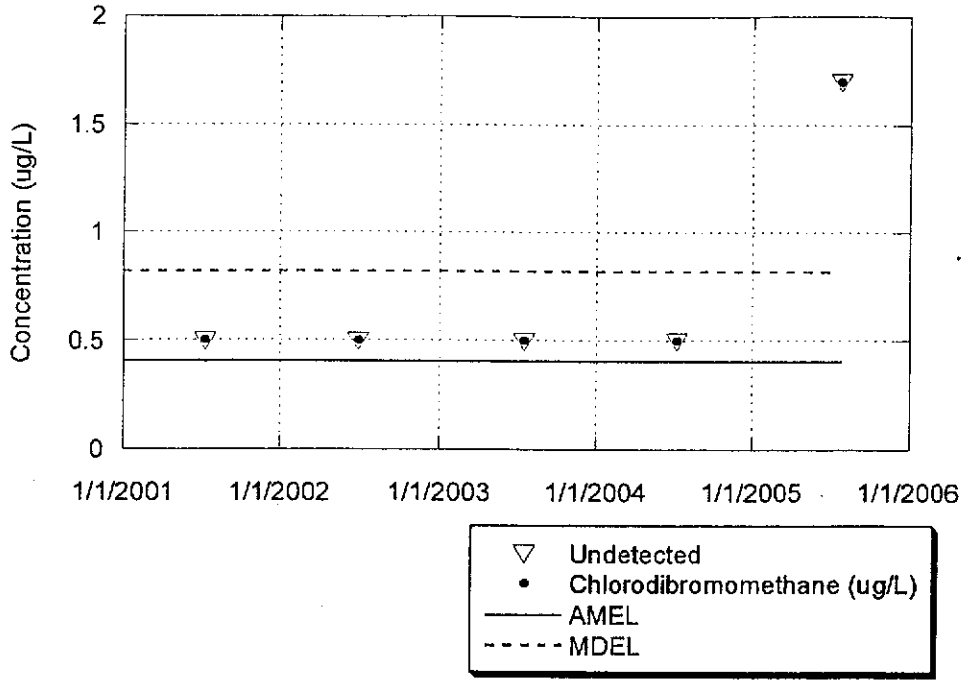

Figure 1. Effluent Chlorodibromomethane

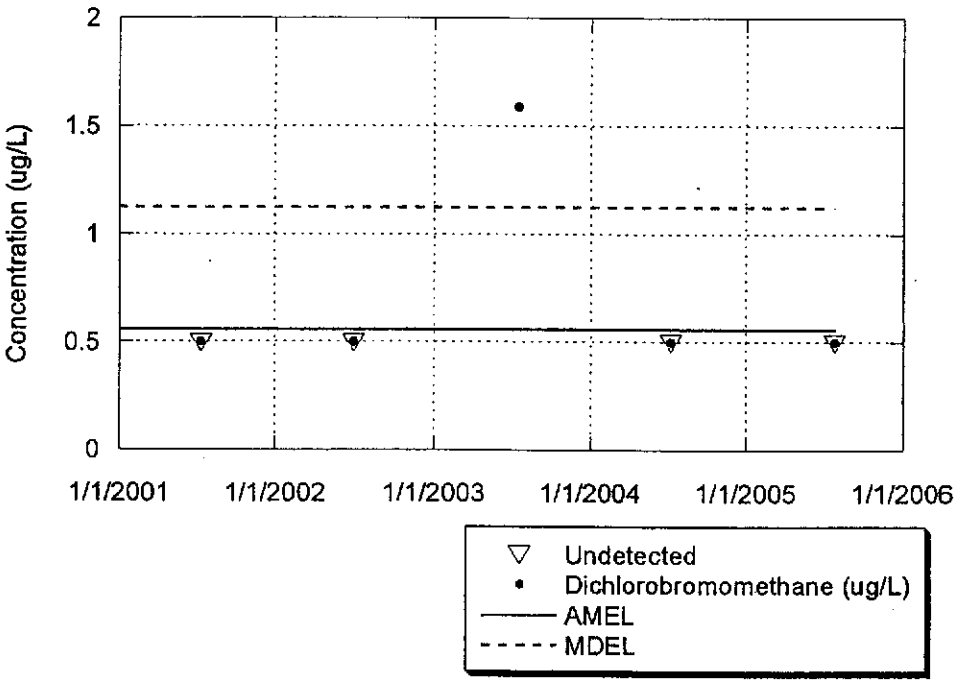

Figure 2. Effluent Dichlorobromomethane

Summary

This evaluation indicates that immediate compliance with potential final effluent limits for chlorodibromomethane and dichlorobromomethane is not feasible for the City of Lompoc.

In accordance with the requirements of the SIP, the City requests that the Regional Board refrain from the adoption of final effluent limits for these constituents. In lieu of final limits, the NPDES permit should include interim performance based limits with which the City can comply. The City will continue monitoring and/or implement the source control actions listed in Table 2 for the two constituents as appropriate.

Table 2. Proposed Source Control Actions

Pollutant	Proposed Action	Estimated Time to Complete
Chlorodibromomethane	• Influent monitoring	• Quarterly until May 31, 2009
	• Switch to UV disinfection	• May 31, 2009
Dichlorobromomethane	• Influent monitoring	• Quarterly until May 31, 2009
	• Switch to UV disinfection	• May 31, 2009

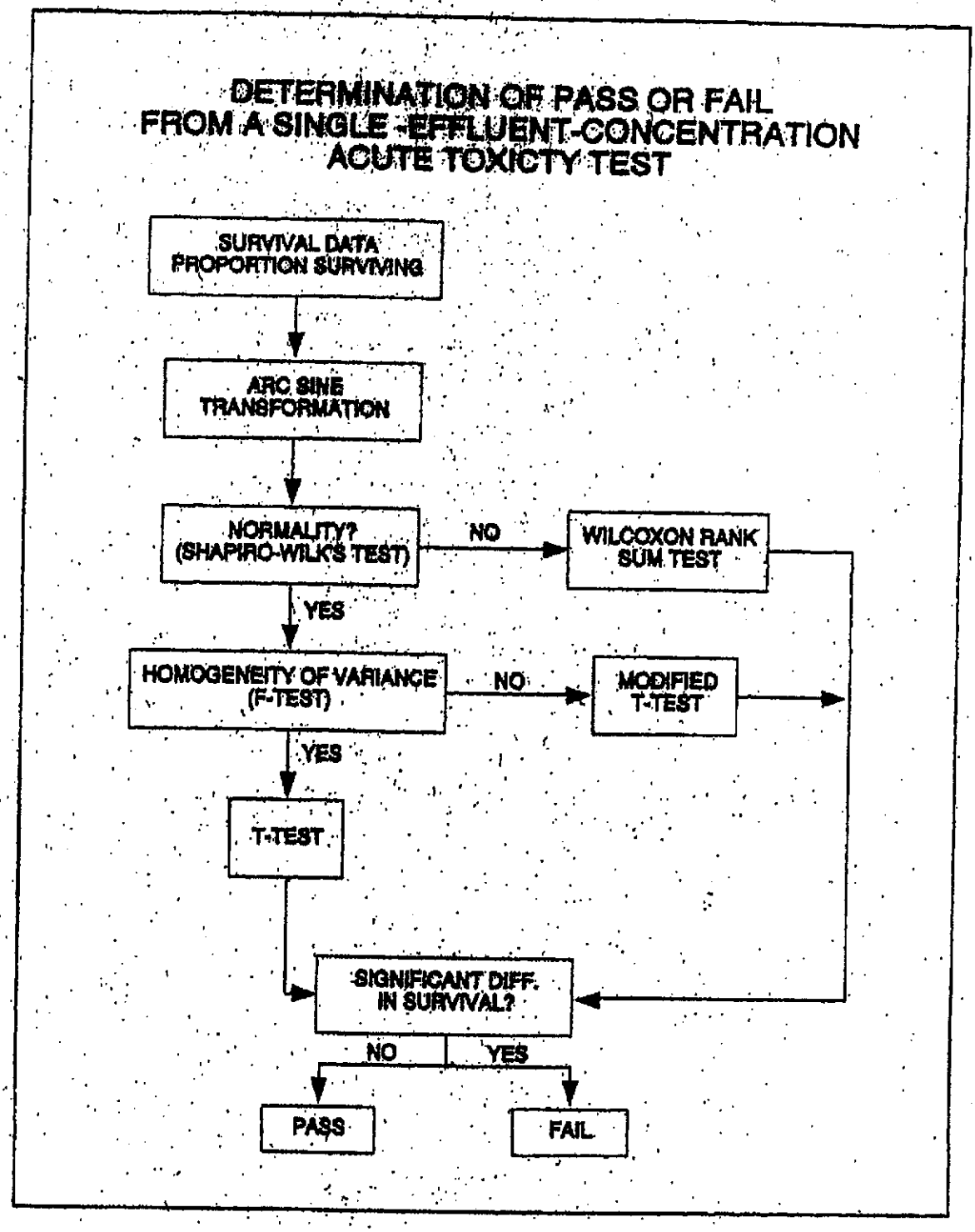

Figure 12. Flowchart for analysis of single-effluent concentration test data.

