

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Bill Johnson)
MEETING DATE: May 14, 2008

ITEM 5A and 6B

SUBJECT: Novato Sanitary District, Ignacio and Novato Wastewater Treatment Plants, Novato, Marin County—Amendment of NPDES Permit (Item 5A) and Issuance of Cease and Desist Order (Item 6B)

CHRONOLOGY: November 2004—NPDES permit reissued

DISCUSSION: These items would amend the Novato Sanitary District's NPDES permit and issue a Cease and Desist Order (CDO). The permit amendment would remove flow restrictions at the Ignacio and Novato wastewater treatment plants, increase the permitted flow at the Novato plant, and update the copper and cyanide effluent limits. The CDO would require the District to upgrade its Novato wastewater treatment plant.

Removing flow restrictions on the Ignacio and Novato wastewater treatment plants would allow the District to decommission its poor-performing Ignacio plant and discharge all its wastewater from its better-performing Novato plant. Allowing the District to discharge all its wastewater from the Novato plant will improve water quality and the District's compliance with effluent limitations.

The amendment would also allow the District's maximum average dry weather flow to increase from 6.5 million gallons per day (mgd) for both plants to 7.05 mgd for the Novato plant. This flow increase allows for limited growth in the District's service area population, which is currently about 60,000. With the planned Novato plant upgrade, we believe this relatively small increase will not degrade water quality.

Finally, the amendment would revise the District's copper and cyanide effluent limits to be consistent with other recently reissued permits. Although these new limits are based on current standards and existing data, the District cannot immediately comply with them. A CDO is necessary to ensure compliance. The District is currently spending roughly \$90 million to upgrade the Novato plant and intends to complete the upgrade by June 2011 as required by the

Tentative CDO. The upgrade will allow the District to decommission its Ignacio plant.

We received a comment letter (Appendix D) from the District regarding the Tentative Permit Amendment, and as explained in our responses to these comments (Appendix E), we revised the Tentative Permit Amendment (Appendix A) and Fact Sheet (Appendix B) to address all the District's concerns. We received no other comments on the Tentative Permit Amendment and no comments regarding the Tentative CDO (Appendix C).

**RECOMMEN-
DATION:**

Adopt the Revised Tentative Permit Amendment and Tentative Cease and Desist Order

FILE NUMBER: 2159.5022

APPENDICES:

- A. Revised Tentative Permit Amendment
- B. Revised Fact Sheet
- C. Tentative Cease and Desist Order
- D. Comment Letter
- E. Responses to Comments

APPENDIX A

Revised Tentative Permit Amendment (Item 5A)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

**REVISED TENTATIVE ORDER R2-2008-XXXX
NPDES PERMIT NO. CA0037958**

**AMENDMENT OF WASTE DISCHARGE REQUIREMENTS ORDER NO. R2-2004-0093
FOR NOVATO SANITARY DISTRICT, NOVATO, MARIN COUNTY**

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter “Regional Water Board”), finds that:

1. On November 17, 2004, the Regional Water Board adopted Order No. R2-2004-0093, which reissued the waste discharge requirements of NPDES Permit No. CA0037958 for the Novato Sanitary District (hereinafter “Discharger”). That order authorized the Discharger to discharge secondary-treated effluent from two municipal wastewater treatment plants (the Novato plant and the Ignacio plant) through one combined outfall to San Pablo Bay under specific conditions.
2. This Order amends Order No. R2-2004-0093 to allow, after certain conditions are met, an increase in the volume of treated wastewater effluent discharged to San Pablo Bay. In addition, this Order changes how flows may be distributed among the two plants and revises monitoring requirements accordingly. It also revises copper and cyanide effluent limits and ammonia sampling requirements for consistency with recently adopted permits.

Facilities Description

3. The Discharger owns and operates the Novato plant, located at 500 Davidson Street, and the Ignacio plant, located at 445 Bel Marin Keys Boulevard, both of which are in Novato, Marin County, California. The plants collect sanitary wastewater from a primarily residential service area serving the City of Novato and adjacent areas. The service area population is about 60,000.
4. The Novato plant has an average dry weather flow (ADWF) design capacity of 4.53 million gallons per day (mgd), and the Ignacio plant has an ADWF design capacity of 2.02 mgd. The Discharger presently discharges an ADWF of 5.4 mgd from both plants combined.
5. During the discharge season, September 1 through May 31, effluent from both plants is dechlorinated and discharged from the combined outfall through a multi-port diffuser. From June 1 through August 31, the effluent is held in reclamation ponds and distributed for recycled water use.
6. In 2001, the Discharger prepared a Strategic Plan that concluded that treatment plant upgrades and expanded capacity were needed to accommodate limited future growth within

the service area and to reliably comply with biochemical oxygen demand (BOD) and total suspended solids (TSS) effluent limitations. The Discharger since completed engineering analyses for facility construction to increase the treatment capacity at the Novato plant to an ADWF of 7.05 mgd. This will allow decommissioning of the Ignacio plant.

7. The Discharger completed an Environmental Impact Report for its Novato Sanitary District Wastewater Facility Plan Project (certified May 23, 2005) pursuant to the California Environmental Quality Act for the increased treatment and discharge.
8. The Discharger prepared an antidegradation analysis (*Anti-Degradation Analysis for Proposed Wastewater Treatment Plant Discharge Modification*, December 2004) to address how increasing the discharge flow is consistent with federal and state antidegradation policies.
9. Construction of the additional treatment and conveyance facilities is to be completed by 2010. The Discharger has already constructed a new pump station and now conveys treated flows from the Ignacio plant to the Novato plant. Until all Novato plant improvements are fully operational, the Ignacio plant may be needed to treat some wet weather flows.

Purpose of Order

10. This Order amends NPDES Permit No. CA 0037958, Order No. R2-2004-0093, as follows:
 - a. Revises the facility description to reflect improvements at the Novato plant that allow all wastewater flows to be treated there, and to reflect the anticipated future treatment capacity of 7.05 mgd;
 - b. Modifies the discharge prohibitions to allow all flows to be discharged from the Novato plant, and to describe the conditions upon which the Discharger will be allowed to increase its permitted ADWF to 7.05 mgd;
 - c. Revises the copper and cyanide effluent limits;
 - d. Revises the antidegradation and antibacksliding discussions to address the flow increase and higher copper and cyanide limits; and
 - e. Revises influent and effluent monitoring locations to be sampled when Ignacio plant discharges do not occur.

CEQA and Public Notice of Action

11. This Order amends NPDES Permit No. CA0037958, adoption of which is exempt from the provisions of Public Resources Code Section 21100 et seq. (California Environmental Quality Act) pursuant to California Water Code Section 13389.
12. The Discharger and interested agencies and persons were notified of the Regional Water Board's intent to consider amending Permit No. CA0037958 and were provided an opportunity to submit written comments.
13. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this amendment.

IT IS HEREBY ORDERED, pursuant to the provisions of California Water Code Division 7 and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Discharger shall comply with Order No. R2-2004-0093 as amended by this Order.

To distinguish the original language contained in Order No. R2-2004-0093 from the amendments of this Order, all amendments are highlighted below. Underline text shows additions, and ~~strike through~~ text shows deletions. References to attachments refer to Order No. R2-2004-0093 attachments.

1. Replace Finding 3 with the following:

3. The Discharger owns and operates a wastewater collection system, two municipal wastewater treatment facilities (the Novato and Ignacio plants, collectively the WWTPs), and one combined effluent discharge outfall (E-003) to San Pablo Bay (the subject discharge), adjacent to the former Hamilton Air Force Base. The WWTPs collect sanitary waste from a primarily residential service area serving the City of Novato and adjacent areas with a current population of about 60,000. The Discharger presently discharges an average dry weather flow (ADWF) of 5.4 million gallons per day (MGD), from the WWTPs into San Pablo Bay.

The Discharger completed additional engineering analyses, an Environmental Impact Report, and an antidegradation analysis for facility construction to increase full secondary treatment capacity to 7.05 mgd (ADWF). The facility improvements will result in all treatment occurring at the Novato plant. When construction is complete, influent flows currently conveyed to the Ignacio plant will be rerouted to the Novato plant, and the Ignacio plant will be decommissioned. Construction of the additional treatment and conveyance facilities is to be completed in 2010.

2. Replace Finding 27 with the following:

27. The Ignacio Treatment Plant is currently unable to attain the standard technology-based effluent limitations for biochemical oxygen demand (BOD₅, 20°C - BOD) and total suspended solids (TSS) for the dry weather discharge. The Discharger anticipates limited future growth in its service area, and is implementing a strategic plan to accommodate that growth and to comply with the BOD and TSS limitations by ~~either upgrading or~~ replacing the Ignacio plant. The original implementation schedule for this strategic plan, ~~is~~ contained in the Discharger's April 28, 2004 letter *Workplan for Ignacio Treatment Plant, NPDES Permit No. CA0037958* (Attachment G, hereby incorporated by reference), was to result in elimination of the Ignacio plant discharge by March 31, 2008. The current implementation schedule calls for capital improvements for consolidation and augmentation of treatment capacity at the Novato plant, with the Ignacio plant being decommissioned. The strategic plan may ultimately include capital improvements to the Ignacio Treatment Plant for consolidation and augmentation of treatment capacity at one

~~or the other of the existing treatment plants, with the remaining plant being decommissioned.~~

The Novato plant improvements will include construction of the following new facilities:

- Headworks
- Influent pump station
- Two primary clarifiers
- Two aeration basins
- Two secondary clarifiers
- Ultraviolet disinfection facility
- Gravity belt thickener
- Second digester
- Odor control facilities
- Electrical facilities

After the transfer pump station and conveyance force main are completed, but before the improvements at the Novato plant are completed, dry weather flows will continue to be treated at the Ignacio plant. But instead of being discharged to the combined outfall, they will be conveyed to the Novato plant for further treatment. This “double-treatment” is being implemented to avoid continuing effluent limit violations at the Ignacio plant. The Discharger conducted a study demonstrating that the current treatment process at the Novato plant has the capacity to handle existing flows from the Ignacio plant (Technical Memorandum, January 7, 2008).

