



Agenda Report

File #: 19-0525

**AGENDA REPORT
REQUEST FOR CITY COUNCIL AND
CORONA UTILITY AUTHORITY ACTION**

DATE: June 5, 2019

TO: Honorable Mayor and City Council Members
Honorable President and Board Members

FROM: Department of Water and Power

SUBJECT:

City Council and Corona Utility Authority consideration of a one year purchase extension for Univar USA, Inc. and Olin Corp pursuant to Notice Inviting Bids (NIB) DWP 15-102CA for Water Treatment Chemicals for Fiscal Year 2019-20 and to approve a change order to Olin Corp to increase compensation amount by \$200,000 for Fiscal Year 2018-19.

RECOMMENDED ACTION:

That the:

1. City Council approve a one year purchase extension for Univar USA, Inc. of Kent, WA as the lowest responsible and responsive bidder for the chemical Sulfuric Acid in the amount of \$200,000 pursuant to NIB DWP 15-102CA for Water Treatment Chemicals.
2. City Council approve a one year purchase extension for Olin Corp of Tracy, CA as the lowest responsible and responsive bidder for the chemical Sodium Hypochlorite and increase the compensation amount by \$200,000 to \$1,050,000 pursuant to NIB DWP 15-102CA for Water Treatment Chemicals.
3. City Council authorize the Purchasing Manager to issue one year purchase orders to Univar USA, Inc. in the amount of \$200,000 and to Olin Corp in the amount of \$1,050,000 for Fiscal Year 2019-20.
4. City Council authorize the Purchasing Manager to issue a change order in the amount of \$200,000 to Olin Corp increasing the compensation amount to \$1,050,000 for Fiscal Year 2018-19.

5. City Council authorize the General Manager to approve necessary change orders up to the amount provided by Corona Municipal Code Section 3.08.080(I).
6. Corona Utility Authority (CUA), review, ratify and to the extent necessary direct that the City Council take the above actions.

ANALYSIS:

On July 25, 2014, Notice Inviting Bids (NIB) No. 15-102 CA was formally advertised in the Press Enterprise, posted on the City's website, and sent to several firms known to the Department of Water and Power (DWP) to provide the products solicited in the NIB. The bid format allowed bidders to submit bids for any, some, or all of the water treatment chemicals listed in the NIB in order to allow for more competitive bids.

At that time, two bids were received for Sulfuric Acid and three bids were received for Sodium Hypochlorite by the August 25, 2014 due date. On November 5, 2014 the Corona City Council and Corona Utility Authority awarded NIB 15-102CA to Univar USA, Inc. as the lowest responsive and responsible bidder for Sulfuric Acid and Olin Corp as the lowest responsive and responsible bidder for Sodium Hypochlorite.

| Sulfuric Acid 93% | |
|------------------------|---------------------------|
| Vendor | 3,000 Gal – Per Wet Pound |
| Univar USA, Inc. | \$0.105 |
| Brenntag Pacific, Inc. | \$0.113 |

| Sodium Hypochlorite 12.5% | | | |
|--|--------------------------------|-------------------------|---|
| Vendor | 2,000-4,999 Gal. Per Gallon | 5,000 Gal Per Gallon | Optional Carrier Stop Charge |
| Olin Corp/dba Olin Chlor Alkali Products | \$0.594 | \$0.564 | \$75.00/site after 1 st stop |
| JCI Jones Chemicals, Inc. | \$0.636 | \$0.585 | \$85.00/site |
| Brenntag Pacific, Inc. | \$0.99 | \$0.89 | \$150.00/site |

At the time, DWP required all bidders to submit chemical samples with their bid documents. The samples were sent to an independent laboratory for third-party testing to confirm they met the Department's standards and technical specifications. The original bid documents also allowed for price adjustments based on Consumer Price Index:

Should the City elect to exercise the option to extend the contract for an additional one-year period, the Parties shall negotiate pricing for such period prior to commencement of the additional one-year period. Price adjustments shall be made in accordance with and shall not exceed the percentage of change in the United States Bureau of Labor Statistics Consumer Price Index "All Urban Consumers for Los Angeles-Riverside-Orange County, California, (CPI-U)," not seasonally adjusted, for the most recent twelve (12) months for which statistics are available. This method of price adjustment shall apply to each extension period exercised.

