CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

IN THE MATTER OF:	)	
	)	
CITY OF PACIFICA	)	COMPLAINT NO. R2-2009-0075
170 Santa Maria Ave.	)	FOR
Pacifica, San Mateo County	)	ADMINISTRATIVE CIVIL LIABILITY
California	)	October 23, 2009
	)	

THE CITY OF PACIFICA IS GIVEN NOTICE THAT:

1. The City of Pacifica (Discharger) is alleged to have violated provisions of law for which the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), may impose civil liability under Sections 13350 and 13385 of the California Water Code (Water Code).

2. Discharger operates a domestic wastewater treatment plant called the Calera Creek Water Recycling Plant (WWTP) located at 700 Coast Highway, Pacifica, San Mateo County. The WWTP and associated wastewater collection system operates under Order No. R2-2006-0067 (NPDES No. CA0038776) and was previously subject to WDR Order No. 99-066 from September 15, 1999, until October 31, 2006, as amended by Order No. R2-2002-0088 on September 18, 2002. The collection system is also subject to State Water Resources Control Board (State Water Board) Order No. 2006-0003. This Complaint is issued to address alleged violations of the Water Code associated with numerous sanitary sewer overflows and bypass violations reported by Discharger, including substantial discharges in January 2008, as well as effluent and receiving water limit violations for the period of February 2006 through September 2008.

3. Unless waived, a hearing on this complaint will be held before the Regional Water Board on January 13, 2010, at 1515 Clay Street in the Auditorium, Oakland, California. You or your representative will have an opportunity to be heard and to contest the allegations in this complaint and the imposition of the civil liability. An agenda for the meeting will be provided to you not less than 10 days before the hearing date. The deadline to submit all evidence or comments concerning this complaint is November 23, 2009.

ALLEGATIONS

1. The WWTP serves a population of approximately 39,000, with 82 miles of gravity sewers and 4.2 miles of force mains. There are five sewage pump stations with a total pumping capacity of 34,000 gallons per minute (49 mgd).

2. Treated wastewater is discharged from the WWTP to Calera Creek which flows through Calera Creek Wetlands into the Pacific Ocean at Rockaway Beach. A bicycle trail follows Calera Creek from the WWTP discharge to Rockaway Beach, and the area is extensively used for recreation. Although the Basin Plan does not specifically identify beneficial uses for Calera Creek and Calera Creek Wetlands, based on characteristics of these water bodies the beneficial uses for inland streams and marine wetlands that are applicable to Calera Creek and its wetlands are as follows. The beneficial uses of Calera Creek are: agricultural supply; cold freshwater habitat; freshwater replenishment; groundwater recharge; industrial service supply; fish migration; industrial process supply; water contact recreation; non-contact water recreation; fish spawning; warm freshwater habitat; and wildlife habitat. The beneficial uses of Calera Creek Wetlands are: ocean, commercial and sports fishing; fish migration; water contact recreation; non-contact water recreation; shellfish harvesting; fish spawning; wildlife habitat; preservation of rare and endangered species; and navigation. The beneficial uses of the Pacific Ocean are the same as for the Calera Creek Wetlands in addition to industrial service supply.

3. As more fully described below, during the month of January 2008, significant discharges occurred at the WWTP and from its collection system that constitute violations of the Water Code and the Discharger's NPDES Permit. On January 25, 2008, more than 100,000 gallons of raw sewage was discharged from various points in the WWTP collection system. On January 25 and 26, 2008, the Discharger bypassed approximately 6,900,000 gallons of partially treated sewage to surface waters. These spills are collectively referred to as the "Discharge Events." In addition to the Discharge Events, this complaint also addresses numerous smaller collection system spills reported by the Discharger and one larger spill in 2004 from a pump station that are detailed in Table A.

4. The Discharge Events occurred as a result of the Discharger's failure to adequately identify and address collection system problems. Specifically, the Discharger could have undertaken detection and elimination of excessive collection system inflow and infiltration ("I&I"). I&I corrective measures could have avoided: (1) the collection system surcharging and the resultant spills; and (2) the WWTP process bypass. The Discharger constructed additional WWTP capacity to address excessive collection system I&I but that additional capacity was not sufficient to transport and treat the peak flows from the January 2008 storm events. Failure to complete correction and repair of the No. 2 sequencing batch reactor prior to the January 25, 2008 storm, also contributed to the treatment system bypasses.

5. The Discharge Events were preventable. Specifically, the Discharger should have undertaken detection and elimination of excessive collection system I&I. There is a long history of I&I problems with the Discharger's collection system and the Discharger had notice of those problems. Historical documents show that the Discharger has been warned of the need to correct the I&I and properly maintain and fund the treatment and collection systems. In a March 26, 1993 letter to the City Manager, Mr. Ron Blair (State Water Board's Revenue Program Specialist) made findings, after reviewing the Discharger's wastewater treatment facilities and financial records, which included the following:

> 1. The operation and maintenance of the grant funded facilities is deficient….Additional staff and resources must be allocated to plant operation and maintenance (including replacement) or O. M. & R.
> 2. At least three audits of City finances indicate that operational expenses exceed operational income. The City is required by 40 CFR 929-2(b)(2) to generate sufficient revenue (from user charges) to pay the total O. M. & R costs.

In addition, Mr. Blair's Audit report dated March 24, 1993, states, "The plant as designed and constructed has operational problems. The problems were compounded by high I/I flows. A lot of the current problems could be reduced or eliminated if the City eliminated the high I/I."

6. The Discharger's knowledge of the collection system's I&I problems is reflected in the fact that the excessive I&I was taken into consideration when designing the relatively new WWTP. Construction of the WWTP facility was completed in September 2000. The WWTP consist of grit removal, sequencing batch reactors, filtration and ultraviolet light disinfection. While the treatment plant was sized to accommodate additional flows from excessive I&I, the capability of the collection system was not expanded to transport excess flows. There is no evidence that the collection system has been evaluated for its carrying capacity or hydraulic limitations since 1982.

7. Excessive I&I into the sanitary sewer was the cause of the discharges of untreated sewage from the collection system and bypass of partially treated sewage during the Discharge Events. Failure to identify and eliminate stormwater I&I into the sanitary sewer threatens to cause future discharges of untreated/partially treated sewage into surface waters in violation of the Water Code and Discharger's NPDES Permit.

