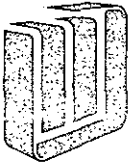


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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Karen E. Duff
EXECUTIVE SECRETARY

April 17, 1992

To: Board of Directors (Finance and Insurance Committee--Action)
(Engineering and Operations Committee--Information)

From: General Manager

Subject: Revision No. 6 to Appropriation No. 536 from \$23 Million to
\$26.6 Million to Finance Completion of the Construction Phase
and Continued Operation of the Oxidation Demonstration Project

Report

In 1986, Metropolitan developed a Trihalomethane (THM) Action Plan in response to the U.S. Environmental Protection Agency's (USEPA's) plans to reduce the current THM standard of 0.10 milligrams per liter (mg/L) and promulgate new standards for other disinfection by-products (DBPs) by the early 1990s. The THM Action Plan (under Appropriation 536) has included the granular activated carbon (GAC) pilot study, the oxidant pilot study--evaluating ozone and peroxone (the combination of ozone and hydrogen peroxide)--and the Oxidation Demonstration Project.

The USEPA now plans to have the first phase of DBP regulations in effect by June 1995 and a second phase in effect by the year 2000. Due to the complexity of the issues related to the full-scale oxidation retrofit program, Metropolitan needs to continue aggressively investigating ozone and peroxone. Our commitment to these technologies is critical to our ability to comply with the proposed regulations in an economical manner.

In March 1990, the Board authorized Revision No. 3 to Appropriation No. 536 to increase funding to \$21.2 million to finance construction of the Oxidation Demonstration Project. In September 1990, the Board authorized Revision No. 4 to Appropriation No. 536 to increase funding to \$21.3 million to finance the estimated costs of a bromide/brominated-DBP bench-scale study. In March 1991, the Board authorized Revision No. 5 to Appropriation No. 536 from \$21.3 million to \$23 million to finance the operations phase of the Oxidation Demonstration Project through June 30, 1992. An increase of \$3.6 million in Appropriation No. 536 is now required to fund (1) additional costs incurred due to construction delays

(actual construction required 22 months as opposed to the scheduled 14 months) and construction change orders, and (2) continued operation of the demonstration project through fiscal year 1992/93. The total estimated cost for the THM Action Plan (under Appropriation No. 536), including the bench- and pilot-scale studies, and the scoping study, design, construction, and operation through June 30, 1993 of the Oxidation Demonstration Project, is estimated at \$26.6 million.

A summary of the estimated costs for the total THM Action Plan expenditures and a breakdown of the estimated costs for the Oxidation Demonstration Project are presented in Attachment A. The early pilot work exceeded the budget by \$74,000, thus reducing the action plan contingency. The completion of construction and initial operation (through fiscal year 1991/92) is estimated to exceed the remaining budgeted contingency by \$1.1 million. This cost increase includes construction change orders involving the addition of Chemical Spill Containment Facilities, additional ozone sampling connections, electrical power and control additions and revisions, and numerous relocations to accommodate existing utilities and facilities (\$610,000), and additional costs due to construction delays (\$350,000 in additional consultant resident engineering and construction inspection services, \$140,000 in additional consultant shop drawing review, and additional in-house labor costs). This estimate does not include funds for delay claims which may be submitted by the construction contractor. Should such delay claims be submitted and determined to be valid, staff will request additional funding from your Board to resolve those items.

The costs for a second year of operation (\$2,426,000) include primarily labor for the demonstration project team (including six operators), as well as \$300,000 for professional services (a technical advisory group and several small studies) and a \$250,000 contingency.

The Oxidation Demonstration Project is exempt from the provisions of the California Environmental Quality Act.

Board Committee Assignments

This letter is referred to:

The Finance and Insurance Committee for action because of its authority to study, advise and make recommendations with

regard to authorization of appropriations pursuant to Administrative Code Section 2441(d).

The Engineering and Operations Committee for information because of its authority to study, advise and make recommendations with regard to the initiation, scheduling, contracting, and performance of construction programs and work pursuant to Administrative Code Section 2431(b).

Recommendation

FINANCE AND INSURANCE COMMITTEE FOR ACTION.

It is recommended that the Board authorize an increase in Appropriation No. 536 from \$23 million to \$26.6 million from the 1991 Revenue Bond Construction Fund, subject to approval of bond counsel, to finance all estimated costs for the completion of construction and continued operation (through June 30, 1993) of the Oxidation Demonstration Project. If in the opinion of bond counsel it would be inappropriate to use bond funds for the initial operations, it is recommended that the Board authorize the General Manager to charge those costs to the Operations and Maintenance Fund.


Carl Boronkay

DAB/rdl/atr
(boapr/app-536.dab)

Attachment

Attachment A

Fiscal Statement

Total THM Action Plan Expenditures

	<u>Revision No. 5</u>	<u>Revision No. 6</u>
GAC Pilot Study	\$ 1,000,000	\$ 1,001,000
Oxidant Pilot Study	2,300,000	2,373,000
Bromide Bench Studies	100,000	100,000
Oxidation Demo. Project	19,600,000	20,700,000
Continued Operations	<u>0</u>	<u>2,426,000</u>
Total:	<u>\$ 23,000,000</u>	<u>\$ 26,600,000</u>

Oxidation Demonstration Project Estimated Costs

	<u>Revision No. 5</u>	<u>Revision No. 6</u>
Scoping Study	\$ 800,000	\$ 800,000
Design	2,300,000	2,300,000
Construction Contract	12,204,000	12,814,000
Construction Support & Initial Operations	<u>3,432,000</u>	<u>4,862,000</u>
Subtotal:	\$ 18,736,000	\$ 20,776,000
Contingency	1,004,000	64,000
AWWARF Funding	- 140,000	- 140,000
Total:	<u>\$ 19,600,000</u>	<u>\$ 20,700,000</u>