INFORMATIONAL DOCUMENT

Public Scoping Meeting for Proposed Revisions to the Toxicity Control Provisions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

December 2005

DIVISION OF WATER QUALITY
STATE WATER RESOURCES CONTROL BOARD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Introduction

As directed by the State Water Resources Control Board (StateWater Board), staff is currently working to revise the toxicity control provisions in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). Proposal changes include clarifying the appropriate form of effluent toxicity limits in National Pollutant Discharge Elimination System (NPDES) permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process.

Background

In order to implement the Clean Water Act, the California Water Boards (State Water Board and the Regional Water Quality Control Boards [Regional Water Boards]) follow the integrated approach to water quality-based toxics control recommended by the United States Environmental Protection Agency (USEPA). This approach combines the use of chemical-specific and whole effluent toxicity (WET) limits to control the discharge of toxics to California's waters. Chemical-specific limits provide control of known pollutants in a discharge, while toxicity limits provide control of unknown pollutants and the aggregate effects of combined pollutants. Both chemical-specific and toxicity limits are crucial to water quality-based toxics control in California.

Whole effluent toxicity is measured through aquatic toxicity tests that expose wastewater effluent or receiving waters to sensitive aquatic organisms and measure the ensuing effects on survival, growth and reproduction. These tests are used to determine compliance with the Objectives for toxicity in California's Regional Water Quality Control Plans (Basin Plans). These Basin Plans contain narrative toxicity Objectives, which generally state that *"all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life;"* however, the specific language varies among Basin Plans. USEPA requires that regulatory authorities establish permit limits for WET when an effluent discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a numeric or narrative criterion [Objective] within an applicable State water quality standard (40 Code of Federal Regulations 122.44(d)).

The current toxicity control provisions, found in Section 4 of the SIP, briefly establish minimum chronic toxicity control requirements for implementing the narrative toxicity Objectives for aquatic life protection in the Basin Plans. The SIP requires that the California Water Boards impose chronic toxicity limits for discharges that have the reasonable potential to cause in-stream chronic toxicity. Compliance with toxicity Objectives and limits is to be determined through short-term chronic toxicity tests. These tests must be performed on at least three test species (a plant, an invertebrate, and a vertebrate) during a screening period, after which the most sensitive species can be used alone. Appropriate sources of test dilution water and the use of reference toxicants are also described. Appropriate chronic toxicity tests for discharges into fresh water are listed in Table 5, which includes references to USEPA methodology for each test. Test methods outlined in the California Ocean Plan are to be used for chronic toxicity testing associated with discharges into salt water. If repeated toxicity tests

reveal toxicity or if a discharge causes or contributes to chronic toxicity in a receiving water body, then a toxicity reduction evaluation (TRE) study, which may include a toxicity identification evaluation (TIE), must be performed. The TRE study is used to identify the source(s) of toxicity, after which the discharger must take all reasonable steps necessary to eliminate the toxicity. Chemical-specific permit limits will be assigned for toxins identified by the TRE. The provisions also allow for multiple dischargers coordinating TREs related to the same water body. Failure to comply with required toxicity testing and TRE studies within a designated period will result in the addition of chronic toxicity limits in the permit, or appropriate enforcement action.

Problem Statement

The SIP currently contains significant implementation gaps regarding the NPDES process to control toxicity. Most critically, the appropriate form and implementation of toxicity limits must be clarified. The SIP does not specify whether narrative or numeric limits should be used to control toxicity and this ambiguity has already led to the petitioning of NPDES permits by dischargers (see Water Quality Order 2003-012). In addition, the direction for assigning toxicity limits in the SIP is not clear. The SIP requires toxicity limits in permits for discharges that have reasonable potential to cause toxicity, but later states that toxicity limits will be imposed on dischargers that fail to comply with required toxicity testing and TRE studies. The latter statement is misleading as it implies that toxicity limits are not required unless a discharger is noncompliant with prescribed monitoring and TRE studies. The conditions under which toxicity limits are required should be clarified in the SIP.

Although clarifying the appropriate use of toxicity limits is of primary importance to this proposed amendment, this amendment may also address additional implementation gaps in the SIP related to the NPDES process to control toxicity. Before a toxicity limit is set, data must be collected, assessed for representativeness, and analyzed to determine if the discharge causes, contributes or has the reasonable potential to contribute to toxicity in receiving waters. If a toxicity limit is required, then either the limit itself (for numeric limits) or a toxicity monitoring trigger (for narrative limits) must be calculated. Whether or not toxicity limits are required, monitoring schedules for toxicity must be developed. Requirements for TREs should be formulated and clearly defined in the permits. And finally, potential enforcement steps should be outlined. The current toxicity control provisions in the SIP do not address these steps. Minimum requirements for the implementation of the above stated processes should be included. Section 1 of the SIP addresses the implementation required to set limits for priority pollutants. Excerpts of Section 1 could be directly applicable to toxicity control implementation, while other implementation strategies may need to be adapted for use with toxicity control. In addition, the USEPA has provided guidance on toxicity control implementation in several documents, some of which could be incorporated into the SIP.

Potential Revisions Subject to Scoping Consideration

1) Clarify the use of Chronic Toxicity Limits in the SIP

If a discharge is found to have reasonable potential to cause or contribute to an in-stream excursion of a narrative toxicity Objective, then a toxicity limit must be included in the NPDES permit (40 CFR 122.44(d)(1)(v)). Two USEPA approved options for setting toxicity limits in NPDES permits are numeric limits and narrative limits with numeric monitoring triggers. Each of these options is discussed below. State Board staff is also exploring a separate toxicity limit provision for Publicly Owned Treatment Works (POTWs) that would address the challenges of influent variability inherent to this discharge class.

Option 1: Numeric Toxicity Limits

Proposal: The SIP may be amended to require the use of numeric toxicity limits for discharges that have a reasonable potential to cause or contribute to in-stream toxicity, and to add compliance schedule provisions, where necessary. Numeric toxicity limits provide an efficient regulatory tool because the measurement of compliance is clearly defined. In this scenario, the burden of achieving and maintaining compliance lies entirely with the discharger. Once a limit is exceeded, the discharger must take all reasonable steps necessary to return to compliance in order to avoid further violations. Such steps may include performing a TRE, or other methods to reduce and control toxicity. Numeric limits represents a compliance-driven model of toxicity control, where the regulating agency assesses the compliance status of the discharge but does not provide management of the dischargers' attempts to reduce toxicity.

The use of numeric toxicity limits can become problematic when a noncompliant discharger is aggressively pursing the necessary steps to identify and reduce the source(s) of the observed toxicity, but is continually accruing violations. In very rare instances, a discharger with a NPDES permit that relies solely on toxicity limits to control pollution could receive a mandatory minimum penalty (MMP) of three thousand dollars for every fourth or greater violation within any consecutive six-month period (California Water Code §13385(i) (CWC)). MMPs do not apply to toxicity violations if the NPDES permit contains at least one chemical-specific limit for a toxic pollutant. Since most California NPDES permits contain chemical-specific limits for toxic pollutants, MMPs for toxicity violations would be very rare.

Most California NPDES permits for POTWs with discharges that have a reasonable potential to cause or contribute to toxicity currently contain narrative toxicity limits. The transition to a numeric limit can be a significant regulatory change and may require a TRE before compliance can be achieved. The use of temporary schedules of compliance, where authorized, could provide regulatory flexibility for dischargers adjusting to new numeric limits. The compliance schedule would include interim limits, a monitoring schedule, and a schedule of deadlines for steps within the TRE process.

