CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 96-116
NPDES PERMIT NO. CA0037664

AMENDMENT OF WASTE DISCHARGE REQUIREMENTS OF ORDER NO. 94-149 FOR

CITY AND COUNTY OF SAN FRANCISCO
SOUTHEAST WATER POLLUTION CONTROL PLANT

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. On October 19, 1994, the Board adopted Order No. 94-149 (NPDES permit CA 0037664), reissuing waste discharge requirements to the City and County of San Francisco (hereinafter called the City) for its Southeast Water Pollution Control Plant (SEP).

2. The City presently discharges an average dry weather flow of 67 million gallons per day (mgd) from its treatment plant, which has a peak secondary treatment capacity of 150 mgd. This plant treats domestic and industrial wastewater from the Southeast and North Shore areas of San Francisco, the Bayshore Sanitary District, and a small part of the North San Mateo County Sanitation District. All treated wastewater up to an outfall design capacity of 100 mgd is discharged into a deepwater outfall through Pier 80 (waste 001) to the central portion of San Francisco Bay approximately 810 feet from shore at latitude 37 deg., 44 min., 58 sec.; longitude 122' deg., 22 min., 22 sec. The submerged diffuser is 42 feet below mean lower low water where initial dilution exceeds 10:1.

3. During wet weather, the plant converts to the wet weather operations mode and provides secondary treatment up to 150 MGD. During larger storms, the plant provides an additional 60 MGD of primary-only treatment (for a total wet weather treatment capacity up to 210 MGD). In 1997, the City will complete improvements which will provide an additional 40 MGD of wet-weather primary capacity. Thus, the total wet weather capacity will be up to 250 MGD. The wet-weather combined sewer overflows from the City's bayside wet weather diversion structures are governed by a separate NPDES permit (No. CA0038610).

4. This Order No. 94-149 regulates discharges from the City's SEP to San Francisco Bay and Islais Creek. During wet weather, effluent flows in excess of 100 million gallons per day (mgd) are discharged into Islais Creek through the Quint Street Outfall (QSO) or waste 002 at latitude 37 deg., 44 min., 50 sec.; longitude 122' deg., 23 min., 13 sec. The QSO for wet weather flows receives less than a 10:1 dilution.

5. On June 15, 1988, the Board adopted Cease and Desist Order No. 88-105 that requires the City to develop alternatives to address the Basin Plan Prohibition on discharges that receive less than 10:1 dilution, specifically the Quint Street discharge into Islais Creek. In 1988, the City identified three alternatives to address the permit violations from discharges receiving less than 10:1 initial dilution from the SEP. There three alternatives are: (1) a new Bay outfall with sufficient capacity to handle the overflows into Islais Creek during wet-weather; (2) a crosstown transport that would take the effluent to the westside ocean outfall for discharge; (3) a request for an exception from the Basin Plan discharge prohibition requiring a minimum initial dilution of at least 10:1. In 1991, the City identified an additional alternative with a possible large scale regional water reclamation program. A large scale regional water reclamation program has the potential to benefit the entire San Francisco Bay by removing unnecessary discharges, developing a new water supply for agriculture and freeing-up potable water that may help the environment of the San Francisco/San Joaquin Delta and/or drought proof the urban Bay Area.

   On October 19, 1994, the Board adopted Order No. 94-149 to reissue waste discharge requirements to the City. Order No. 94-149 regulates discharges from SEP to San Francisco Bay and Islais Creek (wet weather only). The QSO discharge has been a part of the City's wet weather operation for the last ten years. NPDES permits before Order 94-149 and CDO No. 88-105 did not clearly identify the operating procedures for the discharge. To correct this deficiency, specific requirements to clarify the QSO conditional discharge were added to Order 94-149. This clarification is needed because of the increasing complexity of the wet weather operations after 1997. Currently, during rainy weather, flows up to 150 mgd receive secondary treatment. All flows exceeding 150 mgd, up to the current plant capacity of 210 mgd, are given primary treatment. Primary and secondary effluent are blended, and 100 mgd of this blend is discharged to the Pier 80 Outfall. All remaining flows up to a maximum of 110 are discharged through the QSO to Islais Creek.

6. On November 18, 1994, the State Water Resource Control Board (SWRCB) received a petition from San Francisco BayKeeper, Clean Water Action, Clean Water Fund (collectively called BayKeeper), the City and the California Dental Association for review of the permit. Petitioner BayKeeper requested that the SWRCB modify Order No. 94-149, or remand it to the Board with directions to modify the order, to delete certain language regarding discharges from the QSO. BayKeeper contends that the reference to Quint Street discharges in Order No. 94-149 violates the 1986 Basin Plan Prohibition. Secondly, the City and CDA contend that the Order 94-149 did not provide adequate justification for many of the permit effluent limits (e.g., metals and toxic organics). The SWRCB's Order No. WQ 95-4 concluded that the CSO language at issue is inconsistent with the 1986 Basin Plan. The 1986 Basin Plan prohibits the discharge of waste to surface waters at any point at which the discharge receives less than a 10:1 minimum initial dilution, unless exception is granted. The Order No. WQ 95-4 also requires the Regional

Board to revise Order No. 94-149 because the permit findings and Fact Sheet did not provide adequate support on the rationale for certain numeric effluent limitations for toxic pollutants. The Board intends to revise the permit findings and Fact Sheet and to clarify the basis for the requirements.