The schedule for the remaining construction projects is as follows:

<u>June 30, 2009</u>	<u>Complete construction of Novato plant headworks, one primary clarifier, odor control facilities, and electrical facilities.</u>
<u>June 30, 2010</u>	<u>Complete Novato plant aeration basins and one secondary clarifier.</u>
<u>December 31, 2010</u>	<u>Complete Novato plant influent pump station, second primary and secondary clarifiers, UV disinfection, gravity belt thickener, and second digester.</u>

~~Therefore, this Order continues the previous NPDES Permit’s interim performance-based effluent limits for the Ignacio Plant’s BOD and TSS, and the March 31, 2008, compliance schedule for the final limits. This Order contains a Provision requiring an implementation schedule for attainment of the final BOD and TSS limits by March 31, 2008, together with periodic progress reports.~~

3. Replace Attachments A and B with revised figures (attached).

4. Replace Finding 51 with the following:

51. The limitations in this Order comply with the prohibition contained in Clean Water Act Section 402(o) against establishment of less stringent WQBELs (antibacksliding) because:
- a. For impairing pollutants, the revised final limitations will be consistent with TMDLs and WLAs, once they are established;
 - b. For non-impairing pollutants, the final limitations are or will be consistent with current State WQOs/WQCs, including antidegradation policies (see below);
 - c. Antibacksliding does not apply to interim limitations established under previous Orders;
 - d. If antibacksliding policies apply to interim limitations under 402(o)(2)(c), a less stringent limitation is necessary because of events over which the Discharger has no control, and for which there is no reasonable available remedy, or
 - e. ~~if a~~ New information is available that was not available during previous permit issuance.

The IPBLs in this Order comply with antidegradation requirements and meet the requirements of the SIP because they hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further water quality degradation.

This Order contains higher effluent limits for copper and cyanide than those previously in place. However, these higher limits will not degrade water quality because the same or better treatment will be provided. The standards-setting processes for the copper and cyanide site-specific objectives recently adopted by the Regional Water Board addressed antidegradation policies and concluded that water quality would not be degraded if effluent limits were derived from the site-specific objectives. These conclusions were based, in part, on assumptions that dischargers would implement copper and cyanide action plans to maintain their current performance. This Order (Sections E.2 and E.3) requires such plans. The copper and cyanide limits in this Order are no higher than (and, in the case of the alternate limits, the same as) those that would be derived from the site-specific objectives. Therefore, the higher copper and cyanide limits are also consistent with antidegradation policies, and findings authorizing degradation are unnecessary.

This Order allows higher effluent flows to be discharged. The Discharger prepared an antidegradation analysis (*Anti-Degradation Analysis for Proposed Wastewater Treatment Plant Discharge Modification*, December 2004) in accordance with State Water Board Administrative Procedures Update 90-04. The analysis demonstrated that an increase in the permitted capacity of the Novato plant to 7.05 mgd ADWF is consistent with federal and state antidegradation policies (40 CFR §131.6(d) and State Water Resourced Control Board Resolution 68-16). The study evaluated expected water quality changes associated with the flow increase. Specifically, it considered the increased magnitude of mass loads

for specific constituents compared to other loads to the receiving water and likely changes in ambient water quality. It concluded that the increase would have no measurable effect on San Pablo Bay water quality. The incremental change in ambient water quality, as predicted from copper and nickel modeling, would be too small to measure through water quality sampling. When compared to other known sources of various pollutants to San Francisco Bay, the incremental pollutant load increase associated with this flow increase would be less than 0.002%. Compared to San Pablo Bay sources alone, the incremental load increase would be no greater than 0.004%. The relatively small change would not cause or contribute to any violations of numeric water quality standards. Because the flow increase will not degrade water quality, findings authorizing degradation are unnecessary.

The pollutant-specific discussions below and in the attached Fact Sheet contain more detailed discussions of antidegradation and antibacksliding, where appropriate.

5. Replace Table 1 and its footnotes with the following:

Table 1. Results of RPA and final limit calculations.

Constituent	Water Quality Objective, µg/L	MEC, µg/L	Basis for Reasonable Potential	Final WQBELs, µg/L		Immediate Attainment Feasible?	IPBLs, µg/L	
				MDEL	AMEL		Daily Max.	Monthly Avg.
Copper	7.2 6.4 ^[2]	21 13	MEC > C	17 6.4	12 4.4	N	19	
Lead	4.8	3	B (6.5) > C	8.8	3.5	Y		
Mercury ^[1]	0.025	0.046	MEC > C	0.039	0.021	N		0.087
Nickel ^[1]	26 23.7 ^[2]	6.5	B (30) > C	36.1	23.6	Y		
Cyanide	1	12.7 7.3 ^[1]	MEC > C	2.4 4	1.1 0.6 ^[1]	N	9.2	
TCDD TEQ ^[1]	1.4x10 ⁻⁸	[3]	Trigger 3	[4]	[4]	[4]	[4]	[4]
4,4'-DDE ^[1]	0.00059	[3]	B (0.001159) > C	0.00059	0.00029	[5]	0.05 [6]	
4,4'-DDD ^[1]	0.00084	[3]	B (0.001159) > C	0.00084	0.0017	[5]	0.05 [6]	
Dieldrin ^[1]	0.00014	[3]	B (0.000237) > C	0.00028	0.00014	[5]	0.01 [6]	
Heptachlor Epoxide	0.00011	[3]	B (0.000121) > C	0.00022	0.00011	[5]	0.01 [6]	

Footnotes for Table 1.

1. Indicates constituents on 303(d) list, dioxin applies to Toxicity Equivalent Factors (TEQ) of 2,3,7,8-TCDD.
2. WQOs derived from CTR saltwater criteria (copper, ~~4.8~~ 3.4 µg/L acute; nickel 7.1 µg/L chronic) and site-specific translators (copper: ~~0.67~~ 0.73 acute, ~~0.38~~ 0.39 chronic; nickel 0.65 acute, 0.27 chronic).
3. All effluent data ND with detection limits greater than governing WQO/WQC.
4. Dioxin final limits will be based on WLAs contained in the dioxin TMDL. Attainment feasibility will be determined after WLAs and final WQBELs are set.
5. All effluent data ND with detection limits above final WQBELs, and attainability could not be determined.
6. IPBLs set to minimum levels (MLs) depicted on SIP page 4 – 4.

6. Replace Finding 62 with the following:

62. Copper

a. Copper WQC. The acute and chronic marine aquatic life water quality criteria (WQC) for copper from the California Toxics Rule (CTR) are 4.8 micrograms per liter ($\mu\text{g/L}$) and 3.1 $\mu\text{g/L}$ as dissolved metal. The applicable WQC for the discharge were calculated by applying site-specific translators of 0.67 (acute) and 0.38 (chronic) to the acute and chronic criteria as recommended by the Clean Estuary Partnership to convert total dissolved criteria into total recoverable metal concentrations (*North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators*, March 2005). The resulting acute and chronic criteria are 7.2 $\mu\text{g/L}$ and 8.2 $\mu\text{g/L}$.

The Regional Water Board has adopted site-specific objectives for copper in non-ocean, marine waters of the San Francisco Bay Region (Resolution No. R2-2007-0042). The U.S. Environmental Protection Agency has not yet approved them but is expected to do so. These objectives are 3.9 $\mu\text{g/L}$ and 2.5 $\mu\text{g/L}$ as one-hour and four-day averages (i.e., acute and chronic criteria). Based on the same translators, the resulting site-specific acute and chronic criteria are 5.8 $\mu\text{g/L}$ and 6.6 $\mu\text{g/L}$.

b. RPA Results. This Order establishes effluent limits for copper because the 21 $\mu\text{g/L}$ maximum effluent concentration in the data set (the MEC) exceeds the governing WQC of 7.2 $\mu\text{g/L}$, demonstrating reasonable potential by Trigger 1.

c. Copper WQBELs. Water quality-based effluent limits (WQBELs) were calculated based on the CTR WQC. Alternate WQBELs were calculated using the site-specific objectives. In each case, the site-specific translators were used. The limits account for a water effects ratio (WER) of 2.4 as recommended by the Clean Estuary Partnership (*North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation*, March 2005). Effluent limitations were calculated according to SIP procedures using a coefficient of variation of 0.29 based on the mean and standard deviation of the effluent data. No dilution was assumed. These calculations yielded a maximum daily effluent limit (MDEL) of 17 $\mu\text{g/L}$ and an average monthly effluent limit (AMEL) of 12 $\mu\text{g/L}$ based on the CTR and Basin Plan criteria, and as alternate limits based on the site-specific objectives, an MDEL of 14 $\mu\text{g/L}$ and an AMEL of 9.4 $\mu\text{g/L}$.

d. Immediate Compliance Infeasible. The Discharger cannot immediately comply with the effluent limits because an analysis of the Discharger's effluent data shows that the MEC of 21 $\mu\text{g/L}$ is greater than any of the limits, including the alternate limits based on the site-specific objectives. Similarly, the 95th percentile of the effluent data (16 $\mu\text{g/L}$) exceeds the AMELs, and the 99th percentile of the effluent data (19 $\mu\text{g/L}$) exceeds the MDELs.

e. Antibacksliding. Antibacksliding requirements are satisfied in accordance with Clean Water Act §303(d)(4)(B) and §402(o)(1) because (1) the final effluent limits are

based on new information, (2) water quality standards for copper in San Francisco Bay are attained, and (3) the higher effluent limits comply with antidegradation requirements.

- a. ~~*RPA Results* This Order establishes effluent limits for copper because the 16.34 µg/L maximum effluent concentration in the data set (the MEC) exceeds the governing WQO of 6.6 µg/L, demonstrating reasonable potential by Trigger 1, above. The governing WQO is based on the CTR's WQO of 3.1 µg/L for chronic saltwater protection as modified by using the site-specific chronic copper translator of 0.39. The attached Fact Sheet contains further details about the site-specific translator.~~
- b. ~~*WQBELs* The copper WQBELs calculated according to SIP procedures are 6.4 µg/L as a daily maximum (MDEL) and 4.4 µg/L as a monthly average (AMEL). These WQBELs are calculated without dilution.~~
- c. ~~*Immediate Compliance Infeasible* The feasibility study asserts the Discharger cannot immediately comply with these WQBELs. Based on the Board staff's statistical analysis the Discharger's effluent data from October 1999 through April 2004, the Board determined that the assertion of infeasibility is substantiated for copper (see the attached Fact Sheet for detailed results of the statistical analysis).~~
- d. ~~*Interim Performance Based Effluent Limits (IPBLs)* Because it is infeasible for the Discharger to immediately comply with the copper WQBELs, an IPBL is required. The IPBL is the more stringent of the previous NPDES permit limit or recent WWTP performance. Board staff's statistical analysis indicates the 99.87th percentile value of the WWTPs' recent copper effluent data is 19 µg/L, which is lower than the 22 µg/L IPBL developed for the previous NPDES Permit. Therefore, this Order establishes the copper IPBL as 19 µg/L, as a daily maximum.~~
- e. ~~*Plant Performance and Attainability* During the period October 1999 through April 2004, the WWTPs' effluent MEC for copper was 16.34 µg/L. Since all effluent copper values were below the 19 µg/L IPBL, it is feasible for the WWTPs to comply with the IPBL.~~
- f. ~~*Term of IPBL* The copper IPBL shall remain in force until March 31, 2008 or until the Board amends the limit based on additional data, site-specific objectives.~~

7. Replace Finding 66 with the following:

66. Cyanide

- a. *Cyanide WQC.* The acute and chronic marine aquatic life WQC for cyanide from the National Toxics Rule (NTR) are both 1.0 µg/L.