With the numeric limit option, NPDES permits for discharges found to have reasonable potential to cause or contribute to toxicity in receiving waters would be required to contain a calculated toxicity limit. Methods for limit calculation would most likely follow the current

methods in the SIP, which are provided for chemical-specific limits. An alternative would be to calculate limits using USEPA's methods described in the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001). A schedule of compliance for new numeric toxicity limits could be provided for a period as short as practicable, but not exceeding five years. The drawbacks of this option include the potential of assigning violations to POTW dischargers that are genuinely attempting to reduce toxicity through an aggressive TRE process. The numeric limit option would provide the benefit of a highly efficient regulatory tool that will assure the protection of water quality.

Option 2: Narrative Toxicity Limits with Numeric Monitoring Triggers

Proposal: The SIP may be amended to require the use of narrative toxicity limits with monitoring triggers to initiate a stringent TRE for discharges that have a reasonable potential to cause or contribute to in-stream toxicity. Narrative effluent limits to control toxicity generally state that *'there shall be no toxics in toxic amounts'* in the receiving waters. The use of a narrative toxicity limit should be accompanied by a numeric monitoring trigger which, when exceeded, requires a regime of accelerated toxicity testing and possibly a TRE to reduce and control the source(s) of toxicity. Narrative limits do not provide a clear measurement of compliance and thus represent an oversight-driven model of toxicity control, where the regulatory agency must carefully manage the dischargers' efforts to reduce and control toxicity.

When narrative toxicity limits are used, the regulatory agency must ensure that the dischargers are taking all reasonable steps necessary to control effluent toxicity by careful scrutiny of the TRE process. The iterative approach of using TRE studies to detect and reduce the cause(s) of toxicity was designed by USEPA to compliment a numeric effluent limit, which provides incentive for the dischargers to aggressively pursue the elimination and prevention of effluent toxicity. Current USEPA guidance on TRE studies does not incorporate the level of management necessary to implement this process without the incentive of numeric limits. For example, the recommended TRE processes would not address recurring toxic pulses as long as the pulse lasted less than 30 – 60 days and could potentially allow continuous toxicity excursions to continue for months to years while the process is slowly proceeding. To prevent this from occurring, the TRE requirements would need to be significantly strengthened if narrative limits are used. Potential changes to these requirements may include an increase in the number of toxic-free tests required before ending the initial stages of a TRE, a more aggressive TIE approach, and consideration of the frequency and pattern of observed toxicity in any particular facility. A narrative toxicity effluent limit with a numeric monitoring trigger can be used to successfully implement the State toxicity objectives provided that a stringent TRE requirement is in place, and strict oversight by the regulatory agency is possible.

With the narrative limit option, NPDES permits for discharges found to have reasonable potential to cause or contribute to in-stream toxicity would be required to contain clear language describing the narrative toxicity effluent limit, numeric monitoring triggers, accelerated testing requirements to determine the need for a TRE, and detailed, site-specific implementation for a stringent TRE process, including clear deadlines. Regional Water Board staff would need to carefully review the TRE plan and may add additional requirements. Regional Water Board staff must also be prepared to closely monitor the TRE process once it is initiated. The drawbacks of

this option include the considerable Regional Water Board resources that would be required to ensure that water quality is protected. The benefits of the narrative limit option include the avoidance of assigning violations to dischargers that are genuinely attempting to reduce toxicity through an aggressive TRE process.

Option 3: Separate Requirements for POTWs

Proposal: The SIP may be amended to require that different toxicity limit forms be applied to POTWs and non-POTWs. POTW discharges that have a reasonable potential to cause or contribute to in-stream toxicity would receive narrative toxicity limits with monitoring triggers to initiate a stringent TRE. Non-POTW discharges with a reasonable potential to cause or contribute to in-stream toxicity would receive numeric toxicity limits. POTWs face the unique challenge of treating a highly variable and partially unrestricted influent. For this reason the State Water Board may consider the use of a separate toxicity limit provision to regulate discharges of this class. For example, when an industrial discharger observes toxicity there is a finite list of possible causes of that toxicity. This creates a fairly straightforward means of investigating and controlling the sources of toxicity. However, toxicity in a POTW's influent could result from a number of sources, including the use of new household products. Investigating and controlling toxicity observed in POTW effluent can be a lengthy and technically difficult process. Source control may include implementing new pretreatment or public awareness programs. The State Water Board may consider the use of narrative toxicity limits exclusively for POTWs in order to avoid penalizing these facilities while they are aggressively pursuing a TRE to control toxicity.

2) Clarify and Expand the General Toxicity Control Implementation in the SIP

Significant implementation gaps in the SIP regarding the NPDES process to control effluent toxicity have been problematic for Regional Water Board staff, dischargers, and other California stakeholders. The main issues that need to be addressed are discussed below and potential strategies to clarify and standardize toxicity control implementation are listed. The State Water Board may address some or all of these issues through this SIP amendment.

Consideration of Acute Provisions

Proposal: The SIP may be amended to clarify the State's approach to both chronic and acute toxicity control. The SIP does not currently address acute toxicity. USEPA recommends using either chronic or acute toxicity limits in each permit and provides a calculation method to determine which type of limit would be most protective for each discharge. However, most Regional Water Boards currently assign both acute and chronic limits for dischargers that have a reasonable potential to cause or contribute to in-stream toxicity. The State Water Board may consider the efficacy of relying on only chronic toxicity limits to protect water quality.

Data Collection

Proposal: The SIP may be amended to recommend (or require) that at least ten valid and representative WET testing data points be used to evaluate the need for toxicity effluent limits in a NPDES permit. The Regional Water Boards use WET testing data to decide if a discharge requires a toxicity effluent limit in the NPDES permit. It is important that a sufficient

amount of data is used to adequately determine the potential of a discharge to cause toxicity in receiving waters. Using at least ten data points will reduce the variability inherent to very small data sets.

For new discharges that have not previously been permitted, temporary interim limits should be used for up to 18 months while the discharger collects at least ten representative WET testing data points. This can be achieved by using short-term compliance schedule orders. For permit renewals, all representative WET data can be used to determine the need for a toxicity effluent limit in the reissued permit. If less than 10 valid WET data points are available, the Regional Water Board should require the discharger to collect additional data *before* the current permit expires. This can be achieved by issuing written requests under Section 13267 of the CWC. All new or reissued permits should require dischargers to collect at least 10 valid and representative WET testing data points before the permit expires (regardless of assigned monitoring frequency).

Valid and Representative Data

Proposal: The SIP may be amended to recommend (or require) that a standardized data evaluation form be used to ensure that all WET data points are valid and representative when evaluating the need for toxicity effluent limits in NPDES permits. It is essential that all data used to assess the need for a toxicity effluent limit is valid and representative of the discharge (40 CFR 122.41(j)(1)). In order to ensure the use of valid data, Regional Water Board staff should evaluate all WET data for proper collection, preservation, shipment, storage, test method(s), data calculation, and data presentation before accepting the data. This could be implemented by requiring dischargers to submit a signed form that delineates each of these factors with each WET sample. Similarly, staff should ensure that data are representative of the discharge by considering local seasonal variation, seasonal patterns in uses of pollutants (domestic and industrial), and any variation in plant treatment and/or management procedures.

Calculation of Reasonable Potential

Proposal: The SIP may be amended to describe the appropriate method(s) of determining whether a discharge may cause, have the reasonable potential to cause, or contribute to toxicity. The method(s) may be adapted from both Section 1.3 of the SIP and USEPA's recommended method. The SIP may also be amended to recommend (or require) that toxicity data be expressed in a particular format and analyzed by a standard statistical method to determine whether a discharge has a reasonable potential to cause or contribute to toxicity. Section 1 of the SIP outlines a process to determine whether a discharge may (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above applicable Criterion or Objectives for priority pollutants. In this process, effluent data is reviewed to determine the observed maximum effluent concentration (MEC) for a given pollutant. If the MEC is greater than or equal to the pollutant objective, then an effluent limit is required. If the MEC is less than the applicable Objective, the ambient data is reviewed to determine the observed maximum ambient background concentration for the pollutant. If the maximum background concentration of the pollutant is found to be above the pollutant Objective *and* any amount of the pollutant is detected in the effluent, then an effluent limit is required for the discharge. For a more detailed description of this process, see Section 1.3 of the SIP. USEPA

recommends a method to determine reasonable potential that is similar to the method found in the SIP but also accounts for the variation in the evaluated data (EPA/505/2-90-001). Consideration of data variability is important in toxicity monitoring because these excursions can be periodic and unpredictable.

