



Board of Directors

Engineering, Operations, and Technology Committee

3/14/2023 Board Meeting

7-6

Subject

Award a \$394,534 contract to Slater Waterproofing, Inc. to rehabilitate concrete walls within the ozone contactor structure at the Robert A. Skinner Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The ozone contactors at the Robert A. Skinner Water Treatment Plant (Skinner plant) consist of large concrete basins where the plant's influent water is mixed with ozone to disinfect the water. In recent years, expansion cracks have developed in the walls of the ozone contactor structure. Rehabilitation of the concrete walls of the Skinner ozone contactor structure is needed to prevent leakage of ozonated water and to maintain the long-term structural integrity of this water-bearing structure. This action awards a construction contract to repair expansion cracks on the concrete walls inside the Skinner plant's ozone contactor building and inlet channel.

Details

Background

The Skinner plant commenced service in 1976 and currently has a capacity of 350 million gallons per day (mgd). It delivers a blend of waters from the Colorado River and State Water Project (SWP) to Eastern Municipal Water District, Western Municipal Water District of Riverside County, and the San Diego County Water Authority. The plant is located north of Temecula in Riverside County.

Ozone is used as the primary disinfectant at each of Metropolitan's five water treatment plants to substantially reduce the formation of disinfection by-products (DBPs) for compliance with the U. S. Environmental Protection Agency's Disinfectants/DBP rule, and to control taste-and-odor-causing compounds and algal toxins. The combination of these benefits allows Metropolitan to successfully treat blends of SWP and Colorado River Aqueduct supplies. The Skinner plant's ozone contactor structure was placed into service in 2010. The 62,700 square-foot concrete structure is comprised of six contactors, which are each 120-feet long, 38-feet wide, and 30-feet tall, as well as an inlet channel and instrumentation galleries. Ozone and water are mixed within the contactors for a calculated duration to meet state and federal disinfection requirements. Contactors 1-4 are actively in service, while Contactors 5 and 6 were decommissioned when the plant's treatment capacity was reduced from 630 mgd to 350 mgd through Metropolitan's Board authorization in July 2017.

Regular inspections conducted by staff under Metropolitan's preventive maintenance program revealed the existence of cracks on the concrete walls of the Skinner plant's contactor building. The cracks vary in length from two to 12 feet, and in aggregate are estimated to be 2,400 feet in length; the width of the cracks are typically less than 1/16 inches wide. Expansion cracking of reinforced concrete is a naturally occurring phenomenon throughout the lifespan of a water-retaining structure, and in many cases these cracks will typically seal themselves over time as the mineral content in the water calcifies. In some cases, the cracks do not self-seal, and this could lead to leakage of ozonated water from the contactor basins into the instrumentation galleries. In these cases, Metropolitan staff has developed a methodology to proactively repair the concrete walls at the plant's ozone contactor structure. The methodology includes the use of hydrophilic grout injection into the concrete cracks to inhibit the leaks. The concrete walls of Contactors 3 and 4 were rehabilitated with this method in July 2019, and further periodic inspections performed within the next three years confirmed the effectiveness of

this approach. Staff recommends using the same method to rehabilitate the concrete in Contactors 1 and 2 and the contactor inlet channel.

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager authorized staff to proceed with construction of the Skinner Ozone Contactor Structure Rehabilitation, pending board award of the construction contract described below. Based on the current CIP expenditure forecast, funds for the work to be performed pursuant to the subject contracts during the current biennium are available within the CIP Appropriation for fiscal years 2022/23 and 2023/24 (Appropriation No. 15525). This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Treatment Plant Reliability Program.

Skinner Ozone Contactor Structure Rehabilitation – Construction

The scope of the construction contract consists of injecting hydrophilic grout into concrete walls at Contactors 1 and 2 and the inlet channel; protecting equipment in place while the work is being conducted; and placing a finish mortar coating on the concrete walls. Metropolitan forces will clear the work area and provide a contractor work staging area.

A total of \$598,000 is allocated for this work. In addition to the contract amount, other funds to be allocated include \$56,000 for construction management and inspection; \$18,000 for Metropolitan force work as described above; \$35,000 for contract administration, environmental monitoring support, and project management; \$50,000 for submittals reviews and preparation of record drawings; and \$44,466 for remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost to complete the concrete rehabilitation of the Skinner plant's ozone contactor building and inlet channel structure, including the amount appropriated to date and funds allocated for the work described in this action, is \$673,000.