During the January 25, 2008, storm, the Discharger's collection system was inundated with stormwater I&I resulting in the collection system spills and bypass at the WWTP. Flow rates as high as 24 mgd were measured at the WWTP. The massive increase in collection system flows coincides with the January 25, 2008,

storm event and was observed as an immediate flow increase, which is typical of I&I events.

The Discharger's efforts to identify and eliminate I&I from its collection system have been inadequate. The sources of I&I (building and roof drains, illicitly connected stormwater drainage systems, poorly sealed manholes, leaky pipe joints and cracked, leaking or broken pipes) are most commonly detected by doing a comprehensive sewer system evaluation survey. This may involve smoke testing, TV inspections of sewer lines, in-line flow measurements during dry and wet rainy seasons and visual inspection of manholes. The Discharger conducted such a study in the early 1980's with State and Federal grant assistance but has not done a comprehensive survey since that time. The Discharger's staff stated during an interview with Richard McHenry, Senior Engineer with the State Water Board's Office of Enforcement, on June 10, 2008, that one community in the service area had been smoke tested about ten years ago but that no other smoke testing has been undertaken. This interview also revealed that the Discharger has purchased a truck mounted television system for investigating sources of I&I, but only a total of five miles of sewers had been filmed. Subsequently to this interview, the Discharger submitted information demonstrating that, between June 2006 and January 2008, 28,695 feet (5.5 miles) of collection system had been filmed. Since January 2008 another 36,861 feet (seven miles) has been filmed. Discharger's staff also confirmed that they do not own or have access to flow meters that would allow them to assess systems contributing high flows or I&I. At the time of the Discharge Events, the Discharger employed 6 line staff and 2 managers in their collection system crew. Subsequently, the Discharger has hired two additional employees for the collection system with the stated intent of increasing the use of the television system.

8. JANUARY 25, 2008, RAW SEWAGE OVERFLOWS

a. On Friday, January 25, 2008, during a winter storm, more than 100,000 gallons of raw sewage were discharged to surface waters from various points in the Discharger's collection system.

b. The Discharger estimates that overflow from a manhole at the intersection of Linda Mar Blvd. and Highway One had a flow rate of 75 gallons per minute and took place for approximately 5.5 hours (from 12:30 to 6 pm). The total estimated volume of sewage discharged from this manhole is 25,000 gallons. The estimated flow is conservative because the start time is the time that the Discharger's crew arrived on the scene. The raw sewage entered the storm drainage system and discharged into the Pacific Ocean at the Pacifica State Beach via the Linda Mar Pump Station which is located only 500 hundred feet from the overflowing manhole. Beach closure signs were posted at 1 pm on January 25, 2008, at three locations along Pacifica State Beach. Samples were taken the

following day, January 26, and continued through the 30th of January when the closure signs were removed from Pacifica State Beach after consultation with the County Health Department.

c. The Discharger estimated overflow from a manhole at the intersection of Palmetto Avenue and Shoreview Drive at a flow rate of 75 gallons per minute for a total time of overflow of 10.5 hours (1:30 pm until midnight) resulting in a raw sewage discharge of approximately 47,250 gallons. During the same time period, a manhole on Avalon Drive at Edgemar Ave. overflowed at an approximate flow rate of 50 gallons per minute for a total estimated discharge volume of 31,500 gallons. The estimated total flow for both locations is conservative because the start time is the time that the Discharger's crew arrived on the scene, not the actual time that the overflow began.

The sewage made its way into the storm drainage system via a catch basin a few yards away from both overflowing manholes and then entered the Pacific Ocean at North Sharp Park where beach closure signs were posted at 1 pm on January 25, 2008. Samples were taken the following day, January 26, and continued until January 29th when North Sharp Park Beach was allowed to be reopened after consultation with and approval of the County Health Department.

9. JANUARY 25 AND 26, 2008, WWTP BYPASS

a. Beginning at approximately 5:45 pm on January 25, 2008, through to approximately 1 pm the next afternoon; an estimated 6.9 million gallons of primary and/or secondary treated wastewater bypassed the filtration process, was run through the ultraviolet (UV) disinfection process then discharged to surface waters. The peak hour treatment design of the WWTP is 20 million gallons per day (mgd), although at the time its processing capability was approximately 16 mgd whereas the peak hour flow observed during the January 25 storm event was 24 mgd.

b. Secondary treatment at the WWTP is provided by 5 sequencing batch reactors (SBRs). The SBRs work normally in a 5 mode procedure as follows:

Fill – React (air on) – Settle (air off) – Decant – Idle

Only one SBR can be filled at a time as the computerized system will not allow other operational modes. During the very high flows the computer system was overridden to operate in a fill and decant mode (the react and settling processes were skipped) resulting in discharges of partially treated sewage.

c. One of the 5 SBRs, unit No. 2, had been out of service since October 2007. The unit No. 2 SBR was pulled off line after a mixing pump failed and the blower was turned on. The air from the blower caused the internal piping system to break in numerous places due to the uplifting pressure of the forced air. The SBR was brought back on-line on March 13, 2008, approximately six weeks after the bypass occurred.

d. The WWTP treatment design peak hour flow rate of 20 mgd was reduced by approximately 20% during the time that the unit No. 2 SBR was non-operational. The high recorded flow during the January 2008 event was 24 mgd, which exceeds the peak design flow capacity of the WWTP, even if the SBR had been in working order.

e. The Discharger failed to collect composite samples for all constituents which have effluent limits from the WWTP bypass discharge as required by the WDR Order No. R2-2006-0067 (NPDES Permit No. CA00038776). In fact, the Discharger did not modify its sampling routine in response to the bypass and there was no sampling or observations of the impacts to Calera Creek other than limited routine effluent composite samples.

10. JANUARY 2006 THROUGH DECEMBER 2008 MONTHLY SELF MONITORING REPORT EFFLUENT VIOLATIONS

a. From January 2006 through December 2008, there were 28 effluent limit and three receiving water violations, as detailed in Table B. Out of the 28 effluent limit violations, 20 are subject to mandatory minimum penalties.

b. From August 7, 2006 until August 22, 2006 the Discharger had seven fecal coliform violations. The exact cause of these violations is unknown. Regardless, the violations were ongoing and presented a significant risk to human health and water quality.

PERMIT REQUIREMENTS APPLICABLE TO DISCHARGER

WDR ORDER NO. R2-2006-0067 (NPDES PERMIT NO. CA0038776**)** contains the following provisions:

Section III – DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different from that described by this Order is prohibited.

