CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90 - 034
NPDES PERMIT NO. CA0037834

AMENDMENT OF WASTE DISCHARGE REQUIREMENTS, ORDER NO. 88-175

CITY OF PALO ALTO
REGIONAL WATER QUALITY CONTROL PLANT
PALO ALTO
SANTA CLARA COUNTY

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

1. The Board adopted Order No. 88-175, reissuing waste discharge requirements for the City of Palo Alto (hereinafter called the discharger) on December 21, 1988. The City discharges tertiary treated effluent from the Water Quality Control Plant into an unnamed slough, to South San Francisco Bay.

2. The Basin Plan does not establish water quality objectives and effluent limitations for heavy metals in South San Francisco Bay. The discharger is obligated to perform specific heavy metals and toxicity monitoring studies, and assist in the gathering of data needed for development of site-specific water quality objectives and effluent limitations, to comply with the limitations of the Basin Plan.

3. Interim controls on heavy metals are needed because of the limited assimilative capacity of South San Francisco Bay, despite a more than 50% reduction in annual metals loadings since 1975.

4. Order No. 88-175 specifies interim concentration limits for toxic pollutants, and specifies that the Board will amend the permit before December 31, 1989, to establish performance based interim effluent limits for toxic pollutants as defined in Effluent Limitation B.4. The order also specifies that toxic pollutant mass loadings limits will be set for individual toxic pollutants. Limits shall be determined by using the upper 95% confidence limit, and will rely on additional self-monitoring data collected after adoption of Order No. 88-175. Short-term methods available to the discharger to control toxics levels in effluent include more stringent pre-treatment requirements (industrial user categories, local limits, surveillance, and enforcement) and pilot waste minimization programs.

5. The discharger has complied with all toxic pollutant monitoring and reporting requirements specified in Order No. 88-175. Toxics data submitted by the discharger were used to calculate interim concentration and mass loading limits, using a method that differed from the 95% upper confidence limit because of limitations in the data.

Limits were calculated using the 95th percentile value of 1989 measures, which fulfills the intent of Order 88-175. Flow data used in calculating the mass loading limit was a mean of flows from 1985, 1986, 1987, and 1988. This time period was chosen because it encompassed a more normal rainfall regime than the current drought.

6. The discharger is currently conducting studies to assess the impacts of heavy metals on South San Francisco Bay. Order No. 88-175 requires the discharger to submit proposals for further studies on the importance of heavy metals by February 1, 1990. Because data to best design these studies will not be available until after February 1, 1990, the deadline is extended to July 15, 1990. The discharger is also required to submit the results of salt marsh conversion assessment and habitat utilization studies 180 days prior to permit reissuance. This deadline will not allow adequate time for analysis of field survey data collected as part of the study. This deadline should be extended to 120 days prior to the next permit reissuance.

7. Order 88-175 allows the treatment plant to accept a maximum of 39 million gallons per day (mgd) average dry weather flow determined during any five-weekday period during the months of June through October. This flow limit includes 1 mgd of groundwater cleanup flows and 38 mgd of industrial and domestic flows. The intent of the permit was to guard against overflows and plant bypasses. The limit was not meant to disallow groundwater discharge over 1 mgd into the plant. Acceptance of groundwwater discharge into the plant is allowed as long as it does not cause the plant to exceed the average dry weather limit of 39 mgd, or to cause overflows or bypasses of the plant.

8. This action to amend an NPDES Permit is exempt from the provision of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

9. The discharger and interested agencies and persons have been notified of the Board's intent to reissue waste discharge requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

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

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the Clean Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Provision A.5 of Order No. 88-175 shall be amended as follows:

   5. The average dry weather flow from sources other than contaminated groundwater clean-up flows shall not exceed 38 mgd. No contaminated groundwater clean-up flow discharger shall be permitted to discharge such flows during wet weather periods determined to contribute to sewer overflows or plant bypasses.