Toxicity data can be expressed in several different forms including percent survival, point estimates (i.e., LC_{50} or EC_{25}), No Observed Effect Concentration (NOEC), Lowest Observed Effect Concentration (LOEC), and as 'pass/fail.' Point estimate, NOEC and LOEC data can also be reported as Toxic Units (TU) by multiplying the reciprocal of those values by 100. All of the above mentioned data formats, except 'pass/fail,' can include censored data (greater than or less than a given value), which requires advanced statistical techniques to properly evaluate reasonable potential.

Determination of Permit Limit or Numerical Monitoring Triggers

Proposal: The SIP may be amended to describe the appropriate method of toxicity limit or monitoring trigger calculation and to recommend (or require) that toxicity limits be based on a specific type of analysis (i.e., hypothesis testing or point estimate). The SIP may also be amended to include guidelines for setting averaging periods for toxicity limits. Once the need for a toxicity effluent limit is determined, then the numerical limit or monitoring trigger must be calculated. Section 1.4 of the SIP describes a procedure to calculate effluent limits for priority pollutants that incorporates the pollutant objective, discharge dilution credit, ambient concentrations, effluent variability, and monitoring frequency. USEPA describes an effluent limit calculation that accounts for the above factors and is specific to toxicity limits in the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001).

Toxicity is measured differently than chemical-specific pollutants. Rather than quantifying a chemical concentration in effluent, toxicity tests quantify a concentration of effluent that causes a certain level of toxicity. For example, a discharger with a dilution credit may be given a limit of *no chronic toxicity at less than or equal to 75 percent effluent.* This requires that a toxicity test with 75 percent effluent and 25 percent control water is absent of statistically significant effects on the growth, reproduction or survival of test organisms, as compared to 100 percent control water. In this example, toxicity may be observed in higher concentrations of effluent (> 75 percent) because there is sufficient receiving water dilution to protect water quality. This limit could be described as NOEC $\geq$ 75 percent or TUc $\leq$ 1.33 (TUc = 100/NOEC). This type of testing, known as hypothesis testing, identifies a toxicity threshold (no observed effect or lowest observed effect) by comparing a series of diluted effluent to a control.

Limits can also be set as point estimates, which are interpolated from the concentration-response relationship between increasing concentrations of effluent and observed toxicity (analogous to dose-response). A common point estimate for acute toxicity is the LC_{50}, which describes the concentration of effluent at which 50 percent of the test organisms are killed. A common point estimate for chronic toxicity is the EC_{25}, which describes the concentration of effluent at which 25 percent of the test organisms experience a deleterious effect (e.g., reduced growth or reproduction). In the above example of a discharger with a dilution credit, a point

estimate-based chronic toxicity limit may be expressed as $EC_{25} \geq 75$ percent or $TUc \leq 1.33$ ($TUc = 100/ EC_{25}$).

While hypothesis testing compares the effects of one effluent concentration to another, point estimates can predict the effect level at any effluent concentration. Toxicity effluent limits based on hypothesis testing are restricted to the dilution series concentrations (e.g., 6.25 percent, 25 percent, 50 percent, 75 percent and 100 percent effluent) while those based on point estimates can be set at any effluent concentration. The use of point estimates would allow toxicity effluent limits to be expressed as calculated, rather than as the nearest dilution concentration available. As a measure of compliance, hypothesis testing does not identify the precise NOEC but rather the range that the NOEC falls within. For example, if toxicity is observed in 25 percent effluent but not in 6.25 percent effluent, then the actual threshold of toxic effects will be anywhere between 6.25 and 25 percent. The use of a point estimate-based effluent limit would use the concentration-response relationship to interpolate the precise effluent concentrations where significant toxic effects begin to occur.

Toxicity limits have also been expressed as percent survival of test organisms in 100 percent effluent. Test replication is very important with this method because a dilution series is not employed. In general, toxicity tests that use dilution series are considered more robust because the concentration-response relationship is considered. This test is only used for acute toxicity testing.

A toxicity effluent limit must be connected to an averaging period. Averaging periods are commonly monthly, weekly or daily. Some Regional Water Boards average a certain number of consecutive tests to determine compliance with a toxicity limit. The most significant issue to consider in setting averaging periods for toxicity limits is achieving adequate representation of the discharge.

Monitoring Schedules for all dischargers (with or without limits)

Proposal: The SIP may be amended to provide guidelines for setting toxicity monitoring schedules. Dischargers must be given a monitoring schedule for toxicity testing whether or not a toxicity limit is added to the permit. When determining appropriate monitoring schedules, the most significant issue is ensuring that the monitoring will accurately represent the discharge. Issues such as local seasonal variation, seasonal patterns in uses of pollutants (domestic and industrial), and any variation in plant treatment and/or management procedures should be considered. USEPA recommends weekly testing for dischargers with a toxicity limit. Most dischargers currently sample on a monthly basis.

Monitoring requirements should be less strenuous for discharges that shown no reasonable potential to cause or contribute to toxicity. However, the sampling should provide a representative profile of the discharge. All dischargers should be given clear direction for accelerated testing requirements that describes the point of initiation, frequency, reporting and the point of transition to a TRE.

TRE Requirements

Proposal: The SIP may be amended to include guidance on the appropriate implementation of TREs to reduce and control toxicity. The California Water Boards and USEPA are developing TRE guidance recommendations for California. It may be helpful to include guidance in the SIP regarding the following: accelerated testing, detailed, site-specific TRE plans, reasonable TRE timelines, reporting requirements and general guidelines for TIEs.

Potential Enforcement Steps

Proposal: The SIP may be amended to include potential enforcement options for toxicity control. It may be helpful to outline potential enforcement steps in the toxicity control provisions in the SIP. Appropriate methods for requiring extra data, addressing compliance with monitoring and reporting requirements, enforcing TRE plans, and addressing toxicity violations should be described.

Statewide Consistency

Proposal: Toxicity implementation in the SIP could be expanded to address the issues listed above by simply expanding the current provisions, or by creating statewide implementation policy that supersedes the toxicity implementation currently described in the Basin Plans. Currently the toxicity control provisions in the SIP describe the minimum requirements and do not supersede toxicity provisions in the Basin Plans. A statewide policy of toxicity control implementation would not supersede toxicity objectives in the Basin Plans. A statewide policy would provide clarity and consistency to toxicity control in California and would allow State Water Board staff to better provide assistance to all Regional Water Boards regarding the implementation of toxicity control.

Conclusions

Toxicity control is a complex issue in California. The StateWater Board is working to create successful toxicity control regulation that will be protective of water quality and fair to dischargers. A truly comprehensive toxicity control policy is necessary to effectively standardize toxicity control implementation and to assure adequate protection of water quality throughout California.

Environmental Checklist Form

1. **Project title:** Proposed Revisions to the Toxicity Control Provisions in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

2. **Lead agency name and address:**
   State Water Resources Control Board
   Division of Water Quality
   1001 I Street, 15th Floor
   Sacramento, California 95814

3. **Contact person and phone number:**
   Regina Linville
   916-341-5579

4. **Description of project:**
   Revise and expand Toxicity Control Provisions in the SIP to address existing implementation gaps and to clarify the appropriate use of toxicity effluent limits in NPDES permits.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use / Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

EVALUATION OF ENVIRONMENTAL IMPACTS:

Issues:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	X
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	X
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	☐	X
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv) Landslides?	☐	☐	☐	X
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	X
VII. HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
manner which would result in substantial erosion or siltation on- or off-site?				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	X
f) Otherwise substantially degrade water quality?	☐	☐	☐	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	X
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X
Other public facilities?	☐	☐	☐	X
XIV. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	X
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X
XVII. MANDATORY FINDINGS OF SIGNIFICANCE –				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X

EVALUATION OF ENVIRONMENTAL IMPACTS:

I.a.,b.,c.,d. There is nothing in the proposed SIP revision that will impact designated scenic vistas or highways, or have a demonstrable negative aesthetic affect, or result in increase glare.