The Regional Water Board has adopted site-specific objectives for cyanide in San Francisco Bay (Resolution No. R2-2006-0086). The U.S. Environmental Protection Agency has not yet approved them but is expected to do so. These objectives are

- 9.4 µg/L and 2.9 µg/L as one-hour and four-day averages (i.e., acute and chronic criteria).
- b. RPA Results. This Order establishes effluent limits for cyanide because the 12.7 µg/L cyanide MEC exceeds the governing WQC of 1 µg/L, demonstrating reasonable potential by Trigger 1
- c. Cyanide WQBELs. WQBELs were calculated based on the NTR WQC. Alternate WQBELs were calculated using the site-specific objectives. The limitations were calculated according to SIP procedures using a coefficient of variation of 0.68 based on the mean and standard deviation of the effluent data. Cyanide is a non-persistent pollutant that quickly disperses and degrades; therefore, some dilution was assumed for purposes of calculating the WQBELs. A dilution ratio of 3.25:1 (or D = 2.25) was used because this dilution credit is justified in the *Staff Report on Proposed Site-Specific Water Quality Objectives for Cyanide for San Francisco Bay* (December 4, 2006). These calculations yielded an MDEL of 2.4 µg/L and an AMEL of 1.1 µg/L based on the NTR criteria, and as alternate limits based on the site-specific objectives, an MDEL of 15 µg/L and an AMEL of 6.8 µg/L.
- d. Immediate Compliance Infeasible. The Discharger cannot immediately comply with the effluent limits because an analysis of the Discharger's cyanide effluent data shows that the 95th percentile of the effluent data (5.9 µg/L) exceeds the AMEL of 1.1 µg/L, and the 99th percentile of the effluent data (7.1 µg/L) exceeds the MDEL of 2.4 µg/L. The Discharger will be able to comply with the alternate limits if and when the site-specific objectives become effective.
- e. Antibacksliding. Antibacksliding requirements are satisfied in accordance with Clean Water Act §303(d)(4)(B) and §402(o)(1) because (1) the final effluent limits are based on new information, (2) water quality standards for cyanide in San Francisco Bay are attained, and (3) the higher effluent limits comply with antidegradation requirements.
- ~~a. RPA Results.~~ This Order establishes cyanide WQBELs because the 7.3 µg/L cyanide MEC exceeds the 1 µg/L WQC, demonstrating reasonable potential by Trigger 1, above.
- ~~b. Cyanide Water Quality Criteria.~~ The NTR contains saltwater a Criterion Maximum Concentration (CMC) and a Criterion Chronic Concentration, both 1 µg/L, governing cyanide for the protection of aquatic life in marine waters. These CMC and CCC values are below the presently achievable reporting limits, currently ranging from about 3 to 5 µg/L.
- ~~c. WQBELs.~~ The cyanide WQBELs calculated according to SIP procedures are 1 µg/L MDEL and 0.61 µg/L AMEL.
- ~~d. Immediate Compliance Infeasible~~ The feasibility study asserts the Discharger cannot immediately comply with the cyanide WQBELs. The detected values of cyanide in

the discharge ranged from 2.8 µg/L to 7.1 µg/L, all exceeding the MDEL. Therefore, the assertion of infeasibility is substantiated. ata (5.87 µg/L) exceeds the 1.2 µg/L AMEL, and the 99th percentile of the effluent data (7.07 µg/L) exceeds the 2.4 µg/L MDEL.

- e. ~~IPBL.~~ Since the Discharger cannot comply with the cyanide WQBELs, this Order establishes an IPBL for cyanide. The SIP specifies that the IPBL is the more stringent of the previous NPDES permit's limit or recent WWTP plant performance, unless antidegradation is satisfied. Statistical analysis of recent cyanide effluent data indicates a 99.87th percentile value of 9.2 µg/L. This Order establishes the 9.2 µg/L cyanide IPBL, taken as a daily maximum, even though it is higher than the previous NPDES Permit's 5µg/L limit, for the reasons outlined in the antidegradation discussion in section h., below. This limit is in compliance with antibacksliding for the reasons described in the findings above, as well as in compliance with antidegradation.
- f. ~~WWTP Performance and Attainability.~~ During the period November 1998 through December 2002, the MEC for cyanide was 7.3 µg/L. Board staff's evaluation of the subject discharge data indicates that it is feasible for the WWTP to comply with the 9.2 µg/L IPBL.
- g. ~~Term of IPBL.~~ The cyanide IPBL shall remain effective until January 31, 2010 or until the Board amends the limits based on additional data or cyanide SSOs.
- h. ~~Anti degradation.~~ Anti degradation is satisfied because the receiving waters are in attainment for cyanide, and the new IPBL is based on recent plant performance, so no increase in cyanide loading will result.
- i. ~~Participation in Ongoing Studies.~~ The Discharger has participated in regional discharger-funded studies to improve understanding of the relationship between chlorine dosage and cyanide formation, and for development of a cyanide SSO applicable to the receiving water. The collaborative cyanide study plan was submitted to the Board on October 29, 2001. The attached Fact Sheet describes these studies, their interim results, and strategies for further studies in more detail. Provision E.4 requires the Discharger's continued participation in these collaborative studies.

8. Replace Discharge Prohibition A.3 with the following:

3. The average dry weather flow discharge shall not exceed 6.55 MGD, apportioned as follows: Novato Plant 4.53 MGD, Ignacio Plant 2.02 MGD. The average dry weather flow shall be determined over three consecutive dry weather months each year. Upon Executive Officer approval of the following additional submittals by the Discharger, the permitted average dry weather discharge will increase to 7.05 mgd: (a) engineering analysis supporting the above capacity determination for treatment and outfall facilities, (b) certification that the treatment facilities and outfall have been constructed as designed and are available for use, and (c) operations and maintenance manual and contingency plan update for the new treatment and outfall facilities.

9. Replace Effluent Limit B.4 with the following:

4. *85 Percent Removal.* The arithmetic mean of the biochemical oxygen demand (BOD₅, 20°C) and total suspended solids values (TSS), by concentration, for Novato plant effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by concentration, for Novato plant influent samples collected at approximately the same times during the same period ~~for each of the two treatment plants measured separately (85 per cent removal). This 85 percent removal standard applies to each treatment plant individually (E-001 and E-002).~~

10. Replace Table 7 and its footnotes with the following:

Table 7. Effluent limitations for toxic substances in combined effluent.

Constituent ^[1]	Unit	MDEL ^[4]	AMEL ^[4]	Interim Monthly Average ^[4]	Interim Daily Maximum ^[4]	Compliance Deadline for MDEL and AMEL
Copper	µg/L	6.4 <u>17</u> ^[5]	4.4 <u>12</u> ^[5]	--	19	3/31/2008
Lead	µg/L	8.8	3.5	--	--	--
Mercury ^[2]	µg/L	--	--	0.087		3/31/2010
Nickel	µg/L	32	21	--	--	--
Cyanide ^[3]	µg/L	2.4 ^[6]	1.1 ^[6]	--	9.2	1/31/2010
4,4'-DDE	µg/L	--	--	--	0.05	1/31/2010
4'4'-DDD	µg/L	--	--	--	0.05	1/31/2010
Dieldrin	µg/L	--	--	--	0.01	1/31/2010
Heptachlor Epoxide	µg/L	--	--	--	0.01	1/31/2010

Footnotes for Table 7:

- [1] (a) Compliance with these limits is intended to be achieved through wastewater treatment and, as necessary, pretreatment and source control.
 (b) All analyses shall be performed using current U.S. EPA methods, or equivalent methods approved in writing by the Executive Officer
 (c) Limits apply to the average concentration of all samples collected during the averaging period (Daily = 24-hour period; Monthly = calendar month).
- [2] Effluent mercury monitoring shall be performed using ultraclean sampling and analysis techniques to the maximum extent practicable.
- [3] Cyanide: Compliance may be demonstrated by measurement of weak acid dissociable cyanide, EPA Method 335.2, or EPA Method OIA 1677.
- [4] Daily maximum or average monthly sample results for individual constituents shall be considered non-compliance with the relevant effluent limits only if they exceed both the effluent limitation and the ML for that constituent, as depicted in Table 4, of the attached Self Monitoring Program.

[5] Alternate Effluent Limits for Copper

(a) If copper site-specific objectives for the receiving water become legally effective, resulting in an adjusted saltwater Criterion Maximum Concentration (CMC) of 3.9 µg/L and Criterion Continuous Concentration (CCC) of 2.5 µg/L as stated in Regional Water Board Resolution No. R2-2007-0042, upon the effective date, the following limitations shall supersede the copper limitations listed above:

MDEL of 14 µg/L and AMEL of 9.4 µg/L.

(b) If different copper site-specific objectives are adopted, the alternate WQBELs based on the site-specific objectives will be determined after the site-specific objectives' effective date.

[6] Alternate Effluent Limits for Cyanide

(a) If cyanide site-specific objectives for the receiving water become legally effective, resulting in an adjusted saltwater CMC of 9.4 µg/l and CCC of 2.9 µg/l as stated in Regional Water Board Resolution No. R2-2006-0086, upon its effective date, the following limitations shall supersede those cyanide limitations listed above:

MDEL of 15 µg/l and AMEL of 6.8 µg/l.

(b) If different cyanide site-specific objectives are adopted, the alternate WQBELs based on the site-specific objectives will be determined after the site-specific objectives' effective date.

11. Replace Provisions E.2. and E.3. with the following:

2. Copper Action Plan ~~Copper Study and Schedule~~ – ~~Regional Site Specific Objective Study for Copper~~

The Discharger shall implement pretreatment, source control, and pollution prevention for copper in accordance with the following tasks and time schedule. Any similar activities the Discharger undertakes pursuant to a cease and desist order may substitute for and fulfill these requirements.