B. Provision B.4.a. of Order No. 88-175 shall be amended as follows:

4. Interim Limits for Toxic Pollutants

a. Prior to permit expiration, the effluent shall not exceed the following interim limits:

Constituent	Annual 95th Percentile(μg/L)(2)
Arsenic	3.6
Cadmium	10
Chromium(VI)	10
Copper	30
Lead	20
Mercury	0.5
Nickel	24
Silver	5.7
Zinc	117
Cyanide	40
Phenolic Compounds	100
PAHs(1)	40
Selenium	2

Notes:
(1) Polynuclear aromatic hydrocarbons
(2) In calculating compliance, the discharger will count all non-detect measures at the detection level. The discharger will measure compliance with the 95th percentile limit once each calendar year. The 95th percentile value is the highest concentration measured during the year after removing the top 5% of the results for the year (i.e., use the greatest value for sample size n = 1 to 19, second greatest value for n = 20 to 39, and the third greatest value for n = 40 to 59). After 5% of the yearly measures for any toxin have exceeded the interim limit, each additional exceedance will constitute a violation for the measurement period of that toxin (e.g., metals measurements are taken weekly, thus each exceedance after the 5% allowed will be counted as one week of violation). The Board may review compliance before the end of the calendar year if it observes a pattern of exceedances that suggest the annual limit will be exceeded.

C. Provision B.4.b is amended as follows:

b. The intent of the interim limits is to maintain ambient receiving water conditions in the South Bay until site-specific limits are developed. Performance-based interim limits should prevent significant increases in discharge of toxics over current levels. When reviewing any non-compliance with these interim concentration limits, the Board will consider each pollutant separately and will consider trends in increasing pollutant concentration more seriously than isolated occurrences. Because effluent toxics concentrations may be affected by heavy rainfall years, and wet year data were not

considered in the development of these limits, exceedances during wet weather events will also be evaluated individually. Site specific limits to be developed by December 31, 1991, may be higher or lower than the interim limits.

D. Provision B.5., first paragraph, shall be amended as follows:

During the period in which interim limits are in effect, the discharger should investigate waste-minimization and source controls in preparation for potentially more stringent site-specific limits. The following final effluent limits for toxic pollutants will become effective on December 21, 1991, unless the Regional Board establishes alternative limits based on site-specific studies:

E. Provision B.6.a and B.6.b of Order No. 88-175 shall be amended as follows:

6. Toxic Pollutant Mass Loadings

a. Prior to permit expiration, effluent shall not exceed the following interim limits:

Constituent	Annual Average(lbs/day)(1)
Arsenic	221
Cadmium	514
Chromium(VI)	632
Copper	1975
Lead	1185
Mercury	28
Nickel	1422
Silver	344
Zinc	7584
Cyanide	2410
Phenolic Compounds	5925
PAHs	2370
Selenium	119

Notes:
(1) In calculating compliance, the discharger will count all non-detect measures at the detection level. Mass loading should be calculated for each analytical result (e.g., for weekly measures, calculate loadings weekly using weekly-average flow data), and calculate a total load at the end of the year.

b. The intent of the interim limits is to maintain ambient receiving water conditions in the South Bay until site-specific limits are developed. Performance-based interim mass loading limits should prevent significant increases in discharge of toxics over current levels. When reviewing any non-compliance with these interim concentration limits, the Board will consider each pollutant separately and will consider trends in increasing pollutant concentration more seriously than isolated occurrences. Because effluent toxics concentrations may be affected by heavy rainfall years, and wet year data were

not considered in the development of these limits, exceedances during wet weather events will also be evaluated individually. Site specific mass loading limits to be developed by December 31, 1991, may be higher or lower than the interim limits.

F. Provision E.3, page 8, line 23, shall change "180 days" to "120 days."

G. Provision E.4.d, page 10, line 11, shall change "February 1, 1990" to "July 15, 1990."

H. The Self-Monitoring Progam, Part B, page 7, shall be modified to add the following requirement:

7. If any effluent sample is in violation of interim toxics limits, sampling shall be increased for that toxic to daily for at least seven days, and until compliance with the limits have been demonstrated for three successive samples. All additional monitoring results shall be reported in the monthly monitoring reports. The discharger shall also increase pretreatment and source control efforts to determine the source of the increased toxins levels.

I, Steven R. Ritchie, 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 February 21, 1990.

Steven R. Ritchie
Executive Officer