MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

BOARD ACTION

- **Board of Directors**
  Engineering and Operations Committee

June 10, 2003 Board Meeting

8-1

Subject

Appropriate $335,000; and authorize entering into an agreement with Lee & Ro, Inc., in an amount not to exceed $1.15 million, for preliminary design for the Jensen Chlorine Containment Project and final design for the Skinner Chlorine Containment Project (Approp. 15346)

Description

Two projects are recommended to ensure that the chlorine disinfection facilities at the Joseph Jensen and Robert A. Skinner Filtration Plants are modernized in a manner that is consistent with the chlorine industry's current practice. In April 1999, the Board authorized the multi-phased Chlorine Containment and Handling Facilities Program, which will upgrade all of Metropolitan's filtration plants.

Chlorine Containment ($335,000):

The existing Jensen chlorine facility was constructed as part of the Expansion No. 2 program in 1995. The facility includes outdoor storage for two 90-ton chlorine railcars, a chlorine process building housing an evaporator room and chlorinator room, and remote chlorine ejectors. The facility includes substantial safety features including continuous leak detection and provisions to remotely shut off the chlorine supply at the railcars in the event of a leak. However, to comply with current Uniform Fire Code (UFC) regulations and meet the goals of Metropolitan's Chlorine Containment Program, the facility must be modified to include containment and neutralization capabilities.

For the Skinner filtration plant, Metropolitan's Board authorized funding for the design and construction of chlorine containment and handling facilities in March 2001. The approved project scope includes moving the existing chlorinators and evaporators out of the Administration Building and constructing new chlorine process, containment and handling facilities.

This action will appropriate funds and authorize entering into a competitively selected professional services agreement with Lee & Ro, Inc., to prepare the preliminary design for the Jensen Chlorine Containment Project and to complete the final design for the Skinner Chlorine Containment Project, in an amount not to exceed $1.15 million. Of this amount, the Jensen preliminary design fee is $200,000, and the Skinner final design fee is $950,000. The Skinner project final design fee is covered by the funding amount previously authorized by the Board.

These two projects were evaluated and recommended by the Capital Investment Plan (CIP) Evaluation Team, and the funds are included in the fiscal year 2002/03 Capital Budget. See **Attachment 1** for the detailed report and **Attachment 2** for the financial statement.

Policy

Metropolitan Water District Administrative Code § 5108: Capital Projects Appropriation

Metropolitan Water District Administrative Code § 8117: Professional and Technical Consultants

California Environmental Quality Act (CEQA)

CEQA determination for Staff Recommendation:

Jensen Chlorine Containment Project

The proposed actions are exempt under the provisions of CEQA and the State CEQA Guidelines, since they involve utilizing Lee & Ro, Inc., for preliminary engineering design, as associated with feasibility and planning studies and environmental documentation preparation, for possible future actions, as well as basic data collection and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These activities may be strictly for information gathering purposes, or as part of a study leading to actions which a public agency has not yet approved, adopted, or funded. As such, these proposed actions qualify both under a feasibility and planning studies exemption (Section 15262 of the State CEQA Guidelines) and a categorical exemption (Class 6, Section 15306 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under both a feasibility and planning studies exemption and a categorical exemption (Class 15262 and Class 6, Section 15306 of the State CEQA Guidelines).

Skinner Chlorine Containment Project

The project was previously determined by the Board to be categorically exempt under the provisions of CEQA and State CEQA Guidelines. The Skinner Chlorine Containment Project was found to be exempt under Classes 1, 2, 3, and 11 (Sections 15301, 15302, 15303, and 15311 of the State CEQA Guidelines) on March 13, 2001. Since that time, the statute of limitations on the project has ended. With the current board actions to complete final design by using the services of Lee & Ro, Inc., there is no substantial change proposed since the original project was first approved in 2001. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines. As such, no further CEQA documentation is necessary for the Board to act with regards to the proposed actions.

The CEQA determination is: Determine that the proposed actions have been previously addressed in the 2001 categorical exemptions (Classes 1, 2, 3, 11; Sections 15301, 15302, 1503, and 15311 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

Staff Recommendation

Adopt the CEQA determination and

a. Appropriate $335,000 in budgeted CIP funds; and
b. Authorize entering into a professional services agreement with Lee & Ro, Inc., for engineering services in an amount not to exceed $1.15 million.