7. The Basin Plan prohibits waste discharges to surface waters where less than 10:1 initial dilution is achieved. An exception will be considered where:

> An inordinate burden would be placed on the discharger relative to beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability.

8. On February 1, 1996, the City submitted a written request for an exception to the Basin Plan. The exception would apply to the existing seasonal and intermittent discharge of treated effluent from the SEP to Islais Creek during wet weather. Currently, the discharges occur approximately 600 hours per year with annual volume of 1,700 million gallons (primary/secondary blend). The City is constructing facilities to mitigate the potential impacts of the wet weather discharge into Islais Creek. These facilities are designed to insure that only secondary-treated flows are discharged to Islais Creek by 1997. The construction for the "re-piping" project to meet this objective will cost approximately $17 million. This wet weather discharge after improvement is expected to provide the "equivalent level of environmental protection" required by the exception criteria. The costs of other alternatives identified in Finding 5 are substantially higher, ranging from $72 to $225 million and the alternatives are unlikely to produce measurable environmental benefits.

9. The City's staff has conceptually agreed to fund a 25-acre wetland project near Pier 98. The project is an environmental enhancement opportunity that will benefit the quality of the waters surrounding Islais Creek. This wetlands enhancement project will cost approximately $1 million. The project includes 14 acres devoted to wetlands, with the balance of the 11 acres devoted to passive recreation, uplands beautification, shoreline protection, and debris removal.

10. Based on the City's recent analysis, by 1997, as a result of the CSO reduction into Islais Creek (because of the higher treatment plant capacity and storage from current 210 MGD to 250 MGD and the re-piping project), the discharge will produce a 41% reduction in annual suspended solids discharged to Islais Creek.

12. Based on support documents provided by the City's draft EIR (dated May 20, 1994), and the February 1, 1996 written exception request and staff review of the City's performance data from SEP, Board's staff finds that the City's exception request meets the criteria set forth in the Basin Plan. The staff's findings are fully documented in the Fact Sheet of this Order.

13. On April 11, 1994, the U.S. EPA adopted the Combined Sewer Overflow (CSO) Control Policy (50FR 18688). This Policy establishes a consistent national approach for controlling discharges from CSOs to the Nation's water through the NPDES permit program. The City is served almost 100% by combined sewers and thus is directly affected by the Policy. On February 15, 1995, the Board adopted Order No. 95-039, NPDES permit for bayside wet weather control facilities including the North Point Water Pollution Control Plant. The Bayside wet weather facilities have been designed so that on average these discharges will occur only 4 times per year in the North Point Sewerage Zone and 10 times per year on the Southeast Sewerage Zone and once per year for the area south of Islais Creek. In the past, prior to the construction of the wet weather storage/transports systems, these combined sewage overflows occurred 46 times per year (bayside average). The Board concluded that the CSO control requirements in Order No. 94-149, NPDES Permit for SEP and Order No.95-039, NPDES permit for the wet weather control facilities are in compliance with the Policy.

14. During wet weather periods, the secondary effluent discharge from Quint Street will tend to "float" on top of the saline waters of Islais Creek. This is similar to any freshwater input to salt water body. During the intermittent wet weather discharges from the treatment plant to the creek, the receiving water pH will always be above 6.5 and below 8.5. (see Basin Plan page 3-3 Objective for Surface Waters) Marine fish tend to avoid the wet weather input of fresh water by remaining below it. The monitoring plan for this permit will require that pH monitoring occur below the freshwater lens.

14.1 A new finding 20 is necessary in Order 94-149 to correct the receiving water body where the Southeast Water Pollution Control Plant discharges from Central San Francisco Bay to Lower San Francisco Bay.

The Basin Plan contains water quality objectives and beneficial uses for Lower San Francisco Bay. The beneficial uses of Lower San Francisco Bay are as follows:

- Ocean, Commercial and Sport Fishing
- Estuarine Habitat
- Industrial Service Supply
- Fish Migration
- Navigation
- Preservation of Rare and Endangered Species
- Water Contact Recreation
- Noncontact Water Recreation
- Shellfish Harvesting
- Wildlife Habitat

15. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the SWRCB and the Office of Administrative Law on July 20, and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan identifies beneficial uses and water quality objectives for waters of the state in the Region, including surface waters and groundwaters. The Basin Plan also identifies effluent limitations and discharge prohibition intended to protect beneficial uses. This Order implements the plans, policies and provisions of the Board's Basin Plan.

16. On August 21, 1996, the Board adopted Order No. 96-117, requiring the City to cease and desist discharging waste from its Southeast Water Pollution Control Plant, bayside wet weather facilities and westside wet weather control facilities contrary to discharge prohibitions Order Nos. 94-149, 95-039, and 87-120. Order No. 96-117 identified specific schedules for the City to complete all construction projects to achieve full compliance with Order Nos. 94-149, 95-039, 87-120.

17. The amendment of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

18. The City and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity to submit their written views and recommendations.

19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the City, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the prohibitions, effluent limitations, receiving water limitations, and provisions as specified in Order No. 94-149, except as amended here in this Order and described below:

A. DISCHARGE PROHIBITIONS

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited except the wet weather discharges into Quint Street Outfall (waste 002) will be allowed, as long as the discharges comply with Effluent Limitations B.1.1. and B.1.3.

I, Loretta K. Barsamian, 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 August 21, 1996.

Loretta K. Barsamian
Executive Officer