

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of  
the City of Los Angeles for Review  
of the Decision of the Division of  
Water Quality, State Water Resources  
Control Board, not to Authorize the  
Expenditure of Grant Funds to Remove  
and Reconstruct Hyperion Plant's  
Existing Secondary Treatment Facil-  
ities, Project No. 76D-1036.

ORDER NO. WQG 77-3

BY BOARD VICE CHAIRMAN MAUGHAN:

On September 22, 1976, the City of Los Angeles (petitioner) petitioned the State Water Resources Control Board (State Board) for review of the decision of the staff of the Division of Water Quality not to authorize the expenditure of Clean Water Grant funds to remove and reconstruct existing secondary treatment facilities at the petitioner's Hyperion Treatment Plant.

On November 8, 1976, a hearing was held for the purpose of receiving evidence relating to the appropriateness and propriety of the decision made by the Division of Water Quality.

I. BACKGROUND

Petitioner is currently involved in a project to upgrade its Hyperion Wastewater Treatment Plant to achieve full secondary treatment. The Hyperion Plant is presently discharging effluent, two-thirds of which is receiving only primary treatment, while one-third is receiving secondary treatment.

In November, 1975, petitioner submitted to the Division of Water Quality an analysis of the Hyperion project alternatives.

The analysis proposed that the plant's existing 100 MGD secondary treatment system (a coarse bubble aeration system built in 1950) be demolished and that a new 307 MGD pure oxygen system be constructed. In this first analysis only alternatives which would be served by a single aeration method were considered. In April, 1976, the Division asked petitioner to evaluate a dual air-oxygen alternative which involved leaving the existing secondary treatment system intact and constructing another oxygen system with secondary capacity for the portion of the plant's flow which is now receiving only primary treatment. During that same month, petitioner submitted data to the Division to demonstrate that the pure oxygen alternative which it preferred would cost less than the dual air-oxygen alternative. The Division, however, felt that the small monetary advantage of the pure oxygen alternative was offset by the possibility that the public would react unfavorably to the demolition of the existing secondary treatment system, the disadvantage of a completely primary discharge to the ocean during construction, and the adverse environmental impact of the disposal of 42,000 cubic yards of reinforced concrete from the existing system.

After the Division informed petitioner that the removal and reconstruction of Hyperion's existing secondary facilities would not be grant funded, petitioner conducted studies and collected further information to demonstrate the superiority of the pure oxygen alternative. The new information did not convince the Division that its decision not to fund the removal and reconstruction of the existing facilities should be revised. When decision was reaffirmed, petitioner appealed.

## II. CONTENTIONS

The arguments supporting petitioner's and the Division's positions were discussed at length in the hearings. The greatest part of the discussion focused on the comparative costs of the two project alternatives. The arguments advanced were quite technical and the differences in the analyses depend primarily upon professional engineering judgment.

At the beginning of the hearing, the Division of Water Quality presented engineering estimates to support its decision against funding the removal and reconstruction of the existing secondary facilities. The need for some of the items included in petitioner's cost figures was questioned and some cost estimates were adjusted. The staff's conclusion was that the dual air-oxygen alternative was \$10 million more cost effective than the pure oxygen alternative. To counter this argument, petitioner presented engineering estimates to demonstrate how its cost figures were developed. Supplemental written material further substantiated the petitioner's presentation at the hearing. Petitioner's analysis concluded that the pure oxygen alternative was \$22 million more cost effective. Since the cost of either system is of the order of \$150 million, the estimated cost advantage claimed by the staff for the dual system is only 7 percent of the total cost, and that amount is within the usual range of contingency factors for a design at this stage.

Differences in the versions of project time schedules presented created some of the discrepancy in the cost estimates.

The time schedules proposed also significantly affected estimates of the amount of pollutants that would be discharged before the Hyperion plant has full secondary capacity. Petitioner proposed time schedules for design and construction of the alternatives under which the pure oxygen system would be completed eighteen months before the dual air-oxygen system. That analysis concluded that even accounting for the emissions caused by the full primary discharge which would be experienced during construction of the pure oxygen alternative, total emissions would be less than if the dual air-oxygen system were selected, because full secondary capacity would be achieved sooner. The Division, on the other hand, disputes that the dual system would take that much longer than the pure oxygen system, and, therefore, concluded that fewer pollutants would be discharged if the dual system were selected.

Petitioner rebutted the Division's concern over the possibility of adverse public reaction to the demolition of the existing secondary facilities with testimony that none of the people at the public EIR hearing on the project objected to that aspect of the proposal. According to petitioner, the public reaction to a longer more costly alternative would be more harsh. A written report submitted by petitioner at the hearing indicated that disposal of the reinforced concrete would not have adverse environmental consequences. Petitioner intends to dispose of the concrete either at the Mission Hills Canyon landfill or in Santa Monica Bay where it would provide shelter to benefit the fishery.

Finally, petitioner presented three arguments in favor of the alternative it prefers. First, selection of the dual air-oxygen alternative could result in delays in construction caused by the difficulty of building around the existing facilities. Second, the dual air-oxygen system would be more complex to operate and maintain because operators would have to be familiar with both systems. Third, and most significant, the pure oxygen system would use 21.8 percent less energy than the dual system. The energy saved would be enough to serve six thousand homes.

### III. FINDINGS

The resolution of this appeal cannot turn on a finding concerning the disputed cost estimates. Even among eminent designers, construction engineers and cost estimators, legitimate differences of opinion could easily result in estimates whose range was plus or minus ten percent of the median. The difference between the Division's and petitioner's estimates is even smaller. In these circumstances, the State Board's decision turns on other considerations.

Petitioner has indicated that construction of the pure oxygen alternative could be completed by October 1980, eighteen months sooner than construction of the dual air-oxygen alternative. Although the staff felt that the petitioner's estimate for the time of completion of the dual system could be shortened, they did not dispute the completion date for the pure oxygen system.

In any event, the State Board wishes to facilitate in every way possible the achievement of full secondary treatment and feels that the petitioner's plan represents a tight but realistic time schedule. The petitioner also noted, and the Division agreed, that the pure oxygen system would use 21.8 percent less energy than the dual system. The energy savings is substantial and its value will undoubtedly increase in the future.

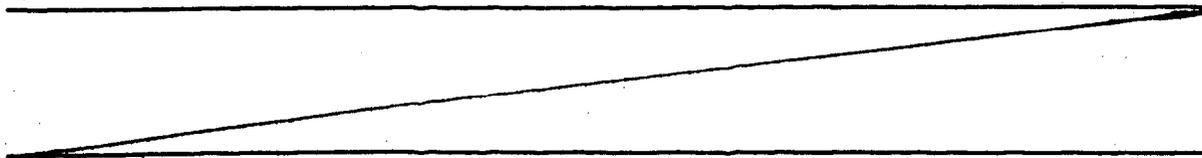
#### IV. CONCLUSION

After a review of the entire record, we conclude as follows:

1. The pure oxygen alternative for the Hyperion Treatment plant project should be given concept approval and Step II grant contracts for the project should be executed with the petitioner, as soon as all necessary Step I work has been completed and approved. The State Board directs staff to keep Board members informed about all aspects of the project leading to execution of Step III grant contracts.
2. Because our preference for the pure oxygen alternative is influenced considerably by petitioner's contention that the pure oxygen system could be completed by the end of 1980, the grant contracts should contain this special condition:

Grantee agrees to complete construction of this project and to have the completed system fully operational by December 31, 1980. No costs which could be attributed to inflation after that date shall be eligible for state or federal grant assistance. The inflation costs will be determined by the difference in the Environmental Protection Agency's Sewage Treatment Plant Cost Index between December 31, 1980, and the date of the actual completion of construction of the fully operational secondary treatment facilities. The inflation costs to be paid by the grantee will be calculated by multiplying the percentage of the increase in the cost index during that time period by the actual bid prices for construction of the entire secondary treatment project.

3. The Step III grant contracts should ensure that if the existing secondary capacity is dismantled, the proposed full secondary capacity will be constructed in its place.



NOW, THEREFORE, IT IS ORDERED that this matter be remanded to the Division of Water Quality for processing of petitioner's grant application in a manner consistent with this order.

Dated: February 17, 1977

/s/ W. Don Maughan  
W. Don Maughan, Vice Chairman

WE CONCUR:

/s/ John E. Bryson  
John E. Bryson, Chairman

/s/ W. W. Adams  
W. W. Adams, Member

/s/ Roy E. Dodson  
Roy E. Dodson, Member

/s/ Jean Auer  
Jean Auer, Member