II.a.,b.,c. The proposed SIP revision will not convert any land including farmland, change existing zoning for agricultural use, or change any existing environment due to its location or nature that could result in the conversion of farmland to non-agricultural use.

III.a.,b.,c.,d.,e. The proposed SIP revision will not adversely affect air quality, result in increase exposure to sensitive species through the air pathway, or result in changes in temperature, humidity, precipitation, winds, cloudiness, or other atmospheric conditions.

IV.a.,b.,c.,d.,e.,f. The proposed SIP revision is not expected to cause any significant adverse effects to plants and animals, including rare, threatened, or endangered species. The SIP revision is based on USEPA recommended implementation procedures to protect aquatic biological resources.

V.a.,b.,c.,d. The proposed SIP revision will have no direct or indirect impact on any cultural resources.

VI.a.i.,ii.,iii.,iv.,b.,c.,d.,e. The proposed SIP revision will not affect any geologic or soil conditions.

VII.a.,b.,c.,d.,e.,f.,g.,h. The proposed SIP revision will have no impact to the above areas.

VIII.a.,b.,c.,d.,e.,f.,g.,h.,i.,j. The proposed SIP revision will not affect absorption rates, drainage patterns, surface runoff, flooding, quantity or quality at surface or groundwater, surface water currents, or groundwater flow or supply.

IX.a.,b.,c. The implementation of the proposed SIP revision does not require specific property to be used in any way or prohibit property use.

X.a.,b. The proposed SIP revision will not result in the loss, recovery, or interfere with a plan regarding mineral resources.

XI.a.,b.,c.,d.,e.,f. The proposed SIP revision will not result in an increase in existing noise levels or cause exposure to people to severe noise levels.

XII.a.,b.,c. The proposed SIP revision will not affect population growth, development patterns, or affect existing housing.

XIII.a. The proposed SIP revision will not result in any adverse impacts to fire, police, schools, parks, or other public facilities.

XIV.a.,b. The implementation of the proposed SIP revision will not increase the use of parks, recreational facilities, or require construction or expansion of recreational facilities that would physically effect the environment.

XV.a.,b.,c.,d.,e.,f.,g. The proposed SIP revision will not impact existing transportation or traffic circulation patterns.

XVI.a.,b.,c.,d.,e.,f.,g. The proposed SIP revision will not directly impact any utility or service system. Even though the proposed SIP revision may have more stringent implementation provisions, permitted dischargers can, in most cases, attain the toxicity effluent limits based on the toxicity objectives set forth in the Basin Plans. The actual objectives are not affected here.

XVII.a.,b.,c. The proposed SIP revision does not have the potential to degrade the quality of the environment, substantially reduce fish or wildlife habitat, cause fish or wildlife population to

drop below self-sustaining levels, or threaten to eliminate a plant or animal community. Also, the SIP revision will not cause effects on human beings directly or indirectly.

California Regional Water Quality Control Board

Central Coast Region

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

Internet Address: http://www.swrcb.ca.gov
81 Higuera Street, Suite 200, San Luis Obispo, California 93401-5427
Phone (805) 549-3147 • FAX (805) 543-0397

June 14, 2001

Mr. Frank L. Priore
City of Lompoc
Post Office Box 801
Lompoc, CA 93438

Dear Mr. Pierce:

CORRECTION OF WASTE DISCHARGE REQUIREMENTS, CITY OF LOMPOC REGIONAL WASTEWATER TREATMENT FACILITY, SANTA BARBARA COUNTY – ORDER NO. 01-87

A typographical error was discovered in your recently adopted Order No. 01-87. The time-based chlorine limit should be 0.02 mg/l instead of 0.01 mg/l, as listed in the final adopted order that was mailed to you. This correction regarding the chlorine limitation is fully explained in the attached memo. Also attached you will find a corrected version of page 10 of the Waste Discharge Requirements in Order 01-87. The original page 10 should be removed and replaced with this enclosed page which correctly identifies the limits that were intended for this discharge.

If you have any questions about this letter, please call Scott Phillips at (805) 549-3550 or Gerhardt Hubner at (805) 542-4647.

Sincerely,

Roger W. Briggs
Executive Officer

Attachments: Corrected Page 10 of Order No. 01-87
Lompoc Regional WWTP Order No. 01-87 Cl Limit Error Memo

Task: 102-01
City of Lompoc
S:\WB\Coastal Watershed\Staff\-Scott-\Lompoc order\Correction.ltr.doc

Cc:Interested Parties List
City of Lompoc
Order No. 00-14

Dale Ducharme
Wastewater Superintendent
P.O. Box 8001
Lompoc, CA 93438

State Water Resources Control Board
Division of Water Quality
Jennifer Soloway
SWRCB/OCC
P.O. Box 100
Sacramento, CA 95812-0100

U.S. Environmental Protection Agency
Region IX, Permits W-5-1
75 Hawthorne Street
San Francisco, CA 94015

Santa Barbara County Environmental Health Services
225 Camino Del Remedio
Santa Barbara, CA 93110

Vicki Clark
Environmental Defense Center
906 Garden Street, Suite 2
Santa Barbara, CA 93101

Bruce Wales
Santa Ynez Water Conservation District
PO Box 719, Santa Ynez, CA
93460

Memo:
June 13, 2001
From Scott Phillips
To: Roger Briggs

RE: LOMPOC REGIONAL WWTP ORDER NO. 01-87 CL LIMIT ERROR.

The Lompoc permit was adopted by the Board at the May 2001 meeting. The City called after receiving their adopted Order and noticed an error in the Chlorine limit (there was a 0.02 limit rather than 0.01). I confirmed with the City that the number was supposed to be 0.02. I researched the evolution of the limit.

The Draft Order 01-87 indeed listed the time-based Cl limit as 0.02. There were no public comments on this limit, and we had no intention to change it in the final version. However, the version that was placed in the agenda states the time-based Cl limit as 0.01 mg/l, as does the final version that was sent to the Discharger. Later in the same specification (B.9) the limit is correctly stated as 0.02 mg/l (when continuous monitoring is not available).

Provision (B.9) in the draft Order that went out for public comment read:

9. Compliance determinations for total chlorine residual shall be based on 99% compliance. To determine 99% compliance with effluent limitations for total chlorine residual, the following conditions shall be satisfied.
   a) The total time during which the total chlorine residual values are above 0.02 mg/L (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month.
   b) No individual excursion from 0.02 mg/L shall exceed 30 minutes; and
   c) No individual excursion shall exceed 0.1 mg/L
   d) When continuous monitoring is not being used, standard compliance guidelines shall be followed [F & E].

This paragraph correctly included the 0.02 limit. After the comment period, the final version of the Order included an added parenthetical statement defining 'standard guidance guidelines', which was discussed in the comment section of the Staff Report as shown below:

"Channel Keepers
Drew Bohan

1. The new standards for continuous pH and residual chlorine monitoring are not explicit enough to spell out when continuous monitoring or "standard compliance guidelines" should be used. Furthermore, "standard compliance guidelines" are not specifically stated, apparently leaving the decision up to best professional judgement.

Staff Response:
Staff agrees that this specification is unclear as originally written. If for any reason continuous monitoring is not possible, standard monitoring procedures dictate that any deviation outside of the Basin Plan range (pH of 6.5 – 8.3 or a Cl residual greater that **0.02 ppm** *emphasis added*) represents a violation. Monitoring frequency will revert to daily, and the standard provisions require that to take place at the time of day when most extreme conditions are expected. As a remedy to this original wording, staff has added a parenthetical statement to the specification to clarify the exact meaning of "standard compliance guidelines". Staff feels that it is in the discharger's best interest to maintain continuous monitoring of these parameters as consistently as possible to avoid violations."

Once again, we referred to the 0.02 limit. No other change was intended or needed. However, the final version that was before the Board and adopted states:

9. Compliance determinations for total chlorine residual shall be based on 99% compliance. To determine 99% compliance with effluent limitations for total chlorine residual, the following conditions shall be satisfied.
   e) The total time during which the total chlorine residual values are above **0.01** mg/L (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month.
   f) No individual excursion from **0.01** mg/L shall exceed 30 minutes; and
   g) No individual excursion shall exceed 0.1 mg/L
   h) When continuous monitoring is not being used, standard compliance guidelines shall be followed (i.e. below **0.02** ppm at all times, measured once a day according to standard provisions)[F & E].