<u>Task</u>	<u>Compliance Date</u>
<p>1. <u>Review Potential Copper Sources</u> <u>The Discharger shall submit an inventory of all potential copper sources to the treatment plant.</u></p>	September 1, 2008
<p>2. <u>Implement Copper Control Program</u> <u>The Discharger shall submit a plan for and begin implementation of a program to reduce copper discharges identified in Task 1 consisting, at a minimum, of the following elements:</u></p> <p>a. <u>Provide education and outreach to the public (e.g., focus on proper pool and spa maintenance and plumbers' roles in reducing corrosion).</u></p> <p>b. <u>If corrosion is determined to be a significant copper source, work cooperatively with local water purveyors to reduce and control water corrosivity, as appropriate, and ensure that local plumbing contractors implement best management practices to reduce corrosion in pipes.</u></p>	February 28, 2009, with <u>pollution prevention report</u>

<u>Task</u>	<u>Compliance Date</u>
c. <u>Educate plumbers, designers, and maintenance contractors for pools and spas to encourage best management practices that minimize copper discharges.</u>	<u>February 28, 2009, with pollution prevention report</u>
3. <u>Implement Additional Measures</u> <u>If the three-year rolling mean copper concentration of the receiving water exceeds 3.0 µg/L, evaluate the effluent copper concentration trend, and if it is increasing, develop and implement additional measures to control copper discharges.</u>	<u>Within 90 days of exceedance</u>
4. <u>Report Status of Copper Control Program</u> <u>Submit a report to the Regional Water Board documenting implementation of the copper control program.</u>	<u>Annually, with pollution prevention reports due February 28</u>

The Discharger shall continue its participation in the regional discharger-funded effort to develop site-specific saltwater aquatic life-based WQOs for copper in San Francisco Bay north of the Dumbarton Bridge, as described in the copper findings, above. The Discharger shall also participate in the development of Copper Action Plans, acceptable to the Executive Officer, designed to ensure that copper concentrations will not increase unacceptably in the receiving water as a result of controllable discharges. The Action Plans will describe baseline actions for wastewater and storm water dischargers and a program of additional monitoring and actions to be taken by those dischargers, triggered by specified increases in ambient copper concentrations.

3. Cyanide Action Plan Compliance Schedule and Cyanide SSO Study

The Discharger shall implement monitoring and surveillance, pretreatment, source control, and pollution prevention for cyanide in accordance with the following tasks and time schedule. Any similar activities the Discharger undertakes pursuant to a cease and desist order may substitute for and fulfill these requirements.

<u>Task</u>	<u>Compliance Date</u>
1. <u>Review Potential Cyanide Contributors</u> <u>The Discharger shall submit an inventory of potential contributors of cyanide to the treatment plant (e.g., metal plating operations, hazardous waste recycling, etc.). If no contributors of cyanide are identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to the sanitary sewer. If so, the Discharger shall notify the Executive Officer and implement Tasks 2 and 3.</u>	<u>September 1, 2008</u>
2. <u>Implement Cyanide Control Program</u> <u>The Discharger shall submit a plan for, and begin implementation of, a program to minimize cyanide discharges to the sanitary sewer system consisting, at a minimum, of the following elements:</u> a. <u>Inspect each potential contributor to assess the need to include that contributing source in the control program.</u> b. <u>Inspect contributing sources included in the control program annually. Inspection elements may be based on U.S. EPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831-B-94-01).</u>	<u>February 28, 2009, with pollution prevention report</u>

<u>Task</u>	<u>Compliance Date</u>
c. <u>Develop and distribute educational materials to contributing sources and potential contributing sources regarding the need to prevent cyanide discharges.</u> d. <u>Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs.</u> e. <u>If ambient monitoring shows cyanide concentrations of 1.0 µg/L or higher in the main body of San Francisco Bay, undertake actions to identify and abate cyanide sources responsible for the elevated ambient concentrations.</u>	
3. <u>Report Status of Cyanide Control Program</u> <u>Submit a report to the Regional Water Board documenting implementation of the cyanide control program.</u>	<u>Annually, with pollution prevention reports due February 28.</u>

The Discharger shall comply with the following tasks and deadlines:

<u>Tasks</u>	<u>Compliance Date</u>
a. <i>Compliance Schedule.</i> The Discharger should track relevant national studies, and participate in regional studies as described in the cyanide findings. The Discharger shall also investigate the relationship between cyanide formation and chlorine dose, as chlorine dosage is reduced under this permit's new bacterial limits. Results from these studies should enable the Board to determine feasibility of compliance with final WQBELS during the next permit reissuance.	Annual progress reports with the first report due November 1, 2005
b. <i>SSO Study.</i> The Discharger shall actively participate in the development of regional SSOs for cyanide.	Annual progress reports by cyanide work group.
e. Conduct evaluation of compliance attainability with appropriate final limitations.	February 1, 2007

12. Replace Provisions E.5.a.iv with the following:

- iv) Evaluate the need to revise local limits under 40 CFR 403.5(c)(1); and within 180 days after the effective date of this Order, submit a report acceptable to the Executive Officer describing the changes with a plan and a schedule for implementation. When the facility upgrades described in Finding 27 are fully operational, re-evaluate the need to revise the local limits, and within one year submit a report acceptable to the Executive Officer describing any changes with a plan and implementation schedule.

13. Replace Table 1 in Self-Monitoring Program, Part B, with the following:

Table 1. Schedule Of Influent Sampling, Analyses And Observations

SAMPLING STATION		A-001	A-002
TYPE OF SAMPLE [1]	Notes	C-24	C-24
		[1] [2]	[1] [2]
BOD ₅ 20°C, or CBOD (mg/L & kg/d)	[15]	2/W	2/W
Total Suspended Solids (mg/L & kg/d)	[15]	3/W	3/W
Pretreatment Requirements µg/L or ppb	[13]	M	M

Footnote for Table 1.

[1] Influent flow monitoring is not required because ~~neither the Ignacio plant (A-001) nor the Novato Plant (A-002) does not have~~ has influent flow measuring.

14. Replace Table 2 in Self-Monitoring Program, Part B, with the following:

Table 2. Schedule Of Individual Plants' Sampling, Analyses And Observations

SAMPLING STATION		E-001 and E-002		All P	All OV
TYPE OF SAMPLE	Notes	G [1]	C-24 [1] [2]	O [1]	O [1]
Flow Rate (MGD)	[3]		Cont/D		
BOD ₅ 20°C, or CBOD (mg/L & kg/d)	[15]		2/W		
Oil and Grease (mg/L & kg/d)	[4]		M		
Total Suspended Solids (mg/L & kg/d)	[15]		3/W		
pH (s.u.)	[14]	5/W			
Temperature (°C)		5/W			
Standard Observations				M [17]	E
Pretreatment Requirements µg/L or ppb	[13]	M			
Chlorine Dosage, mg/L	[12]	D			
Enterococcus (MPN/100 ml)	[16]	3/W			

15. For Tables 1, 2, and 3 in Self-Monitoring Program, Part B, replace footnotes 3 and 15 and add footnote 17, as follows:

[3] Flow Monitoring: Effluent flows shall be measured continuously at Outfalls ~~E-001 and~~ E-002, and recorded and reported daily

[15] Percent removal for BOD and TSS (effluent vs. influent) shall also be reported for the Novato plant.

[17] When the Ignacio plant is not used to treat wastewater, standard observations shall only be required at Novato plant stations P002-1 through P002-‘n.’

16. Replace Table 5 in Self-Monitoring Program, Part B as follows:

Table 5. Pretreatment Monitoring Requirements

Constituents	Sample Locations, Frequency, and Analytical Method.		
	Influent A-001 and A -002	Effluent E-001 and E-002	Sludge [2]
VOC	2/Y 624	2/Y 624	2/Y 8260
BNA	2/Y 625	2/Y 625	2/Y 8260
Metals [1]	M	M	2/Y

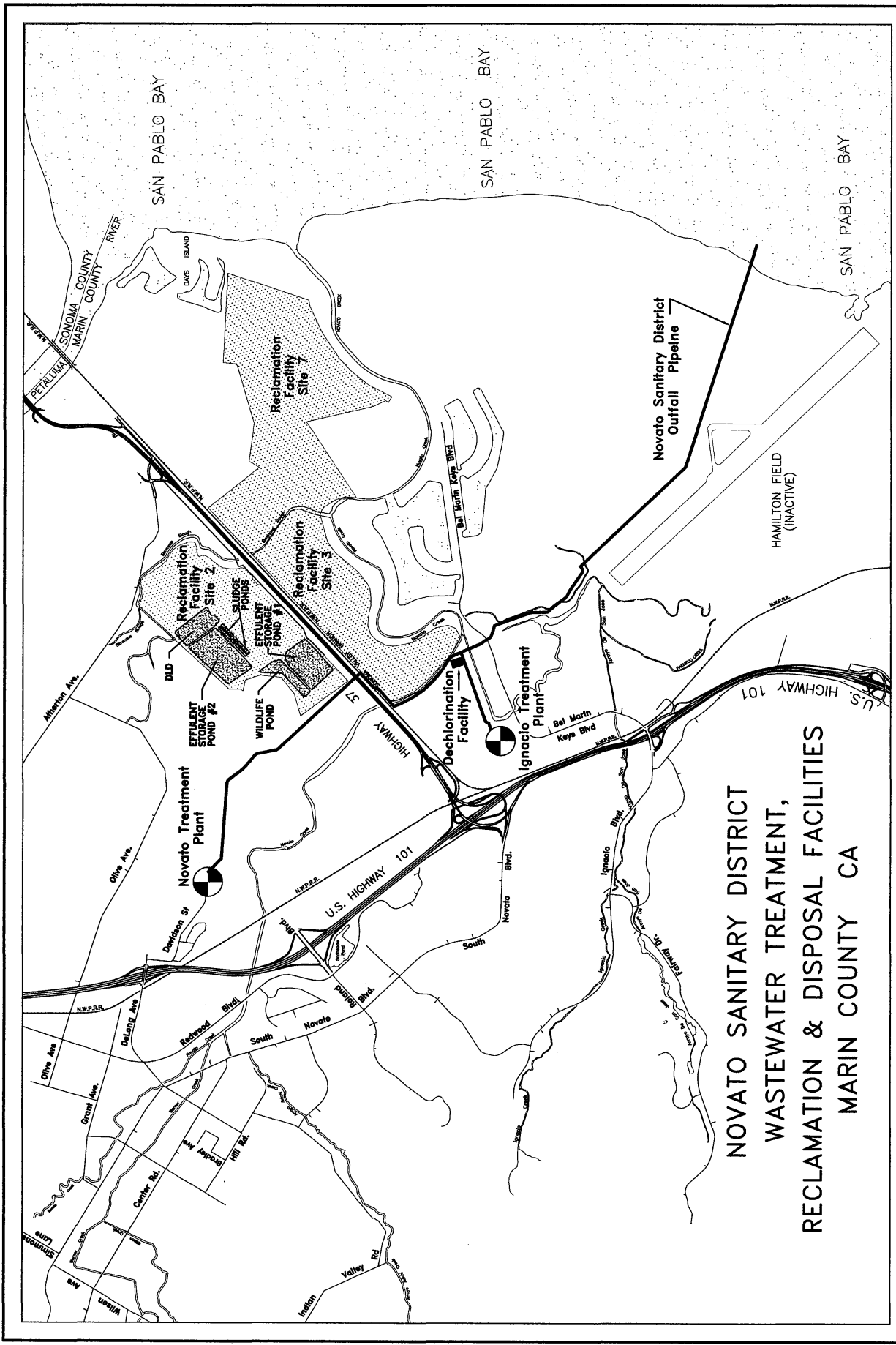
This Order shall be effective upon Regional Water Board adoption.

