CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 95-138
NPDES NO. CA0004961

AMENDMENT OF WASTE DISCHARGE REQUIREMENTS FOR:

TOSCO CORPORATION
AVON REFINERY
CONTRA COSTA COUNTY

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

1. The Board adopted Waste Discharge Requirements Order No. 93-068 on July 21, 1993, for Tosco Corporation, Avon Refinery (hereinafter called the discharger), for discharge under the National Pollutant Discharge Elimination System (NPDES). The discharger operates a petroleum refinery, which manufactures gasoline and diesel fuel with an average crude-run throughput of approximately 150,000 barrels per day. The discharger discharges an average of 4.7 million gallons per day of treated process wastewater, storm water runoff, and other wastes to Suisun Bay.

2. On April 11, 1991, the State Water Resources Control Board (State Board) adopted the Water Quality Control Plan For Enclosed Bays and Estuaries of California (Enclosed Bays and Estuaries Plan). The Board adopted amendments to the December 1986 Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on September 16, 1992. Some of the sections of this 1992 amendment concerned implementation of the Enclosed Bays and Estuaries Plan which included water quality based objectives and effluent limits for a number of toxic pollutants including chlorinated dibenzo-p-dioxins (CDDs) and dibenzofurans (CDFs), generally referred to as dioxins. The State Board approved the 1992 Basin Plan amendments on April 27, 1993.

3. Order No. 93-068 designated the discharger's process wastewater stream as Waste 001, and specified effluent limits for this discharge. The effluent limit for dioxins specified in Order No. 93-068 was based on the 1992 Basin Plan amendments. Also, because discharge data indicated that the discharger would not be able to comply with the limit for dioxins, Order No. 93-068 specified a compliance time schedule requiring source identification and control/treatment with final compliance by June 30, 1995. The effluent limit specified in Order No. 93-068 for dioxins is 0.14 pg/l (picograms per liter) of TCDD Equivalents. TCDD Equivalent is a weighted sum of 17 different dioxin compounds (referred to as congeners). TCDD Equivalent is calculated by multiplying the analytically determined concentration of a congener by its Toxicity Equivalence Factor

(TEF) and summing the products. The TEFs range from 1 to 0.001 depending on the toxicity of the congener relative to 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD).

4. Four municipalities and one private company filed suit challenging the Enclosed Bays and Estuaries Plan. In March 1994, the court issued a final decision which invalidated the Enclosed Bays and Estuaries Plan primarily on procedural issues. As a result of this final court decision, the State Board remanded all sections of the 1992 Basin Plan amendments related to implementation of the Enclosed Bays and Estuaries Plan.

5. By letter of May 31, 1994, the discharger, in reference to the invalidated 1992 Basin Plan, made a request for amendment of the effluent limit on dioxins.

6. Based on careful consideration of the technical bases for the effluent limit for dioxins including the plans, policies, and water quality objectives and criteria contained in the

   a. 1986 Basin Plan,
   b. *Quality Criteria for Water* (EPA/5-86-001, 1986; Gold Book),
   c. applicable Federal Regulations (40 CFR Parts 122 through 131),
   d. National Toxics Rule (57 FR 60848, 22 December 1992; NTR),
   e. *Technical Support Document for Water Quality-based Toxics Control*, Office of Water (EPA/505/2-90-001), March 1991,
   f. *Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins*, Office of Health and Environmental Assessment (EPA/600/8-84/014F), September 1985, and
   g. *Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update*, Risk Assessment Forum (EPA/625/3-89/016), March 1989,
   h. *Estimating Exposure to Dioxin-Like Compounds,* External Review Draft, Office of Research and Development (EPA/600/6-88/005Ca), June 1994.
   i. *Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds*, External Review Draft, Office of Research and Development (EPA/600/BP92001a), June 1994.

in the conclusion of the Board, the effluent limit specified in Order No. 93-068 is appropriate and necessary for the full protection of water quality for beneficial uses. Therefore, the effluent limits specified in Order No. 93-068 will not be changed except as amended by inclusion of the findings of this Order.

7. TCDD Equivalent is the scientifically accepted method for considering toxicity from mixtures of CDDs and CDFs. The TCDD Equivalent procedure was developed under the auspices of the North Atlantic Treaty Organization's Committee on Challenges of Modern

Society in 1988 and was adopted by the USEPA in 1989 as an interim procedure for assessing the risks associated with exposures to complex mixtures of CDDs and CDFs. "TCDD Equivalent" and "TEF" are often referred to in literature as "I-TEFs/89." The concentration 0.14 pg/l was based on the USEPA ambient water quality criteria of 0.014 pg/l for salt waters for 2,3,7,8-TCDD. The discharger was granted a 10:1 dilution credit consistent with general policy expressed by the Board in the 1986 Basin Plan.

8. 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 (CEQA) pursuant to Section 13389 of the California Water Code.

9. The Board has notified the discharger and interested agencies and persons of its intent to consider this matter, and has provided them with an opportunity for a public hearing and an 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 California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the prohibitions, effluent limitations, receiving water limitations, and provisions as specified in Order No. 93-068.

I, Steven R. Ritchie, 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 June 21, 1995.

STEVEN R. RITCHIE
Executive Officer