So the adopted Order had an incorrect 0.01 limit in e. and f., but the correct figure of 0.02 in h. The 0.02 figure is consistent with the staff report and is the correct figure.

Recommendation: Correct and Resend Page 10 of the Order so the intended chlorine limit of 0.02 mg/l is used in the time based limit, rather than 0.01 mg/l.

Element	Interim limit (Average) ppb	EPA MCL (ppb)
Berllium	10	4
Lead	30	15
Selenium	20	50
Silver	10	100
Thallium	50	2
Molybdenum	30	80

These limits are based on the lowest achievable effluent levels of these constituents, using the current treatment system.

6. When the Discharger continuously monitors pH of wastewater, levels shall be maintained within the specified range, 99% of the time. To determine 99% compliance the following conditions shall be met:

   a) The total time during which the pH residual values are outside the range 6.5 to 8.3 (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month.
   b) No individual excursion from this range shall exceed 30 minutes; and
   c) No individual excursion shall fall outside the range of 6.0 to 9.0 for any period of time.
   d) When continuous monitoring is not being used, standard compliance guidelines shall be followed (i.e. between 6.5 and 8.3 at all times, measured daily according to standard provisions).[F]

7. The discharge shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses or floating solids.[C]

8. Effluent discharged to the creek shall be adequately disinfected so that the 7-day median most probable number (MPN) of total coliform organisms in the effluent does not exceed 23 per 100 milliliters, shall not exceed a log mean of 200/100 ml, or shall more than 10% of the total samples during any 30-day period exceed 400/100 ml.

9. Compliance determinations for total chlorine residual shall be based on 99% compliance. To determine 99% compliance with effluent limitations for total chlorine residual, the following conditions shall be satisfied.
   a) The total time during which the total chlorine residual values are above 0.02 mg/L (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month.
   b) No individual excursion from 0.02 mg/L shall exceed 30 minutes; and
   c) No individual excursion shall exceed 0.1 mg/L
   d) When continuous monitoring is not being used, standard compliance guidelines shall be followed (i.e. below 0.02 ppm at all times, measured once a day according to standard provisions)[F & E].

Permit Reopener. This Board shall notice a reconsideration of this permit within 60 days of the date of the final judgement by the San Francisco Superior Court in Waterkeepers Northern California, et.al. Case No. 312513, for the purpose of modifying the permit to make it consistent with the judgement of the Court in this matter where any term, limitation, or provision is inconsistent with the judgement. The permit shall be modified within the time period established by the Court in this matter.

C. RECEIVING WATER SPECIFICATIONS

(Receiving water quality is a result of many factors, some unrelated to the discharge. This permit considers these factors and is designed to minimize the influence of the discharge on the receiving water.)

Specific numeric concentration limits are listed in Table C of the Discharge prohibitions.

The discharge shall not cause:

October 15, 2004

Mr. Gerhardt Hubner
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Subject: **City of Lompoc Regional Wastewater Facility**

Thank you very much to you and Todd Stanley for taking time to meet with us on 4 October and allowing us to share with you our recent progress with our wastewater facility upgrades. As we mentioned, we have recently accomplished the following milestones.

- Completed and submitted reports in 2002, 2003, and 2004 as required by our Waste Discharge Requirements Order No. 01-87 which provide important information on the sources of pollutants to our system as well as the effectiveness of treatment options to achieve interim and final effluent limits contained in our permit.

- Began bench scale testing to evaluate the effectiveness of treatment options to achieve interim and final effluent limits contained in our permit.

- Signed a $6 million contract with Brown and Caldwell to provide preliminary design, detailed design, and construction management services for major upgrades to our wastewater facility to assure compliance with final effluent limits.

- Obtained City Council approval for increases to our local wastewater service charges to support the ultimate construction of our wastewater facility upgrades.

- Applied for $46 million in loans from the State Revolving Fund to support the ultimate construction of our facility upgrades.

- Bonds for the City's portion of the costs for the plant upgrade project will be issued by the City in January 2005.

In addition, we shared with you our preliminary schedule for the wastewater facility upgrades which includes a construction start date of April, 2006 and a construction completion date of April, 2008. As we discussed with you, we are confident we will be able to achieve compliance with the vast majority of final effluent limits for constituents for which there are interim limits by the deadline contained in our current permit. We have attached a series of cumulative probability plots that show influent and effluent total metals concentrations using monthly analyses between July 2002 and June

2003. For some metals which were present at relatively low concentrations, some of the measured concentrations are below the method detection limit (MDL). For those concentrations below the MDL, the data points are not included on the plot. (There are no plots for beryllium and thallium, as all influent and effluent analyses were less than the MDL.) The 50th percentile value represents the mean concentration and the slope of the distribution represents the concentration variability. For most metals, the existing wastewater treatment facilities provide some degree of removal (i.e., the mean concentration is reduced) and the effluent concentration is more stable (i.e., the slope of the distribution is reduced). However, the existing effluent concentrations of two metals – molybdenum and copper – exceed the final effluent limits. As we discussed, we have some concerns with our ability to achieve compliance with the final limits for the constituents discussed below and appreciate your willingness to work with us to address these concerns.

Molybdenum: Analysis of the different influent water supplies in our service area has revealed elevated, natural levels of molybdenum, which are, in fact, higher than the final effluent limit contained in our permit that will be effective May 18, 2006. The molybdenum cumulative probability plot in the attachment shows the existing treatment facilities do not affect the influent molybdenum; the effluent molybdenum concentrations equal the influent concentrations. In addition, our preliminary bench testing does not provide us with a high degree of confidence that our proposed treatment facilities will reduce molybdenum below the final effluent limit. Additional facilities, such as reverse osmosis, may be the only means available to achieve the permit limit. These facilities would be extremely expensive to build, operate, and maintain, particularly for the removal of only one constituent. Disposal of the reverse osmosis concentrate (also referred to as brine) is problematic given the proximity of Lompoc to the ocean.

Additionally, we are aware of no reported historical evidence that existing natural levels of molybdenum in our water supply have caused any impairments of the downstream agricultural water supply. The 10 µg/L limit cited for agricultural beneficial reuse in the Basin Plan, which was the basis for the discharge permit limit, is based on a document published in 1972. We have contacted agricultural water quality specialists at UC Davis regarding subsequent research on the impacts of molybdenum on agricultural water use. This research may indicate no impairment at concentrations exceeding 10 µg/L, especially in areas with naturally occurring elevated molybdenum levels. We will keep you apprised of any information we obtain.

We understand from your comments that over the next few months, you will investigate the Board's original rationale for the molybdenum limit which supported a Basin Plan agricultural water quality objective and determine whether that rationale continues to be appropriate for the water body receiving our wastewater treatment plant effluent. We also understand you will determine the appropriateness of the existing effluent molybdenum limit in light of the fact that the City's influent water supply has naturally elevated levels; you will also review other facilities molybdenum limits for consistency with the City's limit. We understand you may consider a revised effluent limit during our permit reissuance in 2006 and/or an extension to our compliance time schedule for this constituent.

Copper: Based on our bench-scale testing, we are optimistic we will be able to achieve compliance with the monthly average final effluent limit contained in our permit for copper of 8.9 µg/L.

However, due to a lack of extensive data at this time, we are still not able to say with complete confidence we will be able to meet this limit 100 percent of the time. We anticipate additional data collection to more confidently answer this question. For example, we will analyze some effluent samples for both total and soluble (<0.45 μ) copper to determine if more efficient effluent suspended solids removal will allow us to meet the permit final limit. We understand from your comments you would be willing to consider this issue as a part of our permit reissuance in 2006 and may consider a revised effluent limit for this constituent or an extension to our compliance time schedule.

Beryllium and Thallium: We wanted to make you aware also of our concerns of the zero limits for these two constituents. There is a foot note in our permit stating limits of zero will be equivalent to the method detection limit of the constituent in question. Our concerns are that the limit will change each time a detection limit changes, that there is an unclear basis for these limits being either water quality based or technologically based.

