

Agenda Report Details (With Text)

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Title: CHEMICAL SYSTEMS REHABILITATION AT PLANT NO. 2, PROJECT NO. P2-135
Sponsors: Kathy Millea
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Date	Ver.	Action By	Action	Result
3/1/2023	1	OPERATIONS COMMITTEE		

FROM: Robert Thompson, General Manager
Originator: Kathy Millea, Director of Engineering

SUBJECT:

CHEMICAL SYSTEMS REHABILITATION AT PLANT NO. 2, PROJECT NO. P2-135

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Find that Chemical Systems Rehabilitation at Plant No. 2, Project No. P2-135 is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301 and authorize staff to file a Notice of Exemption with the OC Clerk-Recorder;
- B. Approve a Professional Design Services Agreement with Lee & Ro, Inc. to provide engineering services for Chemical Systems Rehabilitation at Plant No. 2, Project No. P2-135, for an amount not to exceed \$862,328; and
- C. Approve a contingency of \$86,233 (10%).

BACKGROUND

Orange County Sanitation District (OC San) stores and uses many chemicals for on-going operations. At Plant No. 2, the Sodium Bisulfite Station was designed for continuous use when OC San regularly disinfected the effluent. From 2000 to 2015, OC San disinfected all effluent, which was sent to the ocean outfall, as required to meet the National Pollutant Discharge Elimination System (NPDES) Permit bacteriological standards. The disinfection process included adding sodium hypochlorite to the effluent to destroy fecal coliform and other disease-carrying microorganisms, and then added sodium bisulfite to dechlorinate the effluent to reduce the impact of sodium hypochlorite

on the ocean.

In 2015, OC San received approval from the United States Environmental Protection Agency (USEPA) and Santa Ana Regional Water Quality Control Board to stop disinfection. Since 2015, disinfection is now only required for abnormal operational conditions. The NPDES permit still requires OC San to disinfect when using the 78-inch one-mile short outfall, which occurs when the 120-inch five-mile outfall is scheduled for maintenance, or OC San experiences an extreme high flow event. The Sodium Bisulfite Station has only been utilized a few times since 2015.

In addition, Plant No. 2 uses ferric chloride and anionic polymer as coagulants, as part of the chemically enhanced primary treatment in the primary clarifiers to remove settleable solids. With this chemical treatment, effluent quality is improved and hydrogen sulfide in the digester gas is reduced. The anionic polymer system is located by the Primary Clarifiers at Plant No. 2. This system was built in 1988 and the electrical and instrumentation equipment being used to run and control this system have not been upgraded.

RELEVANT STANDARDS

- Protect OC San assets
- 24/7/365 treatment plant reliability

PROBLEM

Sodium bisulfate crystallizes when stored at a certain temperature and has a relatively short shelf life. It is difficult to maintain stored chemicals at the Sodium Bisulfite Station since OC San stopped disinfecting continuously. Not only is the equipment in poor condition, but it is also overdesigned for how it is used today. The existing electrical and instrumentation equipment at the Anionic Polymer Station is obsolete and no longer reliable.

PROPOSED SOLUTION

Approve a Professional Design Services Agreement to provide engineering services for Chemical Systems Rehabilitation at Plant No. 2, Project No. P2-135. This project will make improvements to both the Sodium Bisulfite Station and the Anionic Polymer Station at Plant No. 2. At the Sodium Bisulfite Station, the project will replace chemical tanks, chemical feed pumps, piping, electrical equipment and install a plant water and plant air supply. The project will also demolish and replace the Anionic Polymer Station's obsolete electrical and instrumentation assets, including controllers, flow meters/transmitters, motor running time meter tubs, valves, and actuators.

TIMING CONCERNS

If this project is delayed, OC San will continue to operate with a less reliable Sodium Bisulfite Station and Anionic Polymer Station.

RAMIFICATIONS OF NOT TAKING ACTION

The Sodium Bisulfite Station may not function well when called upon during an emergency when OC San is required to disinfect the effluent. The Anionic Polymer Station electrical equipment may fail which could result in poor effluent quality.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

Consultant Selection:

OC San requested and advertised for proposals for Chemical Systems Rehabilitation at Plant No. 2, Project No. P2-135 on September 28, 2022. The following evaluation criteria were described in the Request for Proposals (RFP) and used to determine the most qualified Consultant.

CRITERION	WEIGHT
Project Understanding and Approach	40%
Related Project Experience	25%
Project Team and Staff Qualifications	35%

One proposal was received on November 16, 2022. A post-proposal survey was immediately conducted to professional design firms listed on the Planholders list. Three firms provided responses with the following reasons that inhibited them to successfully submit a proposal on the Project: (1) not having in-house capacity to perform the entire scope of the Project, (2) having various active OC San design projects utilizing resources, and (3) focusing on other projects and priorities.