The bid document for NIB 15-102CA stated "the contract term shall be effective on or about September 22, 2014 through June 30, 2015 with an option to extend the contract on a year-to-year

basis, not to exceed five (5) consecutive one-year renewal terms under the same contractual terms and conditions contained herein.” Based on the NIB documents the contracts should have been established as follows:

| | |
|------------------|------------------------------------|
| Initial Contract | September 22, 2014 – June 30, 2015 |
| Year 1 | July 1, 2015 – June 30, 2016 |
| Year 2 | July 1, 2016 – June 30, 2017 |
| Year 3 | July 1, 2017 – June 30, 2018 |
| Year 4 | July 1, 2018 – June 30, 2019 |
| Year 5 | July 1, 2019 – June 30, 2020 |

When this item was approved by the City Council on November 5, 2014, there was an error in the staff report under “Recommended Actions:”

2. City Council authorize the Purchasing Manager to issue a purchase order to Univar USA, Inc. in the amount of \$200,000 and Olin Corp, in the amount of \$680,000 per year for the next five fiscal years beginning with Fiscal Year 2014-15.

Based on the City Council staff report the contract was established as follows:

| | |
|-------------------------|------------------------------------|
| Initial Contract/Year 1 | September 22, 2014 – June 30, 2015 |
| Year 2 | July 1, 2015 – June 30, 2016 |
| Year 3 | July 1, 2016 – June 30, 2017 |
| Year 4 | July 1, 2017 – June 30, 2018 |
| Year 5 | July 1, 2018 – June 30, 2019 |

The original staff reported should have stated that the initial contract would begin in Fiscal Year 2014-15 with five additional one-year extensions to align with the verbiage in the bid documents. DWP is requesting to extend the purchase orders for Olin Corp and Univar USA, Inc. by one fiscal year in accordance with the bid documents. DWP and the Purchasing Division will bid these chemicals during Fiscal Year 2019-20 to prepare for future purchases.

DWP has experienced cost increases for Sodium Hypochlorite and Sulfuric Acid in accordance with the bid documents.

| Sulfuric Acid 93% | | | | | | |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 | FY 18/19 | FY 19/20 |
| 3,000 Gal – Per Wet Pound | \$0.1050 | \$0.1050 | \$0.1050 | \$0.1078 | \$0.1121 | \$0.1157 |

| Sodium Hypochlorite 12.5% | | | | | | |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 | FY 18/19 | FY 19/20 |
| 2,000-4,999 gallons Per gallon | \$0.594 | \$0.601 | \$0.601 | \$0.619 | \$0.744 | \$0.789 |
| 5,000 gallons Per gallon | \$0.564 | \$0.57 | \$0.57 | \$0.587 | \$0.699 | \$0.739 |

Water Reclamation Treatment

Sodium Hypochlorite is required at all times to meet all of the facilities' compliance points throughout DWP's water reclamation treatment process. Sodium Hypochlorite is used to meet contact time requirements, achieve system residual and for disinfection. In order to meet State Water Resources Control Board tertiary standards, DWP's treatment plants must meet a contact time of 450 milligrams per liter (mg/L) per 90 minutes. The effluent residual varies based on flow and ranges from 2.5 mg/L up to 4.0 mg/L. These residuals vary based on flow and treatment plants. DWP uses sodium hypochlorite in a 12.5% concentration because this is the highest available stable concentration. This purity level is better for all dosing requirements and is the industry standard.