Award of Construction Contract (Slater Waterproofing, Inc.)

Specifications No. 2036 for the construction of the Skinner Ozone Concrete Rehabilitation were advertised on December 14, 2022. As shown in **Attachment 2**, five bids were received and opened on January 26, 2023. The low bid from Slater Waterproofing, Inc. in the amount of \$394,534 complies with the requirements of the specifications. The four higher bids ranged from \$498,776 to \$612,575, while the engineer's estimate for this contract was \$591,000. Of the four higher bids, one was withdrawn due to a clerical error. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. Slater Waterproofing, Inc. is an SBE firm, and thus achieves 100 percent participation. No subcontractors are planned for this contract.

As described above, Metropolitan staff will perform construction management and inspection. The total cost of construction for this project is \$412,534, which includes the amount of the contract (\$394,534) and Metropolitan force activities (\$18,000). Engineering Services' performance metric target range for inspection of projects with construction less than \$3 million is 12 to 15 percent. For this project, the performance metric for inspection is 13.6 percent of the total construction cost.

Alternatives Considered

Staff considered including the rehabilitation of decommissioned Contactors 5 and 6 in the contract. The alternative was not pursued because it would add unnecessary costs and logistical complexity to the project. Contactors 5 and 6 have been taken out of service, and there are no plans to recommission them in the foreseeable future. Contactors 5 and 6 would be rehabilitated in the future if plans to place them back into service materialize.

Summary

This action awards a \$394,534 contract to Slater Waterproofing, Inc. to rehabilitate the concrete walls inside the Skinner plant's ozone contactor structure. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

Project Milestone

January 2024 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 50886, dated July 12, 2017, the Board authorized the removal of Modules 4, 5, and 6 from service at the Skinner plant.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. In particular, the proposed action consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action will not have a significant effect on the environment. Accordingly, the proposed action qualifies as a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$394,534 contract to Slater Waterproofing, Inc. to rehabilitate concrete walls within the ozone contactor structure at the Robert A. Skinner Water Treatment Plant.

Fiscal Impact: Expenditure of \$598,000 in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will improve the operational reliability of the Skinner plant's ozonation facilities.

Option #2

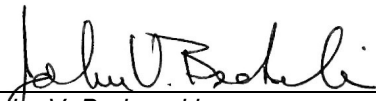
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to improve the reliability of the plant's ozonation facilities. Expansion cracks left unrepaired may lead to costly emergency repairs in the future.

Staff Recommendation


Option #1



John V. Bednarski
Chief Engineer/Manager
Engineering Services

2/22/2023

Date



Adel Hagekhalil
General Manager

2/27/2023

Date

Attachment 1 – Allocation of Funds**Attachment 2 – Abstract of Bids****Attachment 3 – Location Map**

Ref# es12692921

Allocation of Funds for Skinner Ozone Contactor Structure Rehabilitation

	Current Board Action (Mar. 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin.)	35,000
Submittals Review & Record Drwgs.	50,000
Construction Inspection & Support	56,000
Metropolitan Force Construction	18,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	
Slater Waterproofing, Inc.	394,534
Remaining Budget	44,466
Total	\$ 598,000

The total amount expended to date to rehabilitate the Skinner plant's ozone contactor building and inlet channel structure is approximately \$75,000. The total estimated cost to complete the rehabilitation of the concrete, including the amount appropriated to date, and funds allocated for the work described in this action, is \$673,000.

The Metropolitan Water District of Southern California**Abstract of Bids Received on January 26, 2023, at 2:00 P.M.****Specifications No. 2036****Robert A. Skinner Water Treatment Plant Ozone Contactors Rehabilitation**

The work includes injecting hydrophilic grout into existing concrete walls at Contactors 1 and 2 and inlet channel.

Engineer's estimate: \$591,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Slater Waterproofing, Inc. Montclair, CA	\$394,534	\$394,534	100	Yes
Tharsos Inc La Mesa, CA	\$498,776	-	-	-
Eco Construction Los Angeles, CA	\$525,000	-	-	-
Houlla Enterprises, Ltd. Newport Beach, CA	\$612,575	-	-	-
Angelus Waterproofing & Restoration, Inc. Huntington Beach, CA	Withdrawn due to clerical error	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 25% for this contract.

