

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 72-83

WASTE DISCHARGE REQUIREMENTS
FOR
STAUFFER CHEMICAL COMPANY, MARTINEZ

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

1. The Stauffer Chemical Company discharges the following wastes:
 - a. Waste "A" is presently discharged at an average rate of 70 gpm. It consists of process wastewater from manufacture of sulfuric acid, including cooling water blowdown. It also may include contaminated drainage from plant loading and storage areas. After treatment waste "A" discharges into Peyton Slough which enters Carquinez Strait near Bulls Head.
 - b. Waste "B" is domestic waste from the acid plant control washroom. The waste is treated in a septic tank and discharged into a subsurface leaching field about 2,000 feet north of the plant office.
 - c. Waste "C" is domestic waste treated in a septic tank and discharged into a subsurface leaching field (L-1) immediately east of the discharger's plant office.
 - d. Waste "D" is domestic waste treated in a septic tank and discharged into a subsurface leaching field (L-2) 500 feet north of the plant office.
 - e. Waste "E" consists of storm runoff from the discharger's sulfuric acid manufacturing plant and the storage tank area. Initial storm runoff or accidentally spilled process material is diverted to waste water treatment facilities and discharged after treatment as waste "A" to Peyton Slough. Except for this diversion waste "E" is discharged directly into Peyton Slough.

2. The Stauffer Chemical Company retains the following wastes on its plant site:
 - a. Waste "F" consists of partially soluble iron and zinc salts from a former operation. These wastes are confined to two lined ponds (L-3) of about 2.0 acres each. The ponds are located immediately east of the plant office.
 - b. Waste "G" consists of partially soluble iron and zinc salts from a former operation. The waste was originally confined to a pond (L-4) which now has been filled with soil. The buried waste is located 1,000 feet north of the plant office.
 - c. Waste "H" consists of storm runoff and leachate from the "North" and "South Cinder and Slag Areas" from a former operation. Waste "H" is acidic and contains heavy metals. These wastes are confined to the "North" and "South Cinder and Slag Areas" and to the lined evaporation pond area (L-3).
3. The Board adopted an Interim Water Quality Control Plan for San Francisco Bay Basin in June 1971.
4. The beneficial uses of the Carquinez Strait and contiguous water bodies, as set forth in the Interim Basin Plan, include:
 - a. Fish migration and spawning
 - b. Recreation
 - c. Waterfowl and migratory birds habitat and resting
 - d. Navigation
 - e. Industrial water supply
 - f. Esthetic enjoyment
5. 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 contiguous water bodies, and prevent nuisance.

6. 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.
7. 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, Martinez, shall comply with the following:

A. Discharge Specifications - Waste "A"

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 Emmission Rate | (Toxicity Units)(mgd) | 0.15 | 0.23 |
| Toxicity Concentration | Toxicity Units | 0.59 | 0.87 |
| Zinc ^{1/} | lbs/day | 2.2 | 4.3 |
| | 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, or 6.5 to 8.5 when the natural ambient value is as low as 6.5.

B. Discharge Specifications - Wastes "B", "C" and "D"

1. Wastes "B", "C" and "D" shall be kept entirely beneath the ground surface at all times.

C. Discharge Specifications - Wastes "F", "G" and "H"

1. Wastes "F", "G" and "H" shall be effectively confined to their land disposal sites at all times.

These land disposal sites 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 - Waste "E"

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.

E. Discharge Specification - 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 State at any place;

- e. Tidal waters of the State to exceed the following limits of quality at any place more than 100 feet from the point of discharge:

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. The requirements prescribed by this order amend the requirements prescribed by Resolution 68-68 adopted by the Board on December 18, 1968, and Resolution 71-24 adopted by the Board on April 22, 1971, and shall become effective January 1, 1973.

4. Stauffer Chemical Company shall commence a study of the reduction of heavy metals used for cooling water treatment by January 1, 1973, and shall file a report on January 15, 1973 and quarterly thereafter.
5. This order includes items 1, 6, 7 and 8 of the attached "Reporting Requirements" dated September 11, 1972.
6. This order includes items numbered 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)

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

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:

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

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.

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