B. The bypass of untreated or partially treated wastewater to waters of the state is prohibited, except as described at 40 CFR

122.41(m)(4) and in A.12 of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993. (Attachment G).

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D. Any sanitary sewer overflow that results in a discharge of untreated or partially treated waste water to waters of the United States is prohibited.

Section IV – EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final effluent Limitations – Discharge Point 001

a. The discharge of tertiary treated wastewater to Calera Creek shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location E-001 as described in the attached Monitoring and Reporting Program (Attachment E).

Parameter	Units	Daily Maximum	Monthly average	Instantaneous maximum
Total Suspended Solids	mg/l	20	10	
Turbidity	NTU			10
Ammonia Nitrogen (NH3-N)				
Dry season (June – Sept.)	mg/l	5	2	
Wet Season (Oct. – May)	mg/l	10	5	
Cyanide	ug/l	7.8	4.5	

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c. pH: the pH of discharge shall not exceed 8.5 nor be less than 6.5

Attachment D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

D. Proper operation and maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related

appurtenances) which are installed or used by the Discharger to achieve compliance…

G. Bypass

1. Definitions
   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility[40CFR 122.41(m)(1)(i)(4)].

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3. Prohibition of bypasses - Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass unless
   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
   c. The Discharger submitted notice to the Regional Water Board…

Attachment G - SELF-MONITORING PROGRAM, PART A, NPDES PERMITS (Included in the Order No. R2-2006-0067 at VI.B by reference)

Section C. SPECIFICATIONS FOR SAMPLING AND ANALYSES
2. Effluent
h. When any type of bypass occurs, composite samples shall be collected on a daily basis for all constituents at all affected discharge points which have effluent limits for the duration of the bypass.

<u>WDR Order No. R2-2002-0088 (NPDES No. CA0038776)</u>, which was in effect from September 18, 2002, until October 31, 2006, states in part:

I.4

a. The geometric mean value of the last five samples for fecal coliform density shall not exceed Most Probable Number (MPN) of fecal coliform bacteria of 20 MPN/100 ml, and
b. The 90th percentile value of the last 10 samples shall not exceed a fecal coliform bacteria level of 400 MPN/100 ml.

WATER CODE PROVISIONS

Section 13350 provides:

(a) Any person who . . . (2) in violation of any waste discharge requirement, waiver condition, certification, or other order or prohibition issued, reissued, or amended by a regional board or the state board, discharges waste, or causes or permits waste to be deposited where it is discharged, into the waters of the state, . . . shall be liable civilly, and remedies may be proposed, in accordance with subdivision (d) or (e).

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(e) The state board or a regional board may impose civil liability administratively pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 either on a daily basis or on a per gallon basis, but not both.
(1) The civil liability on a daily basis may not exceed five thousand dollars ($5,000) for each day the violation occurs. . . .
(2) The civil liability on a per gallon basis may not exceed ten dollars ($10) for each gallon of waste discharged.

Section 13376 provides:

The discharge of pollutants or dredged or fill material or the operation of a publicly owned treatment works or other treatment works treating domestic sewage by any person except as authorized by waste discharge requirements . . . is prohibited, except that no waste discharge requirements or permit is required under this chapter if no state or federal permit is required under the Federal Water Pollution Control Act, as amended.

Section 13385 provides:

(a) Any person who violates any of the following shall be liable civilly in accordance with this section:
(1) Section 13375 or 13376.
(2) Any waste discharge requirements or dredge and fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.

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(c) Civil liability may be imposed administratively by the state board or a regional board pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 in an amount not to exceed the sum of both of the following:
(1) Ten thousand dollars ($10,000) for each day in which the violation occurs.

(2) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars ($10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

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(e) In determining the amount of any liability imposed under this section, the regional board, the state board, or the superior court, as the case may be, shall take into account the nature, circumstances, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and other matters that justice may require. At a minimum, liability shall be assessed at a level that recovers the economic benefits, if any, derived from the acts that constitute the violation.

* * *

(h) (1) Notwithstanding any other provision of this division, and except as provided in subdivisions (j), (k), and (l), a mandatory minimum penalty of three thousand dollars ($3,000) shall be assessed for each serious violation.

(2) For the purposes of this section, a "serious violation" means any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant, as specified in Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations, by 20 percent or more or for a Group I pollutant, as specified in Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations, by 40 percent or more.

(i) (1) Notwithstanding any other provision of this division, and except as provided in subdivisions (j), (k), and (l), a mandatory minimum penalty of three thousand dollars ($3,000) shall be assessed for each violation whenever the person does any of the following four or more times in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three violations:

(A) Violates a waste discharge requirement effluent limitation.

(B) Fails to file a report pursuant to Section 13260.

(C) Files an incomplete report pursuant to Section 13260.

(D) Violates a toxicity effluent limitation contained in the applicable waste discharge requirements where the waste discharge requirements do not contain pollutant-specific effluent limitations for toxic pollutants.

VIOLATIONS

1. DISCHARGE EVENTS

a. The January 25, 2008 discharges of raw sewage from the collection system into surface waters constitute two days of discharge in violation of NPDES Permit Sections III.A (unauthorized location/manner of discharge) and III.D (unauthorized discharge of untreated or partially treated wastewater). As a result, the Discharger violated Water Code section 13376's prohibition against discharge of pollutants. The Regional Water Board may impose civil liability under 13385 of the Water Code for such violations.

b. The January 25 and 26, 2008, WWTP bypasses constitute violation of NPDES Permit Sections III.A (unauthorized discharge) and III.B (unauthorized bypass), and Attachment G Standard Provisions C.2.h (failure to sample bypass discharge). As a result, the Discharger violated Water Code Section 13376 which prohibits discharges in violation of permit requirements. The Regional Water Board may impose civil liability under 13385 of the Water Code for such violations.

c. In addition to the Discharge Events discussed above, Discharger reported numerous collection system spills for the period of December 2004 through June 2009 that are detailed in Table A. The Regional Water Board may impose civil liability under Water Code section 13350 for the spills that discharged to waters of the state and Water Code section 13385 for the spills that discharged to waters of the United States.