TDS: Although we didn't have time for an in-depth discussion of total dissolved solids (TDS), as you know, future discharges from our facility will likely exceed our current permit level for this constituent. As with molybdenum, analyses of the different influent water supplies in our service area have revealed elevated concentrations of TDS. Also like molybdenum, consistent removal of TDS would require very expensive treatment technologies, such as reverse osmosis. We request to have more in-depth discussion of TDS prior to our permit reissuance in 2006 and look forward to any suggestions you may have on how we should address this challenging issue.

Water Reclamation: Water rights issues have prevented the City of Lompoc from reclaiming wastewater treatment plant effluent for non-potable reclaimed water use. However, downstream agricultural users rely upon groundwater recharge from the Santa Ynez River for their supply and are, in essence, reclaiming the City's effluent. We believe this groundwater recharge is consistent with the Board's interest in water reclamation throughout its region.

Thank you very much for your assistance with and continued discussion of these issues. The City of Lompoc is committed to protect and enhance its local environment which includes compliance with our NPDES permit. We appreciate the opportunity to work with you to assure our effluent limits are protective of our environment and appropriate for our local conditions. We look forward to the upcoming permit reissuance process and welcome any suggestions you may have in the interim on how we may best address our concerns.

Please contact me at 805-875-8405 or shalpin@ci.lompoc.ca.us if I may answer any questions.

Susan Halpin
Wastewater Division Superintendent

December 27, 2005

Regional Water Quality Control Board
895 Aerovista Place
Suite 101
San Luis Obispo, CA 93401

Subject: **Report of CTR Compliance**

As required in Waste Discharge Order No. 01-87, section L, paragraph 1. g., the City of Lompoc Regional Wastewater Reclamation Plant (LRWRP) submits this final report on the recommended method for achieving compliance with the CTR heavy metals objectives. The City has determined through Reasonable Potential Analysis it can be in compliance with all the CTR limits when the appropriate limits are applied; the only constituent limit with which the City cannot comply is the molybdenum limit of 10 ppb. Even though this constituent is not in the CTR (its limit is from the Basin Plan), the City is nonetheless addressing it and other Basin Plan constituents in this report.

Reasonable Potential Analysis

For the Report of Waste Discharge (ROWD) recently submitted to the Central Coast Regional Water Quality Control Board (RWQCB), the City conducted a reasonable potential analysis (RPA) on all of the constituents for which the city has current permit limits and data. In general, the City conducted RPAs by using the State's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) for California Toxic Rule criteria that were adopted by the U.S. EPA on May 18, 2000. For non-CTR constituents, the City conducted the RPA by using the U.S. EPA's recommended RPA approach contained in the *Technical Support Document for Water Quality-based Toxics Control* (TSD). To determine the appropriate applicable criteria, the City used the CTR, the City's current permit, and the Basin Plan.

CTR criteria were used for all priority pollutants (i.e. CTR constituents), except in a few cases were there are no adopted CTR values for specific pollutants. In those cases, alternative available criteria were used. For example, there are no adopted CTR criteria

for beryllium. Therefore, the MCL as incorporated into the Basin Plan and identified in the City's current permit was used to determine if there is reasonable potential.

For non-priority pollutants, the City used Basin Plan objectives as expressed in the City's current permit. If there were data but no Basin Plan objective in the current permit, the City used an available MCL to conduct the RPA. A summary memorandum of the RPA is included with this report. In the summary memorandum, the constituents for which reasonable potential may exist are identified in Tables 1 and 2. Included in Tables 1 and 2 are the projected final effluent limits and potential interim limits for those constituents with reasonable potential. Out of the constituents for which the City had data and an RPA was conducted, the City found reasonable potential for only the following 15 constituents: Beryllium, Mercury, Dichlorobromomethane, TDS, Molybdenum, Ammonia-N, Chloride, Fluoride, Nitrate + Nitrite-N, Nitrite (NO2-N), Lithium, Boron, Sodium, Nitrate, and Sulfate.

Hardness-Dependent Metals Criteria

To calculate the criteria for hardness-dependent metals, the City used the lowest available effluent hardness. The City believes that the lowest effluent hardness is the appropriate value because the LRWRP discharge receives no dilution at times. In addition, there were no available receiving water hardness data. In short, a review of the hardness-dependent trace metal criteria reveals that the design condition (i.e. most critical to aquatic life) is zero to minimal upstream receiving water flow, meaning the LRWRP effluent almost completely comprises the downstream receiving water. Because the design condition for most metals is zero upstream flow, the effluent hardness should be used to evaluate reasonable potential for calculation of WQBELs. When effluent hardness is used to calculate the CTR criteria, there is no reasonable potential for any of these metals. The City will be able to meet the criteria for these constituents.

Constituents with Existing Interim Limits

The City's current permit, adopted in 2001, provided five years for meeting final limits for: Cadmium, Copper, Mercury, Antimony, Beryllium, Lead, Selenium, Silver, Thallium and Molybdenum. According to the permit, the final limits for all of these constituents will become effective on May 18, 2006. Based on the results of the City's RPA, only three of these constituents have reasonable potential. The three constituents for which the City still has reasonable potential (assuming an effluent hardness of 281 $CaCO_3$ and the application of appropriate criteria) are Mercury, Beryllium and Molybdenum. Of these three constituents, Mercury and Beryllium are priority pollutants subject to the SIP and Molybdenum is a non-priority pollutant subject to the Regional Board's Basin Plan provisions.

Mercury

Under the SIP, the Regional Board is required to identify the effluent data and determine if the data are of sufficient quality and quantity. A review of the City's data for Mercury raises several questions regarding the sufficiency of data quality. Since June of 1999, the City has taken 6 Mercury effluent samples as required on an annual basis. Out of the 6 samples, it appears that only one sample was analyzed at a detection limit below the .050 ug/L criteria. Because most of the City's data were undetected at higher detection levels, it is difficult to actually conduct a true RPA under the SIP. Under Step 8 of the SIP, if all reported detection limits of a pollutant in the effluent are greater than or equal to the criteria, than the Regional Board is supposed to require additional monitoring for that pollutant in the place of a water quality based effluent limit. When the Mercury final limit and interim limit were adopted in 2001, the premise for this limit appears to be strictly related to compliance with the final effluent limit and not related to the detection limits associated with the Mercury data. Thus, the City should be afforded the same opportunity as others and be allowed to collect additional data to be analyzed at lower detection limits before being subject to a final effluent limit. Also, if the Regional Board considers this to be the first post-SIP permit applicable to the City, then the City should be allowed a five year compliance schedule, not to exceed the sunset date of the SIP, to collect additional data before a final mercury limit goes into effect.

Beryllium

Beryllium raises additional issues besides those discussed above in relationship to Mercury. Like Mercury, Beryllium is a CTR constituent subject to the SIP. However, unlike Mercury, there are no adopted CTR criteria for beryllium. In the CTR, Beryllium is footnoted to state that the permitting authority (i.e. Regional Board) should use the State's existing narrative criteria for Beryllium. In this case, the appropriate applicable criterion appears to the primary maximum contaminant level (MCL), which is incorporated by reference into the Water Quality Control Plan for the Central Coast (Basin Plan). The MCL for Beryllium is 4 ug/L. The City's current permit contains a Beryllium final effluent limit of zero. When 4 ug/L is used to conduct an RPA and calculate effluent limits, the average monthly effluent limit should be 4 ug/L and the maximum daily effluent limit should be 8.0 ug/L. When calculated properly according to the SIP, the City still has reasonable potential for Beryllium if data over three years old are considered. There remains some question as to the validity of data over three years old based on a recent Superior Court decision in the case of *City of Woodland v. California Regional Water Quality Control Board, Central Valley Region.* (Alameda County Superior Court, Order No. RG04-188200, May 16, 2005.) In that case, the Superior Court stated that to find reasonable potential the Regional Board must show that pollutants receiving effluent limitations have been found in the discharger's effluent in the last three years prior to the date of the Regional Board's Order of permit adoption. The City has not exceeded the MCL in the last three years and thus believes it is appropriate to conclude there is not reasonable potential.