I, Bruce Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 14, 2008.

Bruce H. Wolfe
Executive Officer

ATTACHMENT A

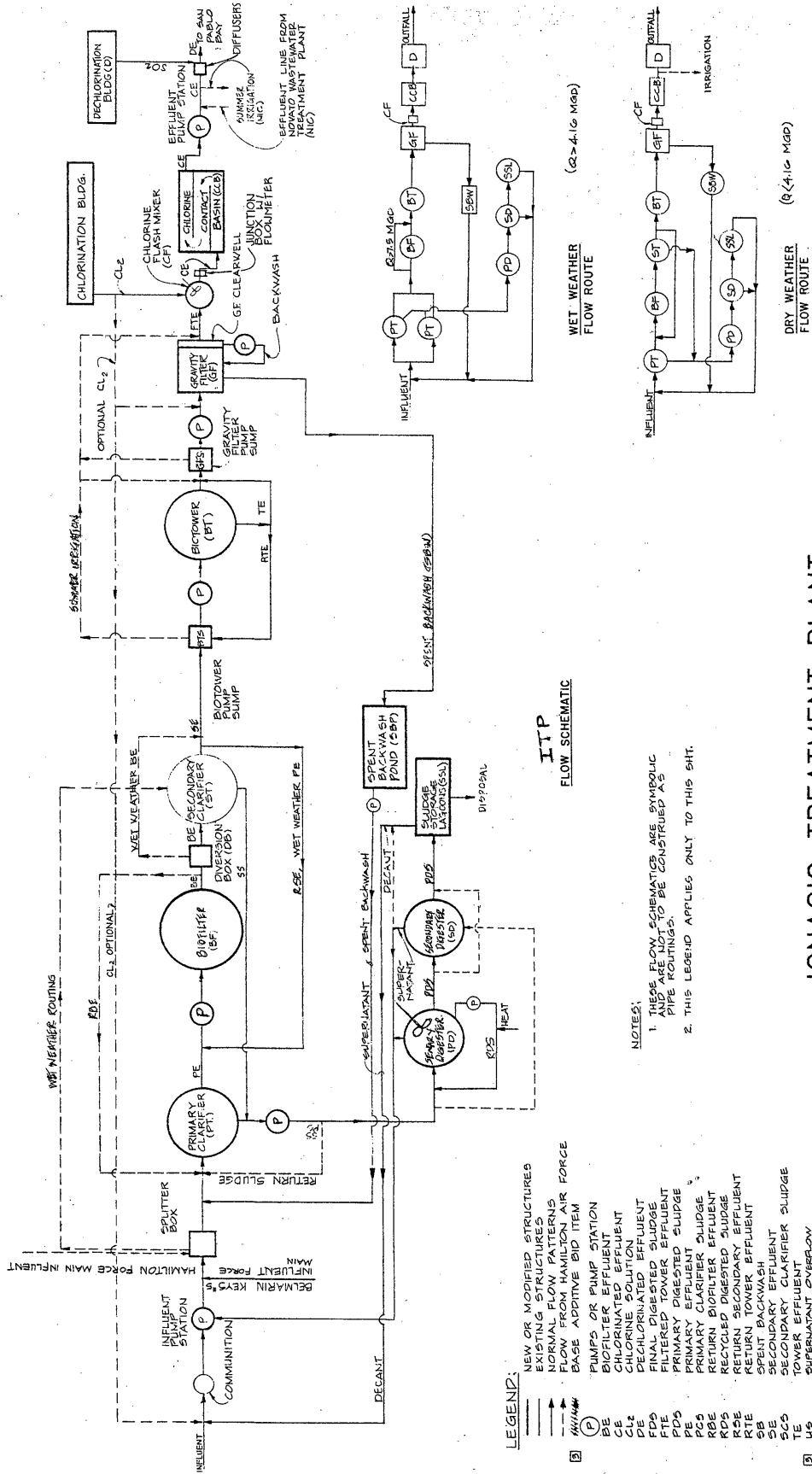
Discharge Facility Location Map



NOVATO SANITARY DISTRICT
WASTEWATER TREATMENT,
RECLAMATION & DISPOSAL FACILITIES
MARIN COUNTY CA

ATTACHMENT B

Discharge Facility Treatment Process Diagrams



- LEGEND:**
- NEW OR MODIFIED STRUCTURES
 - - - EXISTING STRUCTURES
 - NORMAL FLOW PATTERNS
 - FLOW FROM HAMILTON AIR FORCE
 - BASE ADDITIVE BID ITEM
 - ⊕ PUMPS OR PUMP STATION
 - BE BIOFILTER EFFLUENT
 - CE CHLORINATED EFFLUENT
 - CL CHLORINATION BUILDING
 - CF CHLORINE FLASH MIXER
 - CE CHLORINE EFFLUENT
 - CE CHLORINE CONCENTRATOR
 - FTE FILTERED TOWER EFFLUENT
 - FDS FINAL DIGESTED SLUDGE
 - PDS PRIMARY DIGESTED SLUDGE
 - PE PRIMARY EFFLUENT
 - PCS PRIMARY CLARIFIER SLUDGE
 - RBE RETURN BIOFILTER EFFLUENT
 - RDS RECYCLED DIGESTED SLUDGE
 - RDE RETURN TO EFFLUENT
 - RTE RETURN TOWER EFFLUENT
 - SB SPENT BACKWASH
 - SCS SECONDARY CLARIFIER SLUDGE
 - TE TOWER EFFLUENT
 - U/S SUPERNATANT OVERFLOW

ITP
FLOW SCHEMATIC

- NOTES:**
1. THESE FLOW SCHEMATICS ARE SYMBOLIC AND ARE NOT TO BE CONSTRUED AS PIPE ROUTINGS.
 2. THIS LEGEND APPLIES ONLY TO THIS GHT.

WET WEATHER FLOW ROUTE
(Q > 4.16 MGD)

DRY WEATHER FLOW ROUTE
(Q < 4.16 MGD)

IGNACIO TREATMENT PLANT
FLOW SCHEMATIC

APPENDIX B

Revised Fact Sheet (Item 5A)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

FACT SHEET

TENTATIVE ORDER NO. R2-2003-XXXX
NPDES PERMIT NO. CA0037958

**AMENDMENT OF WASTE DISCHARGE REQUIREMENTS ORDER NO. R2-2004-0093
FOR NOVATO SANITARY DISTRICT, NOVATO, MARIN COUNTY**

The Novato Sanitary District (hereinafter the “Discharger”) applied to the Regional Water Board for an amendment of its NPDES permit, Order No. R2-2004-0093. The Discharger requested changes in the facility description, the distribution of flows among its two treatment plants, permitted capacity, monitoring locations, and the copper and cyanide effluent limits.

This Order amends the requirements of Order No. R2-2004-0093 to allow all flows to be discharged from the Novato plant so the Ignacio plant can be decommissioned. When certain conditions are met, this Order allows an average dry weather flow (ADWF) increase to 7.05 mgd. It also revises the copper and cyanide effluent limits, and influent and effluent monitoring locations (when Ignacio plant discharges do not occur). The rationale for each of these changes is described below.

As explained below, the flow increase and revised effluent limits are consistent with federal and state antidegradation policies. Moreover, as also explained below, the Discharger’s sanitary sewer collection system will be sized to accommodate the flow increase.

Antidegradation Analysis

This Order allows higher effluent flows to be discharged. The Discharger prepared an antidegradation analysis (*Anti-Degradation Analysis for Proposed Wastewater Treatment Plant Discharge Modification*, December 2004) in accordance with State Water Board Administrative Procedures Update 90-04. The analysis demonstrated that an increase in the permitted capacity of the Novato plant to 7.05 mgd ADWF is consistent with federal and state antidegradation policies (40 CFR §131.6(d) and State Water Resourced Control Board Resolution 68-16). The study evaluated expected water quality changes associated with the flow increase. Specifically, it considered the increased magnitude of mass loads for specific constituents compared to other loads to the receiving water and likely changes in ambient water quality. It concluded that the increase would have no measurable effect on San Pablo Bay water quality. The incremental change in ambient water quality, as predicted from copper and nickel modeling, would be too small to measure through water quality sampling. When compared to other known sources of various pollutants to San Francisco Bay, the incremental pollutant load increase associated with

this flow increase would be less than 0.002%. Compared to San Pablo Bay sources alone, the incremental load increase would be no greater than 0.004%. The relatively small change would not cause or contribute to any violations of numeric water quality standards. Because the flow increase will not degrade water quality, findings authorizing degradation are unnecessary.

In addition to the flow increase, this Order also allows higher effluent limits for copper and cyanide than those previously in place. The copper limits (including the alternate copper limits) are higher than the copper limits in Order No. 2004-0093, which became effective March 31, 2008. The alternate cyanide limits are higher than the interim cyanide limit in Order No. 2004-0093. As for the higher alternate copper and alternate cyanide limits, the standards-setting processes for the copper and cyanide site-specific objectives recently adopted by the Regional Water Board addressed antidegradation policies and concluded that water quality would not be degraded if effluent limits were derived from the site-specific objectives. These conclusions were based, in part, on assumptions that dischargers would implement copper and cyanide action plans to maintain their current performance. This Order amends Order R2-2004-0093 Sections E.2 and E.3 to require such plans. As for this Order's higher copper limits (to be in place before the alternate copper limits become effective), these higher limits will not degrade water quality because the Discharger's treatment operations will remain the same as or better than the treatment operations already in place. Furthermore, the amendment to Section E.2 to require a copper action plan immediately, before the alternate limits become effective, further ensures that water quality will not be degraded. Therefore, the higher copper and cyanide limits in this Order are consistent with antidegradation policies.