2. EFFLUENT AND RECEIVING WATER LIMITS

a. From January 2006 through December 2008 the Discharger has reported that there were 28 effluent limit violations and 3 receiving water limit violations. One of the violations is a serious violation in accordance with Water Code section 13385, subdivision (h). The remaining 19 violations are either serious and chronic or simply chronic violations in accordance with Water Code section 13385, subdivision (i)(1). (See Table B for details on serious and chronic designations.) The Regional Board is required by Water Code section 13385 subdivisions (h) and (i) to assess mandatory minimum penalty of $3,000 for specified serious and chronic effluent limit violations. The Regional Water Board also has discretion to impose additional liability up to $10,000 per day of violations and $10 per gallon for every gallon discharged but not cleaned up in excess of 1,000 gallons. (Water Code section 13385 subd. (c)(1) and (2).)

b. Included in the above violations are seven fecal coliform violations. The Regional Water Board is proposing additional liability be imposed under

Water Code section 13358 subdivision (c)(1) and (2), as discussed above, for the coliform violations.

MAXIMUM and MINIMUM POTENTIAL LIABILITY

1. DISCHARGE EVENT VIOLATIONS

The maximum administrative civil liability the Regional Water Board may impose for the Discharge Events and numerous other collections system spills as detailed in Table A is $73,498,250. (See Water Code Sections 13350, and 13385(c)(1) and (2).)

2. EFFLUENT AND RECEIVING WATER LIMIT VIOLATONS

The maximum administrative civil liability the Regional Water Board may impose for the 28 effluent and receiving water limit violations reported by the Dischargers' monthly self-monitoring reports for January 2006 through December 2008, not considering liability which may be imposed on a per gallons discharged basis, is $ 2,060,000. (Water Code Section 13385(c)(1) and (2).) The mandatory minimum penalty amount for the serious and chronic effluent limit violations under 13385, subdivisions (h) and (i), is $60,000. (See Table B for calculations)

CONSIDERATION OF FACTORS FOR DISCHARGE EVENT VIOLATIONS UNDER 13327 AND 13385(e)

1. Nature, circumstances, extent and gravity of the violation

The failure to identify and eliminate stormwater I&I into the sanitary sewer was the cause of the discharges of untreated sewage from the collection system and partially treated sewage from the WWTP into surface waters on the 25th and 26th of January 2008. In addition to these Discharge Events, this complaint also addresses numerous other collection system spills reported by the Discharger that are detailed in Table A.

All the discharges detailed in Table A were considered in establishing the recommended liability. The primary focus of the recommended liability, however, is on the Discharge Events because those events present a relatively greater threat to water quality. Discharger's continuing failure to identify and eliminate stormwater I&I into the sanitary sewer threatens to cause future discharges of untreated sewage from the collection system into surface waters and overwhelm the WWTP, compromising its ability to fully treat sewage.

a. January 25, 2008, raw sewage overflow

The gravity of this violation is moderately significant because though diluted with stormwater, the overflow was of a large volume and there were impacts to receiving water beneficial uses. More than 100,000 gallons of raw sewage was discharged from various points in the collection system to surface waters. The discharges resulted in the closure of the Pacifica State Beach and North Sharp Park Beach for 5 days. The length of these closures was determined by the County Health Department based on sampling results for fecal coliform.

These discharges of raw sewage were the result of the Discharger's collection system having I&I problems that render it incapable of handling the amount of rain received from the January 25, 2008 winter storm. The beach closures impacted both water contact and non-contact recreational use. The discharge threatened public health because, by its nature, raw sewage, even in diluted form, contains high concentration of bacteria and viruses. It is unknown to what extent the public was exposed to the discharge prior to closure of the beaches.

b. January 25 and 26, 2008, WWTP bypass

This discharge violation is moderately significant because though the sewage was diluted and partially treated, the discharge volume was extremely large and the potential impacts to beneficial uses were substantial. The Discharger released approximately 6.9 million gallons of primary and/or secondary treated wastewater that bypassed the filtration process, was run through the ultraviolet (UV) disinfection process, and then discharged to surface waters on January 25 and 26, 2008. This partially treated wastewater was discharged to Calera Creek, which flows through Calera Creek Wetlands into the Pacific Ocean at Rockaway Beach.

It is impossible to determine the actual impacts to water quality and the beneficial uses because the Discharger did not conduct the appropriate sampling. NPDES Permit No. CA0038776 Attachment G Standard Provisions C.2.h requires that "[w]hen any type of bypass occurs, composite samples shall be collected on a daily basis for all constituents at all affected discharge points which have effluent limits for the duration of the bypass."

The Discharger's sampling was not sufficient to determine the impacts of WWTP bypass discharge. Furthermore, the monthly Discharger Self-Monitoring Report for January 2008 shows that effluent Biochemical Oxygen Demand (BOD), oil and grease, organic nitrogen, ammonia and fecal coliform were not sampled on the 25th, the day of the bypass. Accordingly, the impacts to water quality and beneficial uses of the receiving stream were not

assessed by the Discharger during the bypass event on January 25, 2008. The grab samples (for fecal coliforms) taken on the upper and lower Calera Creek after January 25, did not show conclusive evidence of long-term impact of the bypass on Calera Creek. The first bacteriological samples of Calera Creek were taken on the morning of January 26 after the bypass was over and the wastewater started receiving full treatment.

Regardless, the discharge of 6.9 million gallons of partially treated sewage would be expected to raise the level of pathogens, ammonia, oxygen-demanding substances, and other pollutants in the receiving waters. On January 25th the total suspended solids (TSS) was measured at 68.8 mg/l and turbidity was 48.5 NTU (as daily averages/ 24-hour composite). The Effluent Limitations for TSS and turbidity are 20 mg/l as a daily maximum and 10 NTU as an instantaneous maximum, respectively. The discharger reported TSS and turbidity as the only effluent limit violations for January 2008.

It can reasonably be assumed that grab samples for TSS and turbidity collected during the actual treatment system bypass (which did not begin until 12 noon on the 25th) would have had shown significantly higher levels of solids and resulting turbidity. This assumption is relevant since solids and turbidity can significantly diminish the ultraviolet light penetration for proper disinfection of the discharged wastewater. Accordingly, fecal coliform organism concentrations could have also exceeded the Effluent Limitations during the bypass period. In fact, the high solids bypassed prompted the Operators to switch the UV system to operate at 100% power, rather than the 50% standard rate; but there is no indication or technical documantation that adequate disinfection was achieved during this period.