Fiscal Impact: $335,000 in budgeted CIP funds

5/16/2003
Roy L. Wolfe *Date*
Manager, Corporate Resources Group

5/20/2003
Ronald R. Gastelum *Date*
Chief Executive Officer

Attachment 1 – Detailed Report

Attachment 2 – Financial Statement for the Chlorine Containment and Handling Facilities Program

BLA #1540

Detailed Report

Purpose/Background

Chlorine is a highly toxic and corrosive chemical that Metropolitan must use in large quantities as the primary- and post-disinfectant in the water treatment process. The use of liquid chlorine will continue indefinitely at each of Metropolitan's filtration plants, even after ozone pre-disinfection is installed. This ongoing need for chlorine at each plant arises from the fact that chlorine, in the form of chloramines, is added to the finished water leaving the plant.

Liquid chlorine is shipped to Metropolitan's Jensen and Weymouth filtration plants in bulk 90-ton capacity rail cars and to the Mills, Diemer, and Skinner plants in 17-ton capacity truck trailers. Metropolitan has maintained an excellent safety record considering the enormous quantities used over the years and the potential consequences of an accidental release of chlorine gas. Because the potential consequences of an accident are serious, Metropolitan continues to be proactive in upgrading its facilities and procedures. A thorough review has been conducted to determine current industry practice and regulations pertaining to the construction of chlorine-related facilities. In April 1999, the Board authorized the multi-phased Chlorine Containment and Handling Facilities Program, which will upgrade all of Metropolitan's filtration plants.

Multi-phased Program

The first phase of this program was initiated in April 1999, when the Board appropriated funds and delegated authority to award a construction contract for the Chlorine Containment and Handling Facilities Project at the Diemer plant. Construction of the Diemer chlorine facility was completed in April 2002, and it has been in successful operation since that time. The second phase of this program was initiated in January 2000 when the Board approved the Chlorine Containment and Handling Facilities Project at the Weymouth plant, which included moving the chlorinators and evaporators out of the plant administration building in addition to providing new chlorine containment and neutralization. Construction of the Weymouth chlorine facility is currently underway and is scheduled to be completed by April 2004. In March 2001, the Board approved the third phase of this program, which includes the design and construction of the chlorine containment facility at Skinner. The current board action will approve another phase of this program, which includes the preliminary design for the Jensen chlorine containment facility.

Chlorine Containment ($335,000):

Jensen Project

The existing chlorine facility was constructed at the Jensen filtration plant in 1995. The facility includes outdoor storage for two 90-ton chlorine railcars, a chlorine process building housing an evaporator room and chlorinator room, and remote chlorine ejectors. The facility includes substantial safety features including continuous leak detection and provisions to remotely shut off the chlorine supply at the railcars in the event of a leak. However, to comply with current Uniform Fire Code (UFC) regulations and meet the goals of Metropolitan's Chlorine Containment Program, the facility must be modified to include containment and neutralization capabilities. The proposed scope of work for the Jensen Chlorine Containment and Handling Facilities Project includes the following components: (1) construction of a temporary unloading facility to be used until start up of new facilities; (2) construction of a new chlorine storage building to house four rail cars; (3) installation of a chlorine scrubbing system to neutralize chlorine released in the storage building and/or process building (evaporator and chlorinator rooms) during a leak; and (4) provisions within the new process building to include a fail-safe backup disinfection system in the event that a significant chlorine release shuts down the primary chlorine feed system.

A request for Statements of Qualifications (SOQs) to Provide On-Call Process and Plant Engineering Services (RFQ 578) was issued in December 2002. Metropolitan received 16 submittals to provide plant engineering services. Staff evaluated the SOQs, short-listed nine firms, and recommends entering into negotiations with the top ranked consultant, Lee & Ro, Inc., to perform this work. This board action will appropriate additional funds

and authorize entering into a professional services agreement with Lee & Ro, Inc. to provide preliminary design services for the Jensen Chlorine Containment Project, at a fee not to exceed $200,000. It is anticipated that staff will return to Metropolitan's Board in mid-2004 for authorization and funding of final design. Construction of the Jensen chlorine containment and handling facilities will begin after completion of Jensen ORP in April 2005.

