OPERATIONS AND WATER QUALITY COMMITTEE MEETING SUMMARY MINUTES

Wednesday, August 7, 2019
4:15 PM

ATTENDANCE

Directors: John Weed (Chair), Judy Huang
Staff: Kurt Arends, Ed Stevenson, Dan Stevenson, Mike Wickham, Bob Marsheck, Geoffry Brown, Cris Pena

DISCUSSION TOPICS

1. Newark Desalination Facility Membrane Replacement Project Update: Cris Pena, Engineering Supervisor in the Water Production Division, provided an update on the current status of the reverse osmosis (RO) Membrane Replacement Project at the Newark Desalination Facility (NDF). Ms. Pena explained that the DOW Filmtec RO membranes, installed in 2010, have been replaced with similar RO polyamide composite membranes manufactured by Toray Membrane USA, Inc.. Bids to replace the membranes were received in September 2018 and in October the Board awarded the membrane replacement project to C. Overaa & Company (Overaa) for $1.1 million.

   Director Weed asked if the NDF was able to remain in service during the membrane replacement process. Ms. Pena explained that the NDF was taken out of service for 3-4 days for bacteriological testing of each train. The facility was back in service and producing water during the 7-day performance and acceptance testing.

   The RO membrane elements for the four RO trains have been successfully replaced and tested, and all contractor related work is complete. Ms. Pena explained that there were two change orders associated with this project. Change Order No. 1, in the amount of $23,983.00, was previously authorized to replace the media in the Decarbonator Towers. Staff will be going to the Board on August 8, 2019 to accept completion of the project and request approval for Change Order No. 2, in the amount of $1,953.00, which was issued to install two pressure vessels on Train 1, replace and install permeate port o-rings, ball valves and miscellaneous PVC parts, and to approve a time extension of 99 days for delays associated with the work.

   The first three trains' membranes were replaced and successfully tested in January and February 2019. The fourth RO train was tested and placed into service utilizing 60 of the 63 RO vessels in early March 2019. There was a delay in completing the fourth RO train because an insufficient number of satisfactory membrane elements had been received by Overaa and, because the membranes are manufactured to order, it took eight weeks to deliver new replacement membrane elements, which pushed the testing date back to May 27, 2019. During the delay, the NDF was placed back in-service with four trains online.

The final contract cost including all change orders, adjustments for unit cost quantities, and unspent optional items is $1,110,972 which includes $25,936 in change orders but reflects an overall increase of only $10,972.00 (or 0.98%) from the awarded contract amount.

2. Communications Project Update: Geoffry Brown, Operations Systems Analyst, provided an overview of the District's communication needs for inter-facility communication that included a review of the District's communication projects over the past seven years, a review of the current project milestones, and the status of the current Production Facilities Communication Project including the March 2019 CEQA exemption and project approval. The current project includes providing high speed radio communication links between production facilities and the headquarters (HQ) site. The project also includes a pilot link to the Appian Tank site to test communications with the storage facilities. The next steps for the project include the adoption of a lease agreement between the County of Alameda and ACWD to allow ACWD to locate communications equipment on County owned property at Coyote Hills. A summary of lease, equipment, and vendor installation costs was provided.

   Director Huang asked how data currently gets from HQ to TP2. Mr. Brown responded that the existing HQ-TP1 microwave link transmits data to TP1 and a fiber-optic line is connected from TP1 to TP2. Director Huang asked about the sizes of the proposed microwave dishes to be installed at Coyote Hills and how they compare to the existing dishes on the County of Alameda tower. Mr. Brown responded that the proposed dish sizes range from 2-4 feet in diameter which are about half the size of the current dishes on the County of Alameda tower. Director Weed asked if the equipment has the capability to store the data in the event of a communication outage. Mr. Brown responded while the radios do have data buffers, they are not intended for storage during an outage. Mr. Brown continued that the video surveillance cameras that are currently used do have local storage that can retain video for a limited time. Director Weed suggested that staff consider looking into backup and low resolution data methods to minimize lost data in the event of a link outage. Director Weed commented that Alameda County Emergency Response utilizes an 800 MHz telecom network and staff may consider integrating an 800 MHz system at Coyote Hills. Mr. Brown responded that it is possible to connect 800 MHz networks at the Coyote Hills location, but the District would not benefit from such a system. Director Weed asked if environmental conditions could impact the performance of the communications system. Mr. Brown responded that these links are engineered to perform at 99.999% reliability under adverse weather conditions which is a performance standard required by the District. Director Weed asked if the system could have any benefit for the proposed AMI system network. Mr. Brown responded there could be some synergy between a District wide area network (WAN) and AMI, but the nexus of benefit cannot be determined until the communications technology and topology are known. Director Weed asked if staff considered the use of satellite links. Mr. Brown responded that staff had not investigated the use of satellite links specifically for ACWD, however, staff has come to understand that USGS uses satellite links and has had some reliability issues. Additionally, the cost structure for satellite is generally prohibitive as it is priced based bandwidth use. Director Weed inquired if communication could be isolated in the event of an infiltration problem. Mr. Brown responded that the communications system can be isolated if needed. Director Huang asked if the District uses multi-factor authentication (MFA). Mr. Brown explained the District's current use of MFA and its deployment progress. Director

Weed asked if a portable camera video could be integrated with the system, for example, video taken by pipeline crews. Mr. Brown confirmed that the video surveillance system has the ability to capture mobile video streams, however, staff has not attempted to do so or explored the requirements for this functionality.

3. Public Comments: There were no public comments.

RECOMMENDATIONS

Topics discussed by the Committee were informational only and no recommendations were made.