

**Memorandum  
Public Works Department**



**To:** City Manager  
**Subject:** Wastewater Treatment Chemical Purchases - 2016  
**Date:** December 7, 2015  
**Number:** 2015-250

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On December 2, 2015 the Bi-State Regional Commission Joint Purchasing Council awarded bids for wastewater treatment chemicals to be purchased in the coming year. Attached is a copy of the bid results for your review with the awarded bids highlighted in yellow. The one non-bid item from Solenis, LLC., is included. This is a propriety blend coagulant used in the sludge press operation. Listed below are the anticipated purchase quantities and costs for each associated chemical.

Chlorine and Praestol K144 are the only two chemicals that have been utilized in the past that we can compare actual bid prices to previous years. The Praestol K144 unit price remains unchanged and Chlorine came in slightly lower than last year. Usage is anticipated to be similar, but this could change depending on how much the Wet Weather Treatment System is operated. \$75,000 has been budgeted for the calendar year 2016 for chemical purchases. Chemical usage optimization will continue to be a priority for the wastewater plant staff, which could potentially result in additional savings.

<u>ITEM</u>	<u>VENDOR</u>	<u>QUANTITY/UNIT PRICE</u>	<u>TOTAL</u>
Chlorine	Viking Chemical Corp.	12 tons @ \$360.00/ton	\$4,320.00
Praestol K144	Solenis, LLC	36 drums @ \$1.07/lb	\$17,334.00
Sodium Hypochlorite	Vertex Chemical Corp.	40,500 gals @ \$0.65/gal	\$26,325.00
Ferric Chloride	PVS Technologies, Inc.	9,000 gals @ \$1.375/gal	\$12,375.00
Sodium Bisulfate	Viking Chemical	33,270 lbs @ \$0.139/lb	\$4,624.53
<b>TOTAL BID:</b>			<b>\$64,978.53</b>

**Recommendation**

The Public Works Department recommends that the City Council accept the bids for the items listed above and authorize them for purchase in 2016.

Account Chargeable:

Fund:	506	Wastewater Operations/Maintenance
Division:	618	Utilities Services
Cost Center:	341	Wastewater Mill Street Plant
Object Code:	52217	Treatment Chemicals

**Submitted by:** Randall D. Tweet, Public Works Director  
Larry P. Cook, Utilities Superintendent

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**Approved by:** Thomas Thomas, City Manager

**Joint Purchasing Council - 2016 Water Treatment Chemicals – October 29, 2015**  
**Final Results – Awarded vendors are in yellow.**

SUPPLIER	COST PER UNIT	TOTAL
<b>1. Aluminum Sulfate (Alum) - Bulk tank truck</b>		
Affinity Chemical, LLC	\$329.95/ton	\$527,920.00
<b>USALCO Michigan City Plant, LLC</b>	<b>\$396.56</b>	<b>\$634,496.00</b>
Univar USA	\$450.00/ton – See Note 9	\$720,000.00
Harcros Chemicals	\$480.00/dry ton	\$768,000.00
Rowell Chemical Corporation	\$490.00/dry ton	\$784,000.00
Chemtrade Chemicals U.S., LLC	\$528.00/dry ton – See Note 3	\$844,800.00
<b>2. Anhydrous Ammonia - Bulk tank truck</b>		
<b>Tanner Industries</b>	<b>\$.81/lb.</b>	<b>\$69,660.00</b>
<b>3. Anthracite Filter Coal - 1 ton bulk sacks on flatbed truck</b>		
<b>4. Anthracite - Crushed, in suitable heavy-duty cloth, paper or polyethylene bags</b>		
<b>CEI – Carbon Enterprises, Inc.</b>	<b>\$.30/lb.</b>	<b>\$7,800.00</b>
<b>5. Caustic Soda - bulk tank truck</b>		
<b>Alexander Chemical Corporation, A Carus Company</b>	<b>\$466.00/ton</b>	<b>\$151,450.00</b>
Brenntag Great Lakes	\$469.00/dry ton	\$152,425.00
Rowell Chemical Corporation	\$470.00/dry ton	\$152,750.00
Univar USA	\$490.00/ton (Full 48,000/loads) – See Note 9	\$159,250.00
Brenntag Mid-South, Inc.	\$495.00/dry standard ton	\$160,875.00
KA Steel Chemicals	\$495.00/dry ton	\$160,875.00
Vertex Chemical Corporation	\$510.00/dry standard ton – See Note 10	\$165,750.00
Harcros Chemicals	\$536.00/dry ton	\$174,200.00
<b>6. Activated Carbon - bulk truck in loads of 30,000 pounds</b>		
Cabot Norit Americas, Inc.	\$.60/lb. – See Note 1	\$72,000.00
<b>Thatcher Company of Montana, Inc.</b>	<b>\$.73/lb.</b>	<b>\$87,600.00</b>
Standard Carbon d/b/a Standard Purification	\$.829/lb. – See Note 8	\$99,480.00
Calgon Carbon Corporation	\$.85/lb. – See Note 2	\$102,000.00
West Rock MWV LLC, Ingevity Chemical Division	\$.89/lb.	\$106,800.00
<b>7. Activated Carbon - 50 lb. bags palletized and plastic wrapped for fork lift</b>		
<b>Cabot Norit Americas, Inc.</b>	<b>\$1,360.00/ton – See Note 1</b>	<b>\$40,800.00</b>
Standard Carbon d/b/a Standard Purification	\$1,627.00 – See Note 8	\$48,810.00
Calgon Carbon Corporation	\$1,820.00/ton – See Note 2	\$54,600.00
Harcros Chemicals	\$3,000.00/ton	\$90,000.00

SUPPLIER	COST PER UNIT	TOTAL
<b>8. Activated Carbon - bulk truck loads not to exceed 20,000 lbs.</b>		
Cabot Norit Americas, Inc.	\$.64/lb. – See Note 1	\$96,000.00
Thatcher Company of Montana, Inc.	\$.77/lb. (sample sent)	\$115,500.00
Calgon Carbon Corporation	\$.85/lb. – See Note 2	\$127,500.00
Standard Carbon d/b/a Standard Purification	\$.915/lb.	\$137,250.00
WestRock MWV LLC, Ingevity Chemical Division	\$.92/lb.	\$138,000.00
<b>9. Chlorine (Gas) 150 lb. Cylinders</b>		
Viking Chemical Co.	\$.32/lb. or \$48.00/cyl. – No sales to East Moline – See Note 11	\$11,952.00
Hawkins, Inc.	\$.34/lb.	\$12,699.00
Brenntag Mid-South, Inc.	\$.355/lb. – No Sales to East Moline Pool	\$13,259.25
DPC Enterprises L.P.	\$.60/lb. or \$90.00 cyl – No sales to East Moline	\$22,410.00
Airgas North Central	\$2.30/lb. or \$345.00/ea	\$85,905.00
<b>10. Chlorine (Sodium Hypochlorite 15%) – 4,500 gallon loads</b>		
Alexander Chemical Corporation, A Carus Company	\$.81/gallon – Rock Island & Moline only	\$148,230.00
Vertex Chemical Corporation	\$.65/gallon – See Note 10	\$177,450.00
KA Steel Chemicals	\$.659/gallon – See Note 4	\$179,907.00
Rowell Chemical Corporation	\$.71/gallon	\$193,830.00
DPC Enterprises, L.P.	\$.85/gallon	\$232,050.00
Harcros Chemicals	\$.