Collection System Capacity

The Discharger's collection system infrastructure (e.g., sewer mains and pump stations) must be sized appropriately to handle the proposed flow increase. Otherwise, the increased flow could result in sewer overflows. The Discharger's existing wastewater collection system includes about 200 miles of sewer lines and 38 wastewater pump stations. Nine of the pump stations have emergency power systems. Of the remaining 29 pump stations, 7 have an auxiliary gravity flow line and the others have sufficient sewer line surcharge capacity and remote alarm systems to allow for mobilization of portable electrical generation equipment.

Sewer system overflows are unlikely to increase due to the flow increase allowed by this Order because the Discharger has an ongoing preventive maintenance and capital improvement program for the sewer lines (both gravity and force mains) and the pump stations to ensure adequate reliability and capacity. The Discharger completed a Sewer System Evaluation Survey (2004) to evaluate the current condition of its collection system and its ability to accommodate future limited service area growth. The Discharger is currently developing a collection system master plan and intends to use capacity analysis and planning to implement capital improvements in advance of demand. Therefore, existing and planned facilities and programs will effectively minimize infiltration and inflow.

Rationale for Changes in Order No. R2-2004-0093 Findings

Provisions 1 and 2 of this Order

Provisions 1 and 2 revise Findings 3 and 27 of Order No. R2-2004-0093 to describe facility upgrade plans.

Provision 3 of this Order

Provision 3 replaces Attachments A and B with revised figures that update the discharge location and treatment process.

Provision 4 of this Order

Provision 4 revises Finding 51 of Order No. R2-2004-0093 to update the antidegradation analysis. The change explains how this Order's higher copper and cyanide limits and increased permitted flow comply with antidegradation policies.

Provision 5 of this Order

Provision 5 revises Table 1 of Order No. R2-2004-0093. It updates the reasonable potential analysis to reflect new copper and cyanide effluent data, and updated copper translators (0.67 and 0.38, acute and chronic, versus 0.73 and 0.39). It revises the final copper and cyanide water quality-based effluent limitations (WQBELs) and eliminates interim performance-based limitations (IPBLs) for copper and cyanide. The derivation of the new WQBELs is explained below with respect to Provisions 6 and 7. This provision also corrects a non-substantive mathematical error pertaining to nickel.

Provisions 6 and 7 of this Order

Provisions 6 and 7 revise Findings 62 and 66 of Order No. R2-2004-0093. They summarize the copper and cyanide water quality objectives, reasonable potential analysis results, WQBEL assumptions, and feasibility of compliance. The table below shows in more detail how the copper and cyanide WQBELs were calculated in accordance with the State Implementation Policy methodology. To calculate the copper WQBELs, ambient background concentrations were obtained from 1993 through 2003 Regional Monitoring Program data collected at Yerba Buena Island. To calculate the cyanide WQBELs, 2002 and 2003 ambient concentrations were obtained for Yerba Buena Island from the Bay Area Clean Water Agencies' *Ambient Water Monitoring: Final CTR Sampling Update Report* (2004).

Effluent Limit Calculations

POLLUTANTS	Copper		Cyanide	
Units	µg/L		µg/L	
Basis	BP & CTR WQC	Copper SSOs	NTR WQC	Cyanide SSOs
WQC - Acute	7.2	5.8	1.0	9.4
WQC - Chronic	8.2	6.6	1.0	2.9

POLLUTANTS	Copper		Cyanide	
Water Effects Ratio (WER)	2.4	2.4	1	1
Lowest WQO	7.2	5.8	1.0	1.0
Site Specific Translator - MDEL	0.67	0.67		
Site Specific Translator - AMEL	0.38	0.38		
Dilution Factor (D) (if applicable)	0	0	2.25	2.25
No. of samples per month	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	Y	Y
Applicable Acute WQO	17	14	1	9.4
Applicable Chronic WQO	20	16	1	2.9
HH criteria	----	----	2.2×10^5	2.2×10^5
Background (Maximum Conc. for Aquatic Life calc.)	2.5	2.5	0.4	0.4
Background (Average Conc. for Human Health calc)	----	----	0.4	0.4
Is the pollutant Bioaccumulative(Y/N)?	N	N	N	N
ECA acute	17.3	13.9	2.35	29.7
ECA chronic	19.7	15.8	2.35	8.53
ECA HH			7.1×10^5	7.1×10^5
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N
Average of effluent data points	10.4	10.4	3.2	3.2
Std Dev of effluent data points	3.0	3.0	2.2	2.2
CV calculated	0.29	0.29	0.68	0.68
CV (Selected) - Final	0.29	0.29	0.68	0.68
ECA acute mult99	0.54	0.54	0.29	0.29
ECA chronic mult99	0.72	0.72	0.49	0.49
LTA acute	9.3	7.5	0.68	8.6
LTA chronic	14	11	1.2	4.2
minimum of LTAs	9.3	7.5	0.68	4.2
MDEL mult99	1.86	1.86	3.47	3.47
AMEL mult95	1.25	1.25	1.63	1.63
MDEL(aq life)	17	14	2.4	15
AMEL (aq life)	12	9.4	1.1	6.8
MDEL/AMEL Multiplier			2.13	2.13
MDEL (human health)			1.5×10^6	1.5×10^6
AMEL (human health)			7.1×10^5	7.1×10^5
minimum of MDEL for Aq. Life vs HH	17	14	2.4	15
minimum of AMEL for Aq. life vs HH	12	9.4	1.1	6.8
Final limit - MDEL	17	14	2.4	15
Final limit - AMEL	12	9.4	1.1	6.8

Rationale for Changes in Order No. R2-2004-0093 Requirements

Provision 8 of this Order

Replace Discharge Prohibition A.3

This change allows all flows to be discharged solely from the Novato plant because it removes the previous individual flow caps that had been placed on the two separate plants. This change allows the Discharger's facility improvements to move forward.

This change also allows a flow increase from 6.55 mgd to 7.05 mgd ADWF, which is consistent with antidegradation policies (see "Antidegradation Analysis," above). The new text specifies three conditions to be met before the flow increase can go into effect. First, the Discharger must submit an engineering analysis to the Executive Officer that demonstrates that the treatment facilities and outfall are designed to provide sufficient capacity for the increased flows. Second, the Discharger must certify that the treatment facilities and outfall are constructed as designed. Third, the Discharger must update its operations and maintenance manual and contingency plan to address the new facilities. These requirements will ensure that the Discharger designs and constructs the plant in a manner consistent with the permit.

Provision 9 of this Order

Replace Effluent Limit B.4

This change clarifies that the BOD and TSS percent removal requirement will be based on the treatment provided at the Novato plant since all Ignacio plant flows will be re-treated at the Novato plant.

Provision 10 of this Order

Replace Table 7 and its footnotes

This change revises the copper and cyanide effluent limitations for consistency with recently reissued permits. It also eliminates the previously approved compliance schedules and interim limits for these pollutants in accordance with State Water Board Order No. WQ 2007-0004. The rationale for these revised limits is set forth in the revisions to Findings 62 and 66 of Order No. R2-2004-0093 (see "Provisions 6 and 7 of this Order," above).

Provision 11 of this Order

Replace Provisions E.2. and E.3

This change eliminates requirements related to the previously allowed copper and cyanide compliance schedules and replaces them with requirements to implement copper and cyanide action plans. These plans are necessary to ensure that the revised copper and cyanide effluent limits comply with antidegradation policies (see "Antidegradation Policies," above). They are also necessary to comply with copper and cyanide site-specific objectives if and when the alternate effluent limits based on these objectives become effective.

For purposes of complying with antidegradation policies, a cyanide action plan is unnecessary until the alternate cyanide limits take effect because, until then, the amended cyanide limits will be lower than the interim cyanide limit in Order No. 2004-0093. However, this Order imposes the requirement for a cyanide action plan sooner because the Discharger is expected to have difficulty complying with this Order's new cyanide limits.

Provision 12 of this Order
Replace Provision E.5.a.iv

This change ensures that the Discharger will update any local limits implementing pretreatment requirements when all the facility upgrades are completed.

Provision 13 of this Order
Replace Table 1 in Self-Monitoring Program, Part B

This change eliminates influent monitoring requirements at the Ignacio plant since Ignacio plant flows will be routed to the Novato plant for additional treatment.

Provision 14 of this Order
Replace Table 2 in Self-Monitoring Program, Part B

This change eliminates effluent monitoring requirements at the Ignacio plant since Ignacio plant flows will be routed to the Novato plant for additional treatment. However, it retains the monthly requirement to complete standard observations (e.g., floating or suspended material, such as oil, grease, or algae, in effluent; peripheral odors; and weather conditions) at both plants. A new footnote (see "Provision 15 of this Order," below) eliminates the requirement for standard observations at the Ignacio plant when it is not used to treat wastewater.

Provision 15 of this Order
For Tables 1, 2, and 3 in Self-Monitoring Program, Part B, replace footnotes 3 and 15 and add footnote 17

The change to footnote 3 clarifies that effluent flows need only be measured at the Novato plant since all Ignacio plant effluent is retreated at the Novato Plant.

The change to footnote 15 clarifies that percent BOD and TSS removal need only be calculated for the Novato plant since all Ignacio plant effluent is retreated at the Novato Plant.

New footnote 17 eliminates the requirement for standard observations (e.g., floating or suspended material, such as oil, grease, or algae, in effluent; peripheral odors; and weather conditions) at the Ignacio plant when it is not used to treat wastewater.

Provision 16 of this Order
Replace Table 5 in Self-Monitoring Program, Part B

This change eliminates influent and effluent monitoring for pretreatment program at the Ignacio plant since Ignacio plant flows will be routed to the Novato plant for additional treatment.

Notification of Interested Parties

The Regional Water Board encouraged public participation in the amendment process. It notified the Discharger and interested agencies and persons of its intent to amend Order No. R2-2004-0093, and provided them with an opportunity to submit their written comments and recommendations. On March 31, 2008, the *Marin Independent Journal* published a notice that this item would appear before the Regional Water Board on May 14, 2008.