DWP facilities use chemical pumps controlled by the Supervisory Control and Data Acquisition system (SCADA) to dose the required sodium hypochlorite. The SCADA calculation is controlled by staff to varying degrees and is established and overseen by the Chief Water Reclamation Operator and Lead Water Reclamation Operator. DWP operates three different water reclamation facilities each with varying plant capacity and treatment process. Water Reclamation Facility No. 1 (WRF1) is the City's largest water reclamation facility; WRF1 demand for sodium hypochlorite is higher than other facilities because staff is using sodium hypochlorite to chemically oxidize ammonia due to aeration basin design characteristics. DWP is in the process of modifying the aeration basins to improve aeration at the facility and reduce sodium hypochlorite consumption. WRF1 had an emergency failure of the WRF1B Secondary Clarifier on May 26, 2019. The replacement equipment is in stock in the City's warehousing facility however the installation is difficult and could take up to two weeks to repair. During this time staff will need to dose a much higher volume of sodium hypochlorite to achieve the required ammonia oxidation to achieve mandatory disinfection rates. As a result, staff calculates the potential need for an additional \$200,000 maximum in sodium hypochlorite deliveries through the end of Fiscal Year 2018-19.

The water reclamation facilities have varying capacities for sodium hypochlorite:

| Site | Sodium Hypochlorite Tank Capacity (gallons) |
|------------------------------|--|
| Water Reclamation Facility 1 | 27,500 |
| Water Reclamation Facility 2 | 12,000 |
| Water Reclamation Facility 3 | 5,000 |

Sodium hypochlorite is typically ordered in 5,000-gallon increments to achieve bulk pricing as noted above. 5,000 gallons is a standard truckload for sodium hypochlorite and orders less than 5,000 result in higher prices since that is considered a "short load." Staff places orders for sodium hypochlorite on a weekly basis, as needed based on the current tank capacity. Staff will sometimes split loads between facilities to achieve the minimum 5,000-gallon order quantity. For example, since WRF3 has a 5,000 capacity and can never reach an empty level, operators will split deliveries between WRF2 and WRF3 or WRF1 and WRF3.

Staff strictly adheres to standard operating procedures for chemical offloading. Operations staff participates in annual Safety Data Sheets (SDS) review and Hazardous Materials training to ensure they are familiar with the chemicals they use daily. All water reclamation staff members have the

required certifications to order and dose sodium hypochlorite.

For Fiscal Year 2019-20, DWP estimates 800 loads of sodium hypochlorite for water reclamation treatment.

Water Treatment

Sodium Hypochlorite and Sulfuric Acid are critical chemicals in the water treatment process.

Sodium Hypochlorite

Similar to water reclamation treatment, sodium hypochlorite is used in water treatment for disinfection and to achieve contact time. Sodium hypochlorite is used at the following facilities within the drinking water system:

| Site | Sodium Hypochlorite Tank Capacity (gallons) |
|-------------------|--|
| Lester | 10,000 |
| Sierra Del Oro | 5,500 |
| Glen Ivy | 4,800 |
| Well 11 | 4,500 |
| Temescal Desalter | 6,400 |

At the Lester and SDO Treatment Plants, sodium hypochlorite is used for pre- and post-treatment disinfection. The influent source for both treatment plants is Colorado River water which is full-body contact. This requires pre-chlorination before the treatment process for the health of the facility and to eliminate bacteria, viruses, parasites, giardia, and cryptosporidium, among others. Sodium hypochlorite is also used in post-treatment disinfection to achieve contact time through a chlorine contact basin (CCB). The chlorine contact time requirements are based on the City's Water Supply Permit as issued by the State Water Resources Control Board (formerly Department of Public Health, Division of Drinking Water).

At the Glen Ivy and Well 11 sites, sodium hypochlorite is used to treat groundwater before the water is blended into the distribution system. At the Temescal Desalter facility, sodium hypochlorite is used to achieve a contact time equivalent based on treatment technique.

For Fiscal Year 2019-20 DWP estimates 16,500 gallons of sodium hypochlorite per month for water treatment.