It can also be reasonably assumed that the domestic wastewater solids in the bypass carried significant BOD. Accordingly, it is likely that the daily maximum BOD Effluent Limitation of 20 mg/l was also violated.

Ammonia is present in domestic wastewater and can be discharged in toxic concentrations if not reduced during treatment. There were periods during the treatment system bypass where the SBRs were operated in a “fill and decant” mode, resulting in no biological treatment or aeration of the waste stream. Without biological treatment and aeration, nitrification would not occur and ammonia in the waste stream would not be reduced. Therefore, It is reasonable to assume that ammonia concentrations would have exceeded the Effluent Limitation of 10 mg/l as a daily maximum during the SBR fill and decant mode of operation.

The potential discharge of ammonia, TSS and fecal coliform organisms at elevated concentrations also threatens to cause violation of Receiving Water Limitations for floating, suspended or deposited matter and toxic and

deleterious substances and to degrade the aquatic life and contact recreation beneficial uses of the receiving stream.

The Discharge Events resulted in the discharge of raw sewage and a large volume of partially treated sewage to waters of the United States. Partially treated wastewater typically does not pose the same level of toxicity or impact as an equal volume of raw wastewater. Nonetheless, the Discharge Event resulted in 5 days of closure and warning signs at 3 beaches and impacted water contact recreation (REC-1) and non-contact water recreation (REC-2). The Discharge Events threatened public health, and impaired the recreational use and aesthetic enjoyment of these beaches. Although discharge occurred during the winter, the REC-1 and REC-2 impact was significant as beach use or recreational use in Calera Creek, Calera Creek Wetlands and Rockaway Beach, Pacific State Beach, and North Sharp Park beaches are higher than average use areas for the San Francisco Bay Region.

2. Whether the discharge is susceptible to cleanup or abatement

The untreated overflow discharged to surface waters and flowed into the Pacific Ocean and onto various public beaches. The 6.9 million gallons of partially treated sewage was discharged into Calera Creek which flows through a wetland before discharging into the Pacific Ocean at Rockaway Beach. Neither discharge was susceptible to cleanup or abatement. Instead, the Regional Water Board would require the Discharger to prevent such discharges.

3. The degree of toxicity of the discharge

For all the discharge events described herein, the degree of toxicity, of raw (untreated) or partially treated wastewater, cannot be accurately quantified. The untreated or partially treated material would be expected to have a deleterious effect on the environment, including causing potential nuisance in the near shore areas. The failure of the Discharger to take the appropriate samples deprived the Regional Water Board staff and other responding agencies of information that may have been useful in fully assessing impacts to the environment. However, raw or partially treated wastewater typically has elevated concentrations of biochemical oxygen demand, total suspended solids, oil and grease, ammonia, high levels of viruses and bacteria, trash (only in the case of raw sewage) and toxic pollutants (such as heavy metals, pesticides, personal care products, and pharmaceuticals). These pollutants exert varying levels of impact on water quality, and, as such, will adversely affect beneficial uses of receiving waters to different extents. Timely and appropriate sampling would have been the Discharger's opportunity to show minimal impacts, if that were the case.

4. The Discharger's ability to pay and the effect on the Discharger's ability to continue in business

The Discharger is financially stable and has the financial resources to provide for debt service obligations and financial needs, including the recommended liability. Determination of the discharger's ability to pay the recommended liability amount is based on a model called "MUNIPAY", which was developed by Industrial Economics for the United States Environmental Protection Agency.

It is estimated that the discharger has the financial ability to pay for the necessary collection system repair as well as the recommended Administrative Civil Liability (ACL) amount. This is based on two analyses that focus on demographic and affordability data. The demographic analysis shows that the city's median home values, median household income, and the individuals below the poverty line are substantially better than the values for the State and the nation. The affordability analysis concludes that the Discharger can afford the recommended ACL amount using internal financial resources, will have substantial funds still available to conduct collection system repairs, and if necessary, can borrow additional funds. This means that the Discharger does not have to raise sewer rates to pay the proposed ACL amount. The sources of data used for the ability to pay analysis are the Pacifica Comprehensive Annual Financial Report-Fiscal Year ending 6/30/2008 (CAFR 2008), the City of Pacifica Adopted Budget Fiscal Year 2008-2009, and the US Census.

The last reported balances of the General Fund and the Sewer Enterprise Fund totaled $11,477,958 (June 30, 2008). Allowing for the MUNIPAY recommended year end balances for the subsequent year, $8,256,727 would be available for paying the ACL and initiating the necessary collection system repairs.[1] In conclusion, the City has the ability to pay in excess of $8,000,000 for the necessary collection system repairs and the proposed administrative liability out of current resources without having to seek a sewer rate increase or taking on additional debt to finance the liability.

5. Any voluntary cleanup efforts undertaken

Discharger did not report any voluntary cleanup efforts as to the Discharge Events.

[1] These estimates will be different for Fiscal Year 2008-2009 but that report is not currently available.

6. Any prior history of violations

In 2005 the Regional Water Board issued Complaint No. R2-2005-0066 to the Discharger for mandatory minimum penalties (MMP) for $396,000 for effluent limitation violations at the WWTP. The Discharger waived their right to a hearing and paid the proposed liability. Both the Supplemental Environmental Project (SEP) and payment obligations have been fulfilled by the Discharger.

In 2007 the Regional Water Board issued Complaint No. R2-2007-0016 for $190,000 in response to a discharge of 253,000 gallons of raw sewage from the collection system to Rockaway Beach. The Discharger waived their right to a hearing and agreed to the proposed liability. The Discharger has fulfilled the payment obligation; however the SEP obligation has not been fulfilled. The SEP, a private lateral program, is expected to be completed by December 2009.

7. The degree of culpability

The Discharger's WWTP is relatively new and was sized to accommodate additional flows from excessive I&I. The collection system, however, was not expanded to transport the excess flows, nor is it maintained in a manner that would minimize I&I. In fact, Discharger has failed to correct I&I issues in the past by only investigating sources of I&I for a small portion of its collection system. Furthermore, the Discharger's collection system maintenance efforts at the time these discharge violations occurred were not sufficient to significantly reduce I&I with the limited exception of broken sewer line replacements.

The need to bypass partially treated sewage could have been substantially reduced during the approximately 8-hour period when plant influent flows exceeded 20 mgd if the Discharger had repaired the Unit No. 2 SBR prior to the January 2008 storm. The Discharger appears to have taken reasonable steps to repair the Unit No. 2 SBR as quickly as possible.