APPENDIX C

Tentative Cease and Desist Order (Item 6B)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

TENTATIVE CEASE AND DESIST ORDER NO. R2-2008-XXXX

**REQUIRING NOVATO SANITARY DISTRICT
TO UPGRADE ITS WASTEWATER TREATMENT FACILITY**

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter “Regional Water Board”), finds that:

1. The Novato Sanitary District (hereinafter “Discharger”) owns and operates the Novato and Ignacio wastewater treatment plants and one combined effluent discharge outfall to San Pablo Bay. The plants collect sanitary waste from a primarily residential service area serving the City of Novato and adjacent areas with a current population of about 60,000.
2. The Novato plant has an average dry weather flow (ADWF) design capacity of 4.53 million gallons per day (mgd) and the Ignacio plant has an ADWF design capacity of 2.02 mgd, for a total of 6.55 mgd. The Discharger presently discharges a total annual ADWF of 5.4 mgd, about 82% of the design capacity.
3. The Discharger is currently implementing significant capital improvements that include construction of major new wastewater treatment facilities. These facilities are being installed to address the aging infrastructure, to accommodate limited future service area growth, to consolidate operations at the Novato plant, and to comply with all effluent limitations. A new transfer pump station and conveyance force main are being installed to convey flow currently being treated at the Ignacio plant to the Novato plant instead. The Novato plant is undergoing a major overhaul with the installation of new headworks, a new influent pump station, two new primary clarifiers, two new aeration basins, two new secondary clarifiers, an ultraviolet disinfection facility, a new effluent pump station, a new gravity belt thickener, a second digester, new odor control facilities, and new electrical facilities. The Discharger intends to decommission the Ignacio plant once these new facilities at the Novato plant are complete.
4. NPDES Permit No. CA0037958 (Regional Water Board Order No. R2-2004-0093, as amended by Order No. R2-2008-XXXX) regulates the discharge of effluent from the Novato and Ignacio plants.
5. NPDES Permit No. CA0037958 contains the effluent limitations listed in Table 1, below.
6. The Discharger cannot currently comply with the effluent limits listed in Table 1. An analysis of the Discharger’s effluent data shows that the maximum effluent copper concentration of 21 µg/L is greater than any of the copper limits, including the alternate limits derived from site-specific objectives not yet in effect. Similarly, the 95th percentile of

Table 1: Effluent Limits in Permit

Parameter	Limits		Alternate Limits*	
	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
Copper	12	17	9.4	14
Cyanide	1.1	2.4	6.8	15

*The alternate limits will become effective if and only if site-specific objectives adopted by the Regional Water Board but not yet approved by the U.S. Environmental Protection Agency become effective.

the effluent data (16 µg/L) exceeds the AMELs, and the 99th percentile of the effluent data (19 µg/L) exceeds the MDELs. Likewise, the data analysis shows that the 95th percentile of the cyanide effluent data (5.9 µg/L) exceeds the cyanide AMEL of 1.1 µg/L, and the 99th percentile (7.1 µg/L) exceeds the MDEL of 2.4 µg/L. The Discharger will be able to comply with the alternate cyanide limits if and when they become effective.

7. Water Code § 13301 authorizes the Regional Water Board to issue a Cease and Desist Order when it finds that a waste discharge is taking place, or threatening to take place, in violation of Regional Water Board requirements.
8. Because the Discharger will violate or threatens to violate required effluent limits, this Order is necessary to ensure that the Discharger achieves compliance. This Order establishes a time schedule for the Discharger to complete necessary facility upgrades to address its imminent and threatened violations. These facility upgrades are expected to result in the Discharger’s ability to comply with all effluent limits in NPDES Permit No. CA0037958.
9. The time schedule is intended to be as short as possible; however, it accounts for uncertainty in determining exactly when facility upgrades can be completed. It is based on reasonably expected times needed to implement each required action. The Regional Water Board may wish to revisit these assumptions as more information becomes available.
10. As part of the time schedule to achieve compliance, this Order requires the Discharger to comply with interim effluent limits. These interim limits are intended to ensure that the Discharger maintains at least its existing performance while completing all tasks required during the time schedule. The interim limits are the same as those in place before Order No. 2008-XXXX amended Order No. R2-2004-0093.
11. This Order is an enforcement action and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21000 et seq.) in accordance with 14 CCR § 15321.
12. The Regional Water Board notified the Discharger and interested persons of its intent to consider adoption of this Cease and Desist Order, and provided an opportunity to submit written comments and appear at a public hearing. The Regional Water Board, in a public hearing, heard and considered all comments.

IT IS HEREBY ORDERED, in accordance with Water Code § 13300, that the Discharger shall comply with the following provisions:

1. Prescribed Actions. The Discharger shall comply with the required actions in Table 2 in accordance with the time schedule provided therein to comply with applicable effluent limits. Deliverables listed in Table 2 shall be acceptable to the Executive Officer, who will review them for adequacy and compliance with the Table 2 requirements.

Table 2. Time Schedule and Prescribed Actions

Action	Deadline
a. Comply with the following interim effluent limit at E-002 when there is no discharge from Ignacio plant or at E-003 when discharging from both the Ignacio and Novato plants: <i>Copper: Interim maximum daily effluent limit = 19 µg/L</i> <i>Cyanide: Interim maximum daily effluent limit = 9.2 µg/L</i>	Upon the effective date of this Order
b. Document and certify complete construction of Novato plant headworks, one primary clarifier, odor control facilities, and electrical facilities.	June 30, 2009
c. Document and certify complete construction of Novato plant aeration basins and one secondary clarifier.	June 30, 2010
d. Document and certify complete construction of Novato plant influent pump station, second primary and secondary clarifiers, UV disinfection, gravity belt thickener, and second digester.	December 31, 2010
e. Document and certify completion of all facility upgrades, place upgrades into operation, and comply with final effluent limits of NPDES Permit No. CA0037958.	June 30, 2011

2. Reporting Delays. If the Discharger is delayed, interrupted, or prevented from meeting one or more deadlines of the time schedule in Table 2 due to circumstances beyond its reasonable control, the Discharger shall promptly notify the Executive Officer, provide the reasons and justification for the delay, and propose a time schedule for resolving the delay.
3. Consequences of Non-Compliance. If the Discharger fails to comply with the provisions of this Order, the Executive Officer is authorized to take further enforcement action or to request the Attorney General to take appropriate actions against the Discharger in accordance with Water Code §§ 13331, 13350, 13385, and 13386. Such actions may include injunctive and civil remedies, if appropriate, or the issuance of an Administrative Civil Liability Complaint for Regional Water Board consideration.
4. Effective Date. This Order shall become effective upon Regional Water Board adoption.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 14, 2008.

BRUCE H. WOLFE
Executive Officer

APPENDIX D

Comment Letter



NOVATO SANITARY DISTRICT

500 DAVIDSON STREET • NOVATO • CALIFORNIA 94945 • PHONE (415) 892-1694 • FAX (415) 898-2279
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Legal Counsel

April 14, 2008

VIA EMAIL AND FACSIMILE: (510) 622-2460

Mr. Bill Johnson
NPDES Wastewater Division
San Francisco Bay Regional Water Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comments Regarding Tentative Order for Amendment of Waste Discharge Requirements Order No. R2-2004-0093 for the Novato Sanitary District and Tentative Cease and Desist Order Requiring Novato Sanitary District to Upgrade its Wastewater Treatment Plant

Dear Mr. Johnson:

Thank you for the opportunity to comment on the Tentative Order for the Amendment of Waste Discharge Requirements for the Novato Sanitary District (District) and the tentative Cease and Desist Order Requiring Novato Sanitary District to Upgrade its Wastewater Treatment Plant. The District would like to thank you for your diligence and care in preparing the document. Our comments are shown on the attached document. Please feel free to contact me should you have any questions or require additional information. Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in cursive script that reads "Beverly B. James".

Beverly James
General Manager

Cc: Bruce Wolfe, Regional Water Board
Lila Tang, Regional Water Board
Monica Oakley, Oakley Water Strategies

Novato Sanitary District

Comments Regarding Tentative Order for Amendment of Waste Discharge Requirements Order No. R2-2004-0093, and Tentative Cease and Desist Order Requiring Novato Sanitary District to Upgrade its Wastewater Treatment Plant

April 14, 2008

The Novato Sanitary District (District) appreciates the opportunity to submit the following comments on the Tentative Order (TO) amending the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of treated wastewater to San Pablo Bay, and the Tentative Cease and Desist Order requiring the District to upgrade its wastewater treatment plant. The District would also like to commend your staff for their diligence and care in preparing this document.

COMMENTS ON TENTATIVE ORDER

- The District requests that sampling requirements for Ignacio Treatment Plant influent and effluent be removed from Tables 1, 2, and 5 of the Self-Monitoring Program, Part B.**

Tables 1, 2, and 5 of the Self-Monitoring Program, Part B, include requirements for sampling at A-001 and E-001, the Ignacio Plant’s influent and effluent. However, all effluent from the Ignacio Plant is being routed to the Novato Plant for further treatment and discharge, and the Novato Plant influent and effluent will continue to be sampled for all required constituents. Sampling at the Ignacio Plant in this circumstance would only provide overlapping results. Please also see comment 3, below.

The District therefore requests the following edits to Provision 12 and the Fact Sheet’s explanation of this provision (yellow highlighting indicates requested underlined or strike-out language in cases where it was necessary to show the permit language to be changed, itself, separately from the existing permit language being added to the TO):

- Remove sampling requirements for A-001 and E-001 from Tables 1, 2 and 5 of the Self-Monitoring Program, Part B, and add citation to Table 2 title for new footnote:**

Table 1. Schedule Of Influent Sampling, Analyses And Observations.

<u>SAMPLING STATION</u>		<u>A-001</u>	<u>A-002</u>
<u>TYPE OF SAMPLE [1]</u>	<u>Notes</u>	<u>C-24</u>	<u>C-24</u>
<u>BOD₅ 20°C, or CBOD (mg/L & kg/d)</u>	[15]	<u>1 [2]</u>	<u>[1] [2]</u>
<u>Total Suspended Solids (mg/L & kg/d)</u>	[15]	<u>3 [2]</u>	<u>3/W</u>
<u>Pretreatment Requirements µg/L or ppb</u>	[13]	<u>M</u>	<u>M</u>

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Footnote for Table 1.

[1] Influent flow monitoring is not required because neither the Ignacio plant (A-001) nor the Novato Plant (A-002) has ~~does not have~~ influent flow measuring.

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Table 2. Schedule of Individual Plants' Effluent Sampling, Analyses And Observations^[17]

<u>SAMPLING STATION</u>		<u>E-001 and E-002</u>	<u>All P 002-1-P-002-n'</u>	<u>All OV</u>
<u>TYPE OF SAMPLE</u>	<u>Notes</u>	<u>G [1]</u>	<u>C-24 [1][2]</u>	<u>O [1]</u>
<u>Flow Rate (MGD)</u>	<u>[3]</u>		<u>Cont/D</u>	
<u>BOD₅ 20°C, or CBOD (mg/L & kg/d)</u>	<u>[15]</u>		<u>2/W</u>	
<u>Oil and Grease (mg/L & kg/d)</u>	<u>[4]</u>		<u>M</u>	
<u>Total Suspended Solids (mg/L & kg/d)</u>	<u>[15]</u>		<u>3/W</u>	
<u>pH (s.u.)</u>	<u>[14]</u>	<u>5/W</u>		
<u>Temperature (°C)</u>		<u>5/W</u>		
<u>Standard Observations</u>			<u>M</u>	<u>E</u>
<u>Pretreatment Requirements µg/L or ppb</u>	<u>[13]</u>	<u>M</u>		
<u>Chlorine Dosage, mg/L</u>	<u>[12]</u>	<u>D</u>		
<u>Enterococcus (MPN/100 ml)</u>	<u>[16]</u>	<u>3/W</u>		

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FOOTNOTES FOR TABLES 1, 2, and 3

[1] The Discharger shall use approved USEPA Methods with the lowest Minimum Levels specified in the SIP and described in footnote 1 of effluent limitations B.7, and in the August 6, 2001, letter.

