

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-014

ORDER SETTING ADMINISTRATIVE CIVIL LIABILITY

SOUTH BAYSIDE SYSTEM AUTHORITY
REDWOOD CITY, SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Board), finds, pursuant to California Water Code Section 13323, that:

1. South Bayside System Authority (SBSA) operates a wastewater interceptor and a sewage treatment plant serving the cities of Redwood City, San Carlos, and Belmont and the West Bay Sanitary District (WBSD). There are four major pump stations tributary to SBSA's interceptor, the WBSD Pump Station, the Redwood City Pump Station, the San Carlos Pump Station and the Belmont Pump Station.
2. A 100-foot section of the forcemain leading out of the Redwood City pump station experienced leaks in 1986 and 1987. SBSA decided to replace this 100-foot section with new reinforced concrete pipe. Because this forcemain section is the only means of transporting wastewater from WBSD and Redwood City to the treatment plant, the replacement work could only be done while flow was stored in the collection system or at off-line storage sites. SBSA determined the maximum storage time to be six hours during the low flow period from 11:00 p.m. to 5:00 a.m. The first night of work began on schedule at 11:00 p.m. on November 18, 1987. During the night, SBSA experienced delays at several steps that delayed subsequent steps. While the project schedule allowed about two hours for unexpected delays, the combination of all the delays extended the work past 7:30 a.m., utilizing all of the available storage capacity in the collection systems. The construction crane failed at this time. When the crane failed at 7:30 a.m., SBSA still have the following work to complete in order to make the forcemain operable: install a four foot long temporary transition spool to connect the old forcemain with the newly installed pipes, install a riser spool, remove the plug, and close off the riser spool. With storage capacity in the collection system all used up, SBSA decided to divert raw sewage from the construction site to a nearby storm channel which leads to Redwood Creek in order to prevent raw sewage from flooding private residences and public streets. A total of about 12.5 million gallons of untreated wastewater was bypassed from the SBSA system to Redwood Creek and Westpoint Slough from approximately 7:30 a.m. until 11:00 p.m. on November 19, 1987. It is estimated that 2.1 million gallons were bypassed to Westpoint Slough at the foot of Marsh Road and that 10.4 million gallons were

bypassed to Redwood Creek at the foot of Maple Street in Redwood City.

3. The discharge violated Prohibition A.1 and A.2 of Order No. 84-6 (NPDES Permit CA0038369). Prohibition A.1 prohibits discharges to any point at which the wastewater does not receive an initial dilution of at least 10:1 and Prohibition A.2 prohibits overflows of untreated wastewater to waters of the state from either the treatment plant or the collection system and pump stations tributary to the treatment plant.
4. The discharge created a condition of pollution and adversely affected Redwood Creek and Westpoint Slough for beneficial uses. Redwood Creek and Westpoint Slough are shallow and has limited tidal exchange. As a result, they have limited ability to assimilate pollutants typically found in untreated sewage. The raw sewage bypass substantially increased bacteria counts in these areas. SBSA's discharge had other potential effects on water quality and beneficial water uses. Settleable solids from raw sewage can cover bottom sediments, disrupting or displacing benthic life. Samples of the bypass collected by WBSD personnel show that heavy metals were discharged to receiving waters at concentrations in excess of Basin Plan limits. These pollutants can bioaccumulate in shellfish and other aquatic organisms.
5. SBSA took prompt corrective action, and the Board therefore did not consider issuing a Cleanup and Abatement Order.
6. SBSA should have anticipated the problems that caused the construction delays and subsequent bypass. SBSA would have minimized the delays and probably avoided the bypass had it taken the following additional steps during project planning, design, and construction:

(1) Delays totalling 90 minutes with cutting the old steel pipe were caused by the coating on the outside of the pipe. SBSA indicated that they have not encountered this type of coating before. However, SBSA and its agents have plenty of time to check and inspect the pipe coating before starting the work to determine if there was a better way to cut the pipe and/or to select the most appropriate equipment for the job. SBSA should have removed the pipe coating in the area that needed to be cut. This could have been done just before the pump stations were shut down.

(2) SBSA discovered more concrete than expected under the 48-inch RCP section. The combination of concrete and 48-inch RCP was too heavy to be lifted in one piece by the crane at hand. SBSA was aware that there was concrete under the pipe but did not know the extent of the concrete. It would have been prudent to know the extent of the concrete beforehand. If this was done, SBSA would have been more prepared to deal with the problem on the night of the bypass by using a larger crane. This would have saved almost an hour.

(3) A fabrication error led to difficulty in putting two sections of the new pipe together. Neither the manufacturer, SBSA, or the contractors hired by SBSA checked the tolerance of the joint before the contractor tried to install the pipe. This fabrication error was responsible for delaying the pipe installation. SBSA should have made sure that the pipe was fabricated correctly, either by asking to review the manufacturer's test results or by checking the pipe themselves before committing to start the replacement of the old pipeline.

(4) SBSA should have more thoroughly investigated off-line storage options (e.g. nearby flood control basins) and should have been ready to use them in event of excessive delays. There was one flood control basin next to the WBSD Pump Station which could have been used to store a large volume of raw sewage. SBSA did not thoroughly investigate this or other storage options.

In a project such as this in which time is of such critical importance, SBSA should have removed the pipe coating ahead of time and determine how much concrete was beneath the old pipes. It is also standard practice to make sure that the pipe was fabricated correctly. All of the above delays contributed to the bypass, and not just the crane breaking down. Even if the crane had not failed, SBSA would not have had enough time to finish the first day of work before bypassing become necessary. However, if the above additional steps been taken, the contractor probably would have had enough time to repair or replace the crane before bypassing became necessary.

7. On September 14, 1988, Complaint No. 88-137 was issued for Administrative Civil Liability due to SBSA's violation of the above cited prohibitions in Board Order No. 84-6.
8. The Executive Officer, in Complaint No. 88-137, proposed that administrative civil liability be imposed by the Regional Board in the amount of \$50,000 pursuant to Section 13350 of the California Water Code. The Complaint states that SBSA negligently discharged or caused or permitted waste to be deposited where it was discharged to waters of the State. The proposed liability has not been paid, and the right to hearing has not been waived.
9. This action is an order to enforce waste discharge requirements adopted by the Board. It is therefore exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 15321 of the Resources Agency Guideline.
10. The Board on January 18, 1989, after due notice to SBSA and other affected persons, conducted a public hearing at which

SBSA appeared and evidence was received concerning the discharge.

IT IS HEREBY ORDERED, PURSUANT TO WATER CODE SECTION 13323 that South Bayside System Authority is civilly liable for this violation and shall pay administrative civil liability in the amount of \$50,000. Payment shall be made within 30 days of the date of this Order to the State Water Pollution Cleanup and Abatement account.

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 January 18, 1989.



STEVEN R. RITCHIE
Executive Officer