Molybdenum

As stated previously, Molybdenum is not a priority pollutant and is therefore not subject to the provisions of the CTR or the SIP. However, Molybdenum continues to be a major issue of concern because the level of Molybdenum in the groundwater which is the source of the City's water supply is above the criterion and the final effluent limit contained in the City's current permit. As we expressed in our October 15, 2004 communication to Mr. Gerhardt Huber (attached), the existing treatment facilities do not affect the influent Molybdenum and the effluent Molybdenum concentrations equal the influent concentrations. In addition, the Basin Plan objective for Molybdenum that is applied to the City is to protect the agricultural beneficial use. According to our research, the potential concern with this issue is not necessarily the level of Molybdenum in the irrigation water but the level of Molybdenum in plants used for livestock forage. Levels of Molybdenum ranging from 10 ppb to 20 ppb in forage can create a copper deficiency in livestock called molybdenosis. The City's review of the available literature did not find any information regarding the correlation between the amount of Molybdenum in irrigation water as to the amount that may be found in plant tissue. Therefore, it is difficult to determine the appropriate level of Molybdenum in irrigation water. In addition, there is minimal, if any, direct use of surface water for irrigation downstream of the LRWRP effluent discharge point.

Furthermore, the City is familiar with the crops that utilize the groundwater recharge from the Santa Ynez River, which is influenced to some degree by the City's effluent. Based on our local knowledge, there are no forage plants grown in this area near the Santa Ynez River and there are no livestock grazing. Therefore, the level of Molybdenum in the irrigation water is not a local concern. As a result, the City identifies the need for a site specific objective (or other appropriate Basin Plan amendment). The development of a site specific objective for Molybdenum will take more time than is currently allowed by the existing permit (the final effluent limit comes into effect on May 18, 2006).

Others

All other constituents with current interim limits have no reasonable potential as conducted by the SIP or TSD on the recent applicable data. Indeed, these constituents should be deleted from future permits.

Other Constituents with Reasonable Potential

In addition to the three constituents discussed immediately above, the City's RPA identifies other constituents for which there is reasonable potential. Many of these other constituents will be addressed by the City's planned treatment plant upgrades. Others have reasonable potential based on the TSD calculation for projected in-stream concentrations: however, most of these constituents do not appear to create a compliance issue for the City. Finally, the City believes that the Regional Board has

used the incorrect water quality criterion for TDS in the current permit. The City has identified the appropriate water quality objective below.

Dichlorobromomethane – Expected to be addressed by replacing existing chemical disinfection system with ultraviolet disinfection as part of the plant upgrade.

Ammonia-N, Nitrate + Nitrite-N, Nitrite, Nitrate – Expected to be addressed by the addition of denitrification as part of the plant upgrade.

Chloride, Fluoride, Lithium, Boron, Sodium, Sulfate – Although there is reasonable potential based on the TSD, which projects in-stream concentrations, the City's effluent has not exceeded (or has rarely exceeded) the applicable criteria for these constituents. Therefore, the City does not anticipate these constituents being a compliance problem.

TDS - The City's effluent can not consistently comply with the current effluent limit of 1100 mg/L for TDS. Like Molybdenum, the TDS levels in the groundwater which is the City's water supply are elevated. In addition, the City does not believe that 1100 mg/L is the appropriate water quality criterion for application to the City's effluent. As we noted in our October 15, 2004 communication to the Regional Board (attached), the City's effluent recharges the Santa Ynez groundwater basin near the Lompoc Plain. According to the Central Coast Basin Plan, the median groundwater objective for the Lompoc Plain for TDS is 1250 mg/L. The City requests that the Regional Board use the applicable groundwater objective 1250 mg/L instead of 1100 mg/L for TDS that exists in the City's current permit. The City will be able to be in compliance with the appropriate objective of 1250 mg/L.

Lompoc Regional Wastewater Reclamation Plant Upgrades

The City is currently in the process of upgrading its treatment plant. The City began work on design and engineering of an upgrade project for the LRWRP in September 2004. To date, the 50% design phase of the upgrade project has been completed. Final design is scheduled to be completed in April 2006 and construction mobilization in July 2006. Construction is scheduled to be completed in August 2008 with plant startup and testing in September 2008.

The objectives of the plant upgrade project are to meet more stringent effluent quality requirements, improve the consistency of effluent quality, improve existing facilities, provide state-of-the art instrumentation and control systems and provide redundancy for some existing facilities. The upgraded facility includes treatment units to provide grit handling and disposal, nitrification/denitrification, flow equalization, chemical-free disinfection, solids thickening and stabilization.

Summary and Conclusion

Based on the RPA conducted by the City, the LRWRP will be able to achieve compliance with CTR heavy metals objectives when the appropriate limits are applied. When using the hardness of the effluent (281 $CaCO_3$) for hardness-dependant metals, all limits can be met except for the final limits for Mercury, Beryllium and Molybdenum. For mercury, additional data collection is required to accurately determine reasonable potential. When the appropriate data are analyzed for the reasonable potential for beryllium, again the City can meet the limit for this constituent.

Although molybdenum is not a CTR constituent, the City reaffirms its past discussions with the Regional Board that this constituent requires a site specific objective (SSO) based on the elevated naturally occurring background concentrations in the City's domestic supply source water and on the actual beneficial use of the plant's effluent. The City will need to work with Regional Board staff to determine that SSO. The LRWRP will be able to meet the limits of all other constituents with reasonable potential either by applying the appropriate limit or by the performance of the upgraded treatment plant.

If I may answer any questions, please contact me by phone at 805-875-8405 or by email at shalpin@ci.lompoc.ca.us.

Susan Halpin
Wastewater Division Superintendent

attachments: 1) RPA summary memo
2) 15 October 2004 correspondence with RWQCB

c James W. Beck

City of Lompoc

Mercury Results for Louann Kromer

Reported by Frontier Geosciences Inc., 414 Pontius Ave. N, Seattle WA 98109
April 21, 2006

Sample Results

Sample ID	Date Collected	Total Hg (ng/L)
Field Blank	4/6/06	<0.15
Secondary Effluent (total)	4/4/06	9.48
Secondary Effluent (dissolved)	4/4/06	2.82
Reporting Limit		**0.15**

City of Lompoc

Mercury Results for Louann Kromer

Reported by Frontier Geosciences Inc., 414 Pontius Ave. N, Seattle WA 98109

April 21, 2006

Quality Control Data - Preparation Blank Report

Analyte (ng/L)	PBW1	PBW2	PBW3	Mean	St. Dev.	R.L.
Total Hg	0.03	0.03	0.04	0.03	0.00	0.15

PBW = Preperation Blank Water
St. Dev. = Standard Deviation
R.L.= Reporting Limit

Quality Control Data - Certified Reference Materials Report

Analyte (ng/L)	CRM Identity	Cert. Value	Obs. Value	% Rec.
Total Hg	NIST 1641d	1601000	1589000	**99.3**

CRM Identity = Certified reference material identity
Cert. Value = Certified value
Obs. Value = Experimental result
% Rec. = Percent recovery

Quality Control Data - Matrix Duplicate Report

Analyte (ng/L)	Sample QC'd	Rep. 1	Rep. 2	Mean	RPD
Total Hg	Batch QC	26.68	27.18	26.93	**1.8**

RPD = Relative Percent Difference

Quality Control Data - Matrix Spike / Matrix Spike Duplicate Report

Analyte (ng/L)	Sample QC'd	Sample Mean	Spike Level	MS	% Rec.	MSD	% Rec.	RPD
Total Hg	Batch QC	12.02	40.82	52.02	**98.0**	52.02	**98.0**	**0.0**

MS = Matrix Spike
MSD = Matrix Spike Duplicate

From: "Jenzen, Paul" <Paul.Jenzen@sbcphd.org>
To: "David LaCaro" <DLaCaro@waterboards.ca.gov>
Date: 4/25/2006 11:29:47 AM
Subject: City of Lompoc NPDES Permit

Hi David,

I have been asked by my director to inquire if the WDR number R3-2006-0037 and updated NPDES permit number CA0048127 includes language that would require the notification of Environmental Health Services in the event of a sewage spill. If the draft language does not have this requirement then it should be included.

Thanks for the help,

Paul Jenzen
Sr. Environmental Health Specialist

CC: "Merrifield, Rick" <Rick.Merrifield@sbcphd.org>, "Brummond, David" <David.Brummond@sbcphd.org>