Sulfuric Acid

Sulfuric Acid is used exclusively at the Temescal Desalter. The Temescal Desalter utilizes reverse osmosis technology to treat groundwater. The sulfuric acid lowers the pH of the influent water from approximately 7.2 to 6.4. Sulfuric acid is a sequestration agent that aids in keeping minerals in suspension thereby optimizing the reverse osmosis process by keeping minerals from precipitating onto the membranes. These minerals are most commonly bicarbonate, calcium carbonate, and silica. Minerals stay in suspension and flow to the waste stream where they are rejected into the Inland Empire Brine Line (IEBL). Without sulfuric acid the Temescal Desalter would experience much

shorter run times between cleanings. Membrane cleanings are conducted based on certain triggers in the system including a change in differential pressure and overall feed water pressure. They are currently conducted by staff on an approximately-quarterly basis. Each cleaning results in some degradation to the membranes and as such staff tries to limit unnecessary cleanings. In addition, without sulfuric acid the membranes would need to be replaced more often. We are currently on a 4-year replacement cycle for membranes in the facility at an approximate rate of one train per year. The minerals are abrasive on the membranes and degrade the materials requiring changeouts on an increased frequency. A membrane changeout typically costs between \$150,000 and \$210,000 depending on which train is being replaced. The Temescal Desalter has four trains; trains 1 through 3 are identical, train 4 was added as phase II and has more vessels. Staff conducted an internal test years ago to test the feasibility of lowering the acid dosage and the plant quickly lost production.

DWP utilizes 93% sulfuric acid because it is a higher concentration and purity and therefore more stable. Sulfuric acid is dosed via SCADA and is flow paced based on influent flow to achieve a pH of 6.4 (based on initial plant design criteria). The Temescal Desalter produces 10.2 million gallons per day through the plant. During the treatment process water passes through decarbonators and operators dose sodium hydroxide to stabilize the pH. The pH entering the distribution system is approximately 7.5.

Deliveries occur in 3,000-gallon loads on a regular schedule. The Desalter receives two deliveries per month with an occasional third delivery if necessary. Operators receive special training and follow a rigorous procedure when offloading chemicals, particularly sulfuric acid. All chemicals are stored in containment structures and sulfuric acid is double contained throughout the plant. An operator must be present during delivery and the operator must vacate everyone else from the premises. The truck driver and operator conduct a pre-check and both must sign off on a pre-check form before offloading can begin.

| Site | Sulfuric Acid Tank Capacity (gallons) |
|-------------------|---|
| Temescal Desalter | 12,000 |

Sulfuric acid is priced by wet pounds. One gallon of sulfuric acid weighs approximately 15.262 pounds. For Fiscal Year 2019-20, staff estimates 110,000 wet pounds per month of sulfuric acid.

DWP staff recommends extending the contracts through the end of Fiscal Year 2019-20 in accordance with the bid documents. In addition, the purchase order from Olin Corp has been increased by 25% as authorized by the City Manager pursuant to Ordinance No. 2970. The current purchase order for Olin Corp is \$850,000 (\$680,000 plus 25%). Staff recommends a purchase order with Olin Corp for \$1,050,000 per year starting in Fiscal Year 2018-19 through Fiscal Year 2019-20 to account for pricing increases and dosing changes that have occurred during the past five years.

COMMITTEE ACTION:

Not applicable.

STRATEGIC PLAN:

Not applicable.

FISCAL IMPACT:

Funding for the recommended action is included in the operating budget for Fiscal Year 2018-19 and has also been included in the proposed operating budget for Fiscal Year 2019-20 in the Water and Water Reclamation Funds.

ENVIRONMENTAL ANALYSIS:

No environmental review is required because the proposed action is not a project governed by the California Environmental Quality Act.

PREPARED BY: KATIE HOCKETT, ASSISTANT GENERAL MANAGER

REVIEWED BY: TOM MOODY, GENERAL MANAGER

REVIEWED BY: CITA LONGSWORTH, PURCHASING MANAGER

REVIEWED BY: KIM SITTON, FINANCE MANAGER

REVIEWED BY: KERRY D. EDEN, ASSISTANT CITY MANAGER/ADMINISTRATIVE SERVICES DIRECTOR

REVIEWED BY: MICHELE NISSEN, ASSISTANT CITY MANAGER

SUBMITTED BY: MITCHELL LANSDELL, ACTING CITY MANAGER & EXECUTIVE DIRECTOR

Attachments:

- Agenda Report, November 5, 2014
- Notice Inviting Bids No. DWP 15-102CA
- Olin Price Increase, Year 2019-20
- Olin Price Increase, Year 2018-19
- Univar Price Increase, Year 2019-20
- Univar Price Increase, Year 2018-19