Skinner Project

In March 2001, the Metropolitan's Board approved the Skinner Chlorine Containment and Handling Facilities Project which consists of the following components: (1) construction of a new chlorine process building which will allow for the existing chlorinators and evaporators to be removed from the Skinner plant administration building; (2) construction of a new chlorine storage building to house seven 17-ton chlorine cargo trailers; (3) installation of a chlorine scrubbing system to neutralize chlorine released in the storage building and/or process building (evaporator and chlorinator rooms) during a leak; and (4) provisions within the new process building to include a fail-safe backup disinfection system in the event that a significant chlorine release shuts down the primary chlorine feed system.

Final design of these facilities was rescheduled to better integrate these facilities into the site planning and preliminary designs of ozonation and chlorine dioxide facilities at the Skinner plant.

This board action will authorize entering into a RFQ 578 competitively selected professional services agreement with Lee & Ro, Inc., to provide final design services for the Skinner Chlorine Project, at a fee not to exceed $950,000. Construction of the Skinner chlorine containment and handling facilities will be coordinated with the construction of the Skinner ORP and Skinner Expansion No. 4 (Module 7).

Approval of the recommended action will appropriate additional funds and authorize entering into a competitively selected professional services agreement with Lee & Ro, Inc., in a total amount not to exceed $1.15 million to provide preliminary and final design services for the Jensen and Skinner chlorine projects, respectively. For the Skinner project, final design as a percentage of the estimated eventual construction cost is approximately 15 percent.

Cost Estimate

Attachment 2 shows the breakdown of the total estimated costs of $335,000 for this board action. The estimated costs include the consultant's fee for preliminary design services; incidental expenses; and Metropolitan's labor cost for project management services, discussions with the local fire department regarding Uniform Fire Code compliance, and technical review of the consultant-prepared Preliminary Design Report. Also, a portion of the appropriated funds will be allocated to the remaining budget to account for unanticipated project costs.

Actions and Milestones

September 2003 – Complete Preliminary Design for Jensen Chlorine Containment Project
October 2004 – Complete Final Design for Skinner Chlorine Containment Project
March 2004 – Return to Board for Final Design Authorization for Jensen Chlorine Containment Project
January 2005 – Complete Final Design for Jensen Chlorine Containment Project
July 2005 – Return to Board for Construction Contract Award for Jensen Chlorine Containment Project
June 2006 – Complete Construction for Skinner Chlorine Containment Project
September 2006 – Complete Construction for Jensen Chlorine Containment Project

Financial Statement for Chlorine Containment and Handling Facilities Program

A breakdown of Board Action No. 5 for Approp. No. 15346 to finance preliminary and final designs for chlorine containment projects at the Jensen and Skinner filtration plants is as follows:

	Previous Board Action No. 4 (April 2001)	Current Board Action No. 5 (June 2003)		New Total Appropriated Amount
Labor				
Studies and Investigations	$ 532,000	$ 5,000		$ 537,000
Design and Specifications	2,741,650	(950,000)	(1)	1,791,650
Owner Costs (Program Management, Water System Operations)	625,200	25,000		650,200
Construction Inspection and Support	2,808,800	0		2,808,800
Control Systems	50,000	0		50,000
Metropolitan Force Installation and Construction	815,500	0		815,500
Materials and Supplies	818,000	0		818,000
Incidental Expenses	216,000	5,000		221,000
Professional/Technical Services	415,700	1,150,000	(1)	1,565,700
Equipment Use	243,000	0		243,000
Contracts	15,818,000	0		15,818,000
Remaining Budget	3,316,150	100,000		3,416,150
Total	**$ 28,400,000**	**$ 335,000**		**$28,735,000**

Funding Request

Program Name:	Chlorine Containment and Handling Facilities Program		
Source of Funds:	Construction Funds (General Obligation, Revenue Bonds, Pay-As-You-Go Fund)		
Appropriation No.:	15346	**Board Action No.:**	5
Requested Amount:	$ 335,000	**Capital Program No.:**	15346-R
Total Appropriated Amount:	$ 28,735,000	**Capital Program Page No.:**	E-15
Total Program Estimate:	$ 37,400,000	**Program Goal:**	R – Regulatory

(1) Under Board Action No. 3, the Skinner plant Chlorine Containment and Handling Facilities final design budget was allocated within Metropolitan Labor. Under the current Board Action, this Skinner final design budget is allocated to Professional and Technical Services.