The Discharger is highly culpable for the events described herein. All of the overflow and the bypass events detailed above would have been avoided altogether if the Discharger had taken the appropriate steps to identify and minimize stormwater I&I into the sanitary sewer. The Discharger has been aware for years of the potential for high I&I to generate wastewater volumes in excess of the collection system and the WWTP's capacity. Nevertheless, the Discharger has failed to initiate timely actions necessary to reduce I&I and eliminate or, at least, reduce the threat of an unauthorized discharge occurring. Compounding this failure, the Discharger also failed to conduct the appropriate sampling that is required under their NPDES permit and the federal regulations.

The Discharger should not be rewarded for its failure to upgrade and maintain its collection system, provide adequate maintenance staff, and proper training of that staff to conduct the repairs and maintenance necessary to reduce I&I.

8. Economic Benefit or savings, if any, resulting from the violation

Economic benefit represents the financial gains that a violator accrues by delaying and/or avoiding compliance with applicable environmental laws and regulations. Funds not spent on environmental compliance are available for other profit-making activities or, alternatively, avoids the costs associated with obtaining additional funds for environmental compliance.

The appropriate economic benefit calculation should represent the amount of money that would make the violator indifferent between compliance and noncompliance. If the enforcement agency fails to recover through a civil penalty at least this economic benefit, then the violator will retain a gain. Because of the precedent of this retained gain, other entities may see an economic advantage in similar noncompliance, and the penalty will fail to deter potential violators. Economic benefit does not represent compensation as in a typical "damages" calculation for a tort case, but instead is the minimum amount by which the violator must be penalized so as to return it to the position it would have been in had it complied on time. Furthermore, Water Code section 13385(e) provides that “(a)t a minimum, liability shall be assessed at a level that recovers the economic benefits, if any, derived from the acts that constitute the violation.”

As discussed earlier, the Discharge Events and other SSOs are primarily due to insufficient capacity of the collection system to handle wet weather I&I. Had the collection system pipes been in better condition with lower I&I, or been larger, the Discharge Events would not have occurred. It is clear that the Discharger received some level of economic benefit from failing to maintain, repair or replace its collection system to an adequate level that would have prevented the Discharge Events.

Quantifying the Discharger’s economic benefit, however, is difficult considering that the Discharger has not conducted a collection system capacity assessment since the early 1980 nor presented any other evaluation of the condition of the their collection system that would otherwise assist in identifying what collection system repairs and upgrades are necessary for to obtain compliance and reduce I&I to an acceptable level. Accordingly, the economic benefit analysis is based on the generalized assumptions discussed below.

The Discharger’s collection system consists of 82 miles of pipe. Assuming a 50-year life, the system should be replaced or renovated at an average rate of

1.64 mi/yr (=82mi/50yr). Using an industry average cost of about $1 million/mi for pipe replacement, the capital cost for the Discharger for proper collection system maintenance, repair and replacement would be an average $1.64 million/year. Over the past four years, the Discharger has spent $531,000 (or $133,000/yr equalized over the 4 years) on collection system related capital projects excluding pump stations. (The Discharger is budgeted to spend $1.2 million in its fiscal year 2009/2010.)

Accordingly, it is estimated that the Discharger's deferred cost of replacement of the collection system for the four years immediately proceeding the January 2008 Discharge Events is $6,028,000. While the level of expenditure over four years may not have totally prevented the wet weather spills, four years is used because it is a reasonable timeframe for when the Discharger could and should have scheduled major capital expenditures to start replacement of its collection system.

The Discharger completed a number of capital improvement projects identified in its 1982 engineering report to increase capacity and reduce I&I in the 1980's. Then, in the 1990s, it turned its efforts appropriately towards treatment plant upgrades as ordered by Regional Water Board Cease and Desist Order No. 93-112 as amended by 98-124. A new treatment plant was constructed and put into service in September 2000. Allowing two years for Discharger to focus its efforts on startup issues, the Discharger could and should have initiated a collection system capacity assessment in 2002, two decades after its last assessment.

This assessment study could have been completed in early 2004 to guide the Discharger's future collection system efforts. Thus, starting in 2004 or four years before the Discharge Events, the Discharger could and should have been implementing an appropriate level of capital improvements to its collection system pipes.

Assuming: (1) that the appropriate level of repair and or replacement would have cost Discharger $ 1,640,000 annually; and (2) that the Discharger should have been performing this level of repair or replacement of the collection system for at least the four years immediately proceeding the Discharge Events; and (3) that compliance activities are initiated and the administrative civil penalty payment is made by January 1, 2010, then the economic benefit of delaying compliance is estimated to be $1,300,000. Accordingly, the recommended liability proposed herein is sufficient to comply with Water Code section 13385(e)'s requirement that liability be assessed at a level which is sufficient to recover economic benefit.

9. Other matters as justice may require

State and Regional Water Board Staff time to investigate and prepare the Complaint is estimated to be about 400 hours. Based on an average cost to the State of $150 per hour, the total staff cost is $60,000.

The Regional Water Board adopted Resolution No. R2-2005-0059 declaring its support of local programs that inspect and rehabilitate private sewer laterals. The Resolution also states that the Regional Water Board would consider the existence of such programs, especially those experiencing significant I&I from private sewer laterals, as an important factor when considering enforcement actions for sanitary sewer overflows.

Though the Discharger appears to have a private lateral program, this did not factor in favor of or against the Discharger in the proposed penalty amount. Since 1976, the Discharger has had an ordinance that requires inspection of private laterals if an application for a building permit involves the addition of plumbing fixtures or drains. In 2008, the Regional Water Board approved supplemental environmental project funds towards a private sewer lateral program. The Discharger has not provided records demonstrating implementation of its ordinance prior to 2008.

CONSIDERATION OF FACTORS FOR EFFLUENT LIMIT AND RECEIVING WATER LIMIT VIOLATIONS UNDER 13327 AND 13385(e)

1. Nature, circumstances, extent, and gravity of the violation

From January 2006 through December 2008 the Discharger has reported that there were 28 effluent limit violations and 3 receiving water limit violations. Of the effluent limit violations, 20 are subject to mandatory minimum penalties as detailed in section 2 of the Violations section herein.