The proposal was evaluated in accordance with the evaluation process set forth in OC San's Purchasing Ordinance by a pre-selected Evaluation Team consisting of OC San staff: Senior Engineer (Project Manager), Associate Engineer (Project Engineer), Engineering Manager, Engineering Supervisor, and Environmental Supervisor. The Evaluation Team also included one non-voting representative from the Contracts Administration Division.

The Evaluation Team scored the proposal on the established criteria as summarized in the table below:

	Firm	Approach (Max 40)	Related Experience (Max 25)	Team (Max 35)	Total Score (Max 100)
1	Lee & Ro, Inc.	32	18	25	75

On December 15, 2022, the interview was conducted. During the interview, Lee & Ro, Inc. answered all the questions prepared by the Evaluation Team and provided additional clarifications about the technical approach and staff qualifications. After the interview, the Evaluation Team determined that the proposer is well-qualified based on both the written proposal and the interview. Below is the summary of the final scores.

	Firm	Approach (Max 40)	Related Experience (Max 25)	Team (Max 35)	Total Score (Max 100)
1	Lee & Ro, Inc.	33	19	28	80

Lee & Ro, Inc. demonstrated their ability to deliver this project in both the proposal and the interview. Their technical proposal went beyond a general understanding of the Scope of Work and provided specific examples of how the proposed team would efficiently approach design challenges of the Project. The following are key elements that stood out from Lee & Ro, Inc.'s proposal and interview:

- The proposal presented different options on how to phase the anionic polymer work and provided illustrations on the sequencing of tasks to accomplish the Project.
- The team presented a good approach to selecting the sodium bisulfite station pumps.
- The team demonstrated great technical communication and collaboration between the team members. They explained their different skill sets that they will bring to the Project and how they will guide and support each other to ensure a successful project.
- The team will apply lessons learned from previous OC San projects that will greatly benefit the execution of this Project.

Lee & Ro, Inc. confirmed they had a clear understanding of OC San's expectations and key challenges with performing a comprehensive rehabilitation of the Sodium Bisulfite Station and Anionic Polymer Station.

Review of Fee Proposal and Negotiations:

Lee & Ro, Inc.'s proposal was accompanied by a sealed fee proposal. In accordance with OC San's Purchasing Ordinance, the fee proposal of only the highest-ranked firm was opened after approval by the Director of Engineering of the Evaluation Committee's recommendation.

Starting on January 4, 2023, the Evaluation Team conducted negotiations with Lee & Ro, Inc. to clarify the requirements of the Scope of Work, the assumptions used for the estimated level of effort, and the proposed approach to meet the goals and objectives for the Project. Negotiations were conducted with multiple follow-up meetings, e-mails, and calls.

The negotiations resulted in revised labor hours to reflect the level of effort needed to complete the Scope of Work. The table below summarizes the revised level of effort.

	Original Fee Proposal	Negotiated Fee
Total Hours	6,006	4,922
Total Fee	\$1,120,844	\$862,328

The final fee changed due to the following reasons:

- Eliminated preliminary design drawings. Consultant will insert exhibits/sketches into the Design Memos.
- Reduced number of Design Memos from 15 to 9.
- Reduced number of Drawings from 105 to 98.
- Reduced hours for meetings and workshops.
- Reduced hours for the Lead Electrical Engineer, Lead Instrumentation & Controls Engineer, Supervising Engineer, and Senior Engineer. The Project Engineer and Engineer roles already cover work where we are reducing hours for higher level staff.

The Consultant's fringe and overhead costs, which factor into the billing rate, have been substantiated. The contract profit is 8.82%, which is based on an established formula based on OC San's standard design agreements. Staff is requesting a 10% contingency to address revisions as the project progress through preliminary and final design.

Based on the above, staff has determined that the final negotiated fee is fair and reasonable for the level of effort required for this project and recommends award of the Professional Design Services Agreement to Lee & Ro, Inc.

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations sections 15301. A Notice of Exemption will be filed with the OC Clerk-Recorder after OC San Board of Directors approval of the PDSA contract.

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget FY2022-2023 and 2023-2024, Section 8, Page 73) and the project budget is sufficient for the recommended action. It is anticipated that additional budget will be required during the construction phase of this project. Staff will be reviewing the budget for this project in more detail and will request additional budget through the normal budget review process.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Professional Design Services Agreement

CM:tk