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[2] Composite sampling: 24-hour composites may be made up of discrete grabs collected over the course of a day and volumetrically or mathematically flow-weighted. Samples for inorganic pollutants may be combined prior to analysis. If only one grab sample will be collected, it should be collected during periods of maximum peak flows. Samples shall be taken on random days.

[3] Flow Monitoring: Effluent flows shall be measured continuously at Outfalls E-001 and E-002, and recorded and reported daily

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Table 5. Pretreatment Monitoring Requirements

<u>Constituents</u>	<u>Sample Locations, Frequency, and Analytical Method.</u>
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Provision 13 of this Order

Add citation to Table 3 title in Self-Monitoring Program, Part B

This change applies a new footnote to this table (see "Provision 14 of this Order," below).

3. The District requests that the monitoring requirements for BOD and TSS be changed to require monitoring of Novato influent and effluent only.

The District requests the ability to calculate BOD and TSS removal based on monitoring of Novato influent and effluent, only. The current location of the effluent sampler at the Ignacio plant does not allow for samples to be taken from the effluent that is being conveyed to the Novato plant. The sampler is currently located on Ignacio's former outfall line, after the chlorine contact basin, neither of which are currently in use. Also, BOD and TSS data for the Novato influent and effluent indicate that compliance with the 85% removal requirements will be feasible without including any adjustment for the dilution of Novato influent by the treated Ignacio effluent.

Therefore, the District requests the following revisions to Provision 14 and the explanation of this provision in the Fact Sheet that accompanies the TO:

14. Replace footnotes for Tables 1, 2, and 3 in Self-Monitoring Program, Part B, as follows, beginning with footnote 13:

[13] Pretreatment Program Requirements: see Table 5, below. All influent sampling shall occur only at A-002 (at the Novato plant).

[14] Daily minimum and maximum for pH shall be reported.

[15] Percent removal for BOD and TSS (effluent vs. influent) shall also be reported. Percent removal shall be calculated based on Novato influent and effluent BOD and TSS concentrations.

[16] The approved methods for the Enterococcus analysis are Enterolert, Membrane Filtration, or multiple tube fermentation. The Discharger may submit a request to the Executive Officer for a reduction in sampling frequency once it has collected 24 months of data demonstrating consistence compliance with the effluent bacterial limitations.

[17] All effluent monitoring shall be at E-002, except for chlorine residual and toxicity monitoring, which shall be at E-003.

Provision 14 of this Order

Replace footnotes for Tables 1, 2, and 3 in Self-Monitoring Program, Part B

There are three changes to these footnotes.

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- Deleted: E-003
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- Deleted: C-24 [1] [2]
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- Deleted: They also revise the ammonia sampling method from grab samples to 24-hour composite samples because composite samples represent ammonia levels better than grab samples.
- Deleted: When the Ignacio plant is treating flows but there is no discharge from the Ignacio plant (all Ignacio plant effluent flows to the Novato plant), a
- Deleted: except BOD and TSS
- Deleted: When the Ignacio plant is not being used for treatment, all influent sampling (including all BOD and TSS) shall occur only at A-002.
- Deleted: When the Ignacio plant is treating flows but there is no discharge from the Ignacio plant (all Ignacio plant effluent is conveyed to the Novato plant), p
- Deleted: using a flow-weighted average for both plants. The BOD calculation is as follows (for the TSS calculation, "TSS" replaces "BOD" in the equation):

$$\text{Influent BOD}_{\text{flow-weighted}} = \frac{(F_N)(\text{BOD}_N) + (F_I)(\text{BOD}_I - \text{BOD}_{I_p})}{F_N}$$
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First, the change to footnote 13 clarifies pretreatment program monitoring requirements when the Ignacio plant is treating flows but there is no discharge from the Ignacio plant (i.e., all Ignacio plant effluent flows to the Novato plant). In this case, the pretreatment monitoring will take place only at the Novato Plant.

Second, the change to footnote 15 specifies how the percent BOD and TSS removal is to be calculated when the Ignacio plant is treating flows but all Ignacio effluent flows also go to the Novato plant. In particular, compliance with BOD and TSS removal requirements will be based solely on BOD and TSS concentrations in the Novato influent and effluent.

Third, new footnote 17 applies to Tables 2 and 3. It clarifies that, when there is no discharge from the Ignacio plant and all Ignacio plant effluent flows to the Novato plant, all monitoring will occur only at the Novato plant.

Deleted: Compliance with the BOD and TSS percent removal requirements is generally determined by comparing the BOD and TSS effluent and influent concentrations. Essentially, percent removal equals the influent concentration minus the effluent concentration, divided by the influent concentration times 100 percent (see Effluent Limit B.4 of Order R2-2004-0093). With this Order, however, the two treatment plants are treated as one treatment system, and the percent removal requirement is to be met by this combined treatment system instead of by the individual plants. Therefore, the effective flow-weighted influent concentration must be calculated from the influent concentrations measured separately at the two plants, the Ignacio plant effluent concentrations, and effluent flows at both plants (influent flows are not measured at either plant, but are assumed to equal the effluent flows for each plant).¶

$$\text{Influent BOD}_{\text{flow-weighted}} = [(F_N)(\text{BOD}_{N_i}) + (F_I)(\text{BOD}_i - \text{BOD}_{I_e})] \div F_N \text{¶}$$

¶ Where: F_N = Novato plant effluent flow¶

· F_I = Ignacio plant effluent flow¶

· BOD_{N_i} = Novato plant influent BOD concentration¶

· BOD_i = Ignacio plant influent BOD concentration¶

· BOD_{I_e} = Ignacio plant effluent BOD concentration¶

¶ When the Ignacio plant no longer treats wastewater and its effluent no longer flows to the Novato plant for further treatment, F_I will equal zero in the above equation. At that time, BOD and TSS percent removal may be calculated directly from Novato plant influent and effluent concentration data.

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using a flow-weighted average for both plants. The BOD calculation is as follows (for the TSS calculation, "TSS" replaces "BOD" in the equation):

$$\text{Influent BOD}_{\text{flow-weighted}} = [(F_N)(\text{BOD}_{N_i}) + (F_I)(\text{BOD}_{I_i} - \text{BOD}_{I_e})] \div F_N$$

Where: F_N = Novato plant effluent flow

F_I = Ignacio plant effluent flow

BOD_{N_i} = Novato plant influent BOD concentration

BOD_{I_i} = Ignacio plant influent BOD concentration

BOD_{I_e} = Ignacio plant effluent BOD concentration

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When the Ignacio plant is not being used for treatment, BOD, TSS, and percent removal shall only be monitored at the Novato plant.

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When the Ignacio plant is treating flows but there is no discharge from the Ignacio plant (all Ignacio plant effluent flows to the Novato plant), effluent flow, BOD, and TSS

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All other effluent monitoring shall be at E-002.

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All other effluent monitoring shall be at E-002.

APPENDIX E

Responses to Comments

RESPONSES TO COMMENTS

Novato Sanitary District
NPDES Permit No. CA0037958
April 2008

The Regional Water Board circulated a Tentative Order for public comment from March 13, 2008, through April 14, 2008, and received one comment letter from the Novato Sanitary District. Our responses below begin with paraphrased summaries of the comments in *italics*, followed by a response to each issue raised. The original letter should be consulted to ascertain the full substance and context of each comment.

1. *The District requests that sampling requirements for Ignacio Treatment Plant influent and effluent be removed from Tables 1, 2, and 5 of Self-Monitoring Program, Part B.*

Tables 1, 2, and 5 of Self-Monitoring Program, Part B, include requirements for sampling at A-001 and E-001, the Ignacio Plant's influent and effluent. However, all effluent from the Ignacio Plant is being routed to the Novato Plant for further treatment, and the Novato Plant influent and effluent will continue to be sampled for all required constituents. Sampling at the Ignacio Plant is unnecessary.

Response: We agree that since all effluent will flow through the Novato plant, monitoring at the Ignacio plant is unnecessary. We have revised Tables 1, 2, and 5 (including footnotes 3 and 15) to remove Ignacio plant monitoring. However, we retained the requirement for standard observations (e.g., floating or suspended material, such as oil, grease, or algae, in effluent; peripheral odors; and weather conditions) at the Ignacio plant when it is used to treat wastewater. We added a footnote to Table 2 to negate this requirement when the Ignacio plant is not used to treat wastewater.

2. *The District requests that the ammonia sample collection requirement be changed from composite to grab.*

Collection of grab samples with immediate analysis reduces the chance for inaccuracy due to interference caused by acid preservation. The 21st edition of Standard Methods for the Examination of Water and Wastewater (2005) indicates that, although acidification is suitable for certain types of samples, it may cause interference and artificially elevated results for ammonia.

Response: We agree. We had previously proposed to change the ammonia sampling requirement at the District's request. However, upon further consideration, we now agree with the District that doing so was inappropriate. The ammonia sampling requirement in Table 3 of Self-Monitoring Program, Part B, now remains unchanged from Order No. R2-2004-0093.

3. The District requests that BOD and TSS monitoring requirements be changed to require only monitoring of Novato plant influent and effluent.

The District requests the ability to calculate BOD and TSS removal based on monitoring of Novato plant influent and effluent only. The Ignacio plant effluent sampler is currently located on the former Ignacio plant outfall line, after the chlorine contact basin, neither of which is currently used. Ignacio plant effluent conveyed to the Novato plant does not flow by this effluent sampler. BOD and TSS data for the Novato influent and effluent indicate that compliance with the 85% removal requirements is feasible without accounting for Ignacio plant treatment.

Response: We agree that the District may evaluate BOD and TSS removal at the Novato plant without accounting for any BOD or TSS removal at the Ignacio plant. This approach is more stringent than our previous proposal, which was unworkable because the District cannot currently monitor the Ignacio plant effluent. We have revised footnote 15 for Tables 1, 2, and 3 of Self-Monitoring Program, Part B, to clarify that percent BOD and TSS removal need only be calculated for the Novato plant.