In addition to the mandatory minimum penalty amounts for these violations, additional penalties are proposed for the fecal coliform violations in August 2006. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens. Coliform are controllable through disinfection, and violations can pose a significant threat to human health through water contact recreation, fishing, and contact with water drawn from the source for industrial use.
Treated wastewater was discharged to Calera Creek which flows through wetlands into the Pacific Ocean at Rockaway Beach. The beneficial uses of Calera Creek as defined by the NPDES permit and mandated by the Basin Plan are: agricultural supply; cold freshwater habitat; freshwater replenishment; groundwater recharge; industrial service supply; fish

migration; industrial process supply; water contact recreation; non-contact water recreation; fish spawning; warm freshwater habitat; and wildlife habitat.

2. Whether the discharge is susceptible to cleanup or abatement

The violations of effluent and receiving water limitations are not susceptible to cleanup or abatement.

3. The degree of toxicity of the discharge

Discharge of effluent in violation of effluent and receiving water limits would be expected to have a deleterious effect on the environment, including causing potential nuisance in the near shore areas. Fecal coliform violations can pose a significant threat to human health. The fecal coliform violations occurred during the month of August 2006, a time when greater recreational use increases the opportunity for human contact with wastewater in the area.

4. The Discharger's ability to pay and the effect on the Discharger's ability to continue in business

The analysis of this factor is the same as presented above in section 4 of the Consideration of Factors for Discharge Event Violations.

5. Any voluntary cleanup efforts undertaken

These violations of effluent and receiving water limitation were not susceptible to cleanup.

6. Any prior history of violations

The analysis of this factor is the same as presented above in section 6 of the Consideration of Factors for Discharge Event Violations.

7. The degree of culpability

All wastewater permittees are prohibited from discharging pollutants in violation of permit limits, and the discharger is responsible for compliance with the effluent limit and receiving water limits in this NPDES permit. In particular, coliform violations are controllable through adequate disinfection. As noted above, coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens. Proper operation of the treatment process to control fecal coliform is critical for ensuring effective control of pathogens that pose a threat to human health.

8. Economic Benefit or savings, if any, resulting from the violation

It is estimated that the Discharger did not receive any quantifiable economic benefit or savings from the effluent limit and receiving water limit violations.

9. Other matters as justice may require

Staff costs for issuance of this action are included in section 9 of the Consideration of Factors for Discharge Event Violations.

PROPOSED CIVIL LIABILITY

Based upon consideration of the factors in Sections 13327 and 13385, the Assistant Executive Officer proposes civil liability be imposed upon Discharger in the amount of $2,300,000. This amount includes $87,000 for effluent and receiving water limit violations cited above - $60,000 of which is for mandatory minimum penalties and the remaining $27,000 is liability to address coliform violations. Of this total, $2,298,845 will be paid to the State Water Board's Cleanup and Abatement Account, and $1,155 will be paid to the State Water Board's Waste Discharge Permit Fund.

Dyan C. Whyte
Assistant Executive Officer

October 23, 2009
Date

Attachment: Waiver of Hearing

Table A - Pacifica SSO and Bypass Violations

Item	ACL Code	Date	Description	Calculation of penalty. Spill Volume (gallons)	Duration (days)	Max Penalty
S1	13385	12/27/2004	495 Linda Mar Blvd.(Linda Mar pump station).	300,000	1	$3,000,000
S2	13350	1/16/2005	7 HOLIDAY CT.	350	1	$5,000
S3	13385	1/21/2005	GRAND AVE	520	1	$10,000
S4	13350	2/25/2005	900 Block Palmetto	200	1	$5,000
S5	13350	2/28/2005	790 ROCKAWAY BEACH BLVD.	90	1	$5,000
S6	13385	3/16/2005	1600 BLOCK HIGGINS	300	1	$10,000
S7	13385	6/5/2005	76 Cranham ct.	15	1	$10,000
S8	13385	8/10/2005	Hwy.1 @ Seabowl Lane	20	1	$10,000
S9	13385	9/2/2005	407 HEATHCLIFF DR	100	1	$10,000
S10	13350	12/23/2005	Sharp Park Golf Course	700	1	$7,000
S11	13385	3/6/2006	Paloma at Francisco	650	1	$10,000
S12	13385	4/29/2006	901 OCEANA	20	1	$10,000
S13	13350	5/18/2006	Sharp Park Road	20	1	$5,000
S14	13385	8/7/2006	MH in front of 1450, 1459 Perez	200	1	$10,000
S15	13350	9/6/2006	NATAQUA@REINA DEL MAR	10	1	$5,000
S16	13385	10/30/2006	351 Carmel	400	1	$10,000
S17	13350	12/21/2006	200 BONITA	40	1	$5,000
S18	13385	1/11/2007	GALVEZ EASEMENT	200	1	$10,000
S19	13385	1/16/2007	300 BLOCK PACIFIC	300	1	$10,000
S20	13385	3/23/2007	Paceito Terr.	50	1	$10,000
S21	13350	3/27/2007	Carmel Ave	200	1	$5,000
S22	13385	4/18/2007	1200 Block of Crespi Drive	60	1	$10,000
S23	13385	4/18/2007	500 block of Carmel	100	1	$10,000
S24	13385	5/13/2007	Kavanaugh Way/Glencourt Way	100	1	$10,000
S25	13350	5/30/2007	Seville Drive	5	1	$5,000
S26	13385	6/3/2007	Gypsy Hill Road	50	1	$10,000
S27	13350	6/3/2007	Cedar Lane	50	1	$5,000
S28	13350	6/20/2007	Farallon Easment Sewer Main	40	1	$5,000
S29	13385	7/1/2007	Alta Vista Drive	20	1	$10,000
S30	13385	7/18/2007	Carmel Ave	300	1	$10,000
S31	13385	8/16/2007	Reina Del Mar Ave	100	1	$10,000
S32	13385	8/18/2007	Reichling Ave	200	1	$10,000
S33	13350	9/24/2007	Fassler Ave Townhomes	200	1	$5,000
S34	13350	12/25/2007	Rosita Road	500	1	$5,000
S35	13385	1/4/2008	Linda Mar Blvd	900	2	$20,000
S36	13385	1/25/2008	Bypass from WWTP	6,900,000	2	$69,010,000
S37	13385	1/25/2008	Linda Mar Blvd	25,000	2	$260,000
S38	13385	1/25/2008	Avalon Drive	31,500	2	$325,000
S39	13385	1/25/2008	Palmetto Ave	47,250	2	$482,500
S40	13350	2/25/2008	Lerida Way	30	1	$5,000
S41	13350	3/16/2008	Francisco Blvd	40	1	$5,000
S42	13350	3/21/2008	400 Rockaway Beach Ave	1	1	$5,000
S43	13385	4/2/2008	1595 Linda Mar Blvd	10	1	$10,000
S44	13350	4/7/2008	Sharp Park Road / Gypsy Hill Road	875	1	$8,750
S45	13350	4/7/2008	220 Nelson Ave	1	1	$5,000
S46	13385	4/8/2008	Higgins Way Easement	160	1	$10,000
S47	13350	4/10/2008	663 Beaumont Blvd	10	1	$5,000
S48	13350	4/21/2008	1152 Linda Mar Blvd	10	1	$5,000
S49	13350	7/14/2008	455 Rockaway Beach Ave	2	1	$5,000
S50	13385	8/17/2008	Lands End Apartments	300	1	$10,000
S51	13350	8/22/2008	La Mirada	5	1	$5,000
S52	13350	8/28/2008	482 Goodman	20	1	$5,000
S53	13350	11/17/2008	Carmel Ave	150	1	$5,000
S54	13385	2/15/2009	Intersection of Beaumont Blvd and Shasta Lane	200	1	$10,000
S55	13350	2/23/2009	301 Clifton Road	2	1	$5,000
S56	13350	3/9/2009	Sterling Road	20	1	$5,000
S57	13350	3/28/2009	Hibbert Court Easment Main	100	1	$5,000
S58	13385	4/15/2009	Crespi Drive @ Highway 1	175	1	$10,000
S59	13385	6/23/2009	Farallon Ave	80	1	$10,000
					TOTAL FOR SPILL AND BYPASS VIOLATIONS:	**$73,498,250**

Table B - Pacifica Mandatory Minimum Penalty Violations

Item	Date	Description	Limit	Reported Level	Units	Period Type	% Exceedence	MMP Serious	MMP Chronic	Calculation of penalty. Days of Violation	Minimum Penalty	Recommended Penalty	Max Penalty
E1	2/3/2006	pH	6.5	6.44		inst. minimum				1			$10,000
E2	5/2/2006	cyanide	4.5	6.2	µg/l	monthly avg	38%			31			$310,000
E3	8/7/2006	coliform	20	45.6	MPN/100 ml	mean – last 5	128%			1		$6,000	$10,000
E4	8/15/2006	coliform	20	31.4	MPN/100 ml	mean – last 5	57%			1		$6,000	$10,000
E5	8/16/2006	coliform	20	64.8	MPN/100 ml	mean – last 5	224%		Yes	1	$3,000	$6,000	$10,000
E6	8/17/2006	coliform	20	77.6	MPN/100 ml	mean – last 5	288%		Yes	1	$3,000	$6,000	$10,000
E7	8/18/2006	coliform	20	198.8	MPN/100 ml	mean – last 5	894%		Yes	1	$3,000	$6,000	$10,000
E8	8/21/2006	coliform	20	97.6	MPN/100 ml	mean – last 5	388%		Yes	1	$3,000	$6,000	$10,000
E9	8/22/2006	coliform	20	36.1	MPN/100 ml	mean – last 5	81%		Yes	1	$3,000	$6,000	$10,000
E10	1/31/2007	cyanide	4.5	5.7	µg/l	monthly avg	27%	Yes	Yes	31	$3,000	$3,000	$310,000
E11	4/3/2007	RW2 DO (receiving water limit)	7	1.67	mg/l	minimum	-76%			30			$300,000
E12	4/18/2007	ammonia	10	11	mg/l	daily	10%			1			$10,000
E13	6/13/2007	ammonia	5	5.4	mg/l	daily	8%			1			$10,000
E14	7/29/2007	pH	6.5	6	minimum	inst. minimum				1			$10,000
E15	1/25/2008	TSS	20	68.8	mg/l	daily	244%	Yes		1	$3,000	$3,000	$10,000
E16	1/25/2008	turbidity	10	48.5	NTU	inst. maximum	385%			1			$10,000
E17	2/12/2008	ammonia	10	14	mg/l	daily	40%	Yes	Yes	1	$3,000	$3,000	$10,000
E18	2/19/2008	ammonia	10	16	mg/l	daily	60%	Yes	Yes	1	$3,000	$3,000	$10,000
E19	2/29/2008	ammonia	5	7.86	mg/l	monthly avg	57%	Yes	Yes	29	$3,000	$3,000	$290,000
E20	3/11/2008	RW2 DO (receiving water limit)	7	0.9	mg/l	minimum	-87%			1			$10,000
E21	3/11/2008	RW4 DP (receiving water limit)	7	5.32	mg/l	minimum	-24%			1			$10,000
E22	6/10/2008	ammonia	5	5.2	mg/l	daily	4%		Yes	1	$3,000	$3,000	$10,000
E23	6/17/2008	ammonia	5	5.7	mg/l	daily	14%		Yes	1	$3,000	$3,000	$10,000
E24	6/24/2008	ammonia	5	6.5	mg/l	daily	30%		Yes	1	$3,000	$3,000	$10,000
E25	6/30/2008	ammonia	2	5	mg/l	monthly avg	150%	Yes	Yes	30	$3,000	$3,000	$300,000
E26	9/2/2008	ammonia	5	6	mg/l	daily	20%		Yes	1	$3,000	$3,000	$10,000
E27	9/6/2008	ammonia	5	6	mg/l	daily	20%		Yes	1	$3,000	$3,000	$10,000
E28	9/8/2008	ammonia	5	6	mg/l	daily	20%		Yes	1	$3,000	$3,000	$10,000
E29	9/10/2008	ammonia	5	7	mg/l	daily	40%	Yes	Yes	1	$3,000	$3,000	$10,000
E30	9/11/2008	ammonia	5	7	mg/l	daily	40%	Yes	Yes	1	$3,000	$3,000	$10,000
E31	9/30/2008	ammonia	2	3	mg/l	monthly avg	50%	Yes	Yes	30	$3,000	$3,000	$300,000
									TOTALS FOR EFFLUENT LIMIT VIOLATIONS:	**206**	**$60,000**	**$87,000**	**$2,060,000**