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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

*Darwin E. Duff*  
EXECUTIVE SECRETARY

April 20, 1994

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

From: General Manager

Subject: Appropriation No. 681 for \$1,075,000 to Finance All Costs in Advance of Award of a Construction Contract for Installation of Emergency Power Generating Systems at the Weymouth and Diemer Filtration Plants, and Authority to Enter into an Agreement

Report

Metropolitan's previous standby emergency power criteria for filtration plants called for providing reduced power for limited operations for a short period of time during utility power outages. Because of concern for maintaining water quality during extended power outages, the criteria was revised to providing emergency power for operating at 50 percent of plant treatment capacity during a power outage. The existing standby emergency generators at the F. E. Weymouth and R. B. Diemer filtration plants do not have the capacity to meet this new criteria.

Centralizing emergency power generation is also important as determined by a study conducted by Boyle Engineering Corporation at the Skinner filtration plant in 1990. The study concluded that a centralized system, consisting of large capacity generators, would be more efficient and cost-effective than the existing noncentralized system consisting of several small generators of varied capacities serving individual plant areas. In September 1990, your Board authorized the installation of a centralized emergency power generation system at the Skinner plant.

The Diemer and Weymouth filtration plants are the only treatment plants where actions are not underway to upgrade and centralize the Emergency Power Generation Systems. Proceeding with this project will complete the upgrading of the emergency power generation systems for all treatment plants and will alleviate reliability concerns raised by the recent Northridge earthquake.

To provide the required level of emergency power for the Diemer plant, a 900 kW, 480-Volt, mobile, diesel-engine

generator, temporarily in use at the Skinner filtration plant, will be permanently housed in a soundproof masonry building with associated equipment and connected to the existing plant switchgear with a 480/4160-volt step-up transformer. At the Weymouth plant, a new 1000 kW, 2.4 kV, diesel-engine generator will be purchased and installed in a soundproof masonry building with associated equipment and connected to the existing switchgear. The existing three 480-volt emergency generators at each plant will be available to back up the new centralized systems with limited emergency power in the event of a failure.

It is proposed to proceed with design and construction of centralized emergency power generation systems at the Weymouth and Diemer filtration plants to meet the new emergency power requirements. The total estimated cost for both the Weymouth and Diemer plants is \$4,380,000. A breakdown of the estimated \$1,075,000 in advance of award of a construction contract is shown in the attached Financial Statement.

Due to the workload in the Engineering Division, it is proposed to enter into an agreement with Burns and Roe Pacific Company to provide engineering services for design and construction support for installation of emergency power generation systems at the Weymouth and Diemer filtration plants. Proposals were received under RFP 023 and Burns and Roe was selected because of its qualifications and experience in accomplishing this type of work. The total estimated cost of these services is \$500,000, including expenses. Burns and Roe Pacific is an equal opportunity employer. Certified MBE/WBE subcontracting goals were not required under RFP 023 as this RFP was issued prior to formulation and implementation of the Business Outreach Program, and the work will be accomplished without the use of subcontractors. In addition, it would be costly for Metropolitan to reissue the RFP to meet these new requirements.

The proposed project is categorically exempt from the provisions of the California Environmental Quality Act because it involves the construction of a small facility to house emergency power generating systems within the confines of the existing Weymouth and Diemer filtration plants. No expansion of plant capacity or impacts to sensitive environmental resources will result from this installation.

Board Committee Assignments

This letter is referred for action to:

The Engineering and Operations Committee because of its jurisdiction over the initiation, scheduling, contracting and performance of construction programs and the selection of engineering and geologic consultants and the determination of the scope of their assignments, pursuant to Administrative Code Section 2431(b) and (h);

The Finance and Insurance Committee because of its responsibility to study, advise, and make recommendations with regard to authorization of appropriations pursuant to Administrative Code Section 2441(d); and

The Organization and Personnel Committee because of its responsibility for the terms and conditions of employment of all consultants, pursuant to Administrative Code Section 2471(g).

Recommendations

**ENGINEERING AND OPERATIONS COMMITTEE FOR ACTION.**

It is recommended that the General Manager be authorized to have all work performed, other than work to be performed under construction contracts involving an expenditure of \$250,000 or more, for installing centralized standby emergency power generation systems at the F. E. Weymouth and R. B. Diemer Filtration Plants.

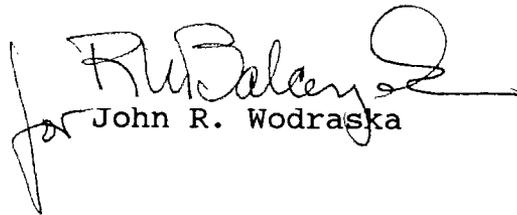
**FINANCE AND INSURANCE COMMITTEE FOR ACTION.**

It is recommended that the Board authorize Appropriation No. 681 in the amount of \$1,075,000 from the Pay-As-You-Go Fund, to finance all estimated costs in advance of award of a contract for installing centralized standby emergency power generation systems at the F. E. Weymouth and R. B. Diemer Filtration Plants.

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**ENGINEERING AND OPERATIONS AND ORGANIZATION AND PERSONNEL  
COMMITTEES FOR ACTION.**

It is recommended that the General Manager be authorized to enter into an agreement with Burns and Roe Pacific Company, substantially on the terms outlined in this letter and in form approved by the General Counsel, to perform consulting engineering services for design and construction support for installing centralized standby emergency power generation systems at the F. E. Weymouth and R. B. Diemer Filtration Plants. The fee for this work shall not exceed \$500,000 including expenses.

  
for John R. Wodraska

DWC/jj

(ba:apr-681.b11-04054)

Attachments: A. Burns and Roe Fee Schedule  
B. Financial Statement

Attachment A

The proposed fee schedule of Burns and Roe Pacific Company for this work is as follows:

<u>Classification</u>	<u>Hourly Rate</u>
Project Manager	\$106.00
Project Architect	\$ 96.00
Civil Engineer	\$ 85.00
Structural Engineer	\$ 85.00
Electrical Engineer	\$ 96.00
Instrument & Control Engineer	\$ 96.00
Mechanical Engineer	\$ 96.00
Architectural Designer	\$ 65.00
Electrical Designer	\$ 65.00
Civil Designer	\$ 65.00
Structural Designer	\$ 65.00
Mechanical Designer	\$ 65.00
Project Controls	\$ 38.00
Quality Assurance	\$101.00
Secretarial	\$ 38.00
Clerical	\$ 38.00
Word Processing	\$ 38.00

Burns and Roe Pacific Company is an equal opportunity employer, and a copy of its current Affirmative Action Plan is on file with Metropolitan. Burns and Roe will not be utilizing any outside services or subcontractors under this Agreement.

Attachment BFINANCIAL STATEMENT

(Program No. 5-0713-31)

A breakdown of the estimated costs in advance of award of a construction contract for installing centralized standby emergency power generation systems at the Weymouth and Diemer filtration plants is as follows:

	<u>Initial Funding</u>
Labor:	
Study/Preliminary Design	\$ 90,000
Engineering and Specifications	150,000
Operations Control Systems	20,000
Environmental	<u>5,000</u>
Total Labor	\$ 265,000
Incidental Expenses	\$ 5,000
Materials and Supplies	10,000
Operating Equipment & Miscellaneous	10,000
Professional/Technical	500,000
Administrative Overhead	145,000
Contingencies	<u>140,000</u>
Total	\$ 1,075,000
Source of Funds: Pay-As-You-Go Fund	
Projected Expenditure of Funds:	
Through Fiscal Year 1993/94	\$ 150,000
" Fiscal Year 1994/95	610,000
" Fiscal Year 1995/96	1,100,000
" Fiscal Year 1996/97	<u>2,520,000</u>
TOTAL	\$ <u>4,380,000</u>

Attachment B (Cont.)

Fiscal Year 1993/94 Capital Projects  
Program:

Estimated Program Cost	\$ 7,468,000
Program Estimate For Fiscal Year 1993/94	\$ 479,100

Class:

One--Project directly related to the  
delivery of water.

Project Benefit:

Will provide efficient emergency power  
at the most effective cost for 50 percent  
of treatment capacity during utility  
power outages to provide continuous  
water deliveries to member agencies.