

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 72-84
WASTE DISCHARGE REQUIREMENTS
FOR
STAUFFER CHEMICAL COMPANY, RICHMOND

The California Regional Water Quality Control Board, San Francisco Bay Region finds:

1. The Stauffer Chemical Company submitted a report of waste discharge dated July 18, 1972. The discharger proposes a material change in the character, location and volume of the existing discharge.
2. The Stauffer Chemical Company proposes to discharge 0.1 mgd of process wastewater from manufacturing industrial and agricultural chemicals, including cooling tower blowdown, and wastewater from a research laboratory and pilot plant. This wastewater is to be discharged, after treatment, into a tidal basin from where it flows into San Francisco Bay. During wet weather, storm runoff is proposed to be discharged directly into a tidal basin.
3. Leachate from a landfill area located east and adjacent to the tidal basin, and containing cinders from a former plant operation, is seeping into San Francisco Bay. This discharge contains heavy metals and is acidic.
4. The Board adopted an Interim Water Quality Control Plan for the San Francisco Bay Basin in June 1971.
5. The beneficial uses of the North San Francisco Bay as set forth in the Interim Basin Plan include:
 - a. Fish, shrimp, crab and shellfish habitat
 - b. Fish migration
 - c. Recreation
 - d. Waterfowl and other water associated birds habitat

- e. Navigation
 - f. Industrial water supply
 - g. Esthetic enjoyment
6. The requirements herein after prescribed are necessary to implement the Basin Plan for San Francisco Bay, protect the beneficial uses of San Francisco Bay, and prevent nuisance.
 7. The Board has notified the discharger and interested agencies and persons of its intent to prescribe new waste discharge requirements for the Stauffer Chemical Company.
 8. The Board in a public meeting heard and considered comments pertaining to the discharge and the requirements prescribed herein.

IT IS HEREBY ORDERED, the Stauffer Chemical Company, Richmond, shall comply with the following:

4. Discharge Specifications - Process and Laboratory Wastewaters

1. Neither the treatment nor the discharge shall create a nuisance as defined in Section 13050(m) of the California Water Code.
2. Representative samples of the discharge shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Mean</u>	<u>Maximum</u>
Settleable Matter	ml/l/hr	0.1	0.5
Toxicity Emission Rate	(Toxicity Units)(mgd)	0.06	0.10
Toxicity Concentration	Toxicity Units	0.59	0.87
Aluminum - Total ^{1/}	lbs/day	1.7	3.4
^{1/}	mg/l	-	4.0
Lead	lbs/day	0.1	0.2
	mg/l	-	0.2
Zinc ^{1/}	lbs/day	0.8	1.6
	mg/l	-	2.0

^{1/} Values in addition to quantities and concentrations present in the water supply.

3. The discharge shall not have a pH of less than 7.0 nor greater than 8.5.
- B. Discharge Specifications - Storm Runoff
1. The discharge shall not cause floating oil, floating solids, or foam in the waters of the state.
 2. The discharge shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
- C. Discharge Specifications - Leachate from Landfill Area
1. The landfill area containing cinder shall have facilities adequate to divert surface runoff from adjacent areas, to protect the boundaries of the site from erosion, to prevent conditions that would cause drainage or seepage from the site, and to protect the site from flooding by tidal or storm water. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal stage that may occur.
- D. Discharge Specifications - Receiving Water
1. The discharge of waste shall not cause:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam in waters of the State at any place;
 - b. Bottom deposits or aquatic growths at any place;
 - c. Alteration of temperature, turbidity or apparent color beyond present natural background levels in waters of the State at any place;
 - d. Visible, floating, suspended or deposited oil or other products of petroleum origin in waters of the State at any place;
 - e. Tidal waters of the State to exceed the following limits of quality at any place offshore from the Santa Fe railroad track culvert:

Dissolved Oxygen Minimum - 5.0 mg/l
Annual median - 80% saturation

When natural factors cause lesser concentrations, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

Toxic or Other
Deleterious
Substances

None shall be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife or waterfowl or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

pH

A variation of the natural ambient pH by more than 0.1 pH units.

F. Provisions

1. Mean values shall be based on the running average of samples representative of the discharge over any 30-day period.
2. Stauffer Chemical Company shall immediately take all possible measures to achieve compliance with the discharge specifications in this order and shall submit to the California Regional Water Quality Control Board, San Francisco Bay Region, by December 1, 1972, a report delineating the immediate measures that have been or will be taken.
3. Stauffer Chemical Company shall comply with the following time schedule to assure compliance with the requirements of this order:

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance Date</u>
Develop a work plan to meet discharge requirements and to study the reduction of heavy metals used for cooling water treatment	December 1, 1972	December 15, 1972
Develop a conceptual plan and detailed time schedule for completion of final plans, award of construction contracts, completion of construction, and compliance with requirements	January 1, 1973	January 15, 1973

4. The requirements prescribed by this order amend the requirements prescribed by Resolution 451 adopted by the Board on April 18, 1963, which shall remain in full force and effect until the date Stauffer Chemical Company is to be in full compliance with these requirements pursuant to a complete time schedule to be adopted by this Board.
5. This order includes items 1, 6, 7, and 8 of the attached "Reporting Requirements" dated September 11, 1972.
6. This order includes items number 1 through 6 of the attached "Notifications" dated January 6, 1970.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the Regional Board, on September 26, 1972.

Executive Officer

DEFINITION OF TOXICITY TERMINOLOGY

a. Toxicity Concentration (Tc)

Expressed in Toxicity Units (tu)

$$Tc \text{ (tu)} = \frac{100}{96\text{-hr. TLM\%}}$$

b. Median Tolerance Limit (TLM%)

The TLM shall be determined by static or continuous flow bioassay techniques using standard test species.

When it is not possible to measure the 96-hr. TLM due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$Tc \text{ (tu)} = \frac{\log (100 - S)}{1.7}$$

S = percentage survival in
100% waste

c. Toxicity Emission Rate (TER)

Is the product of the effluent Toxicity Concentration (Tc) and the waste flow rate expressed as mgd.

$$TER \text{ (tu x mgd)} = Tc \text{ (tu)} \times \text{Waste Flow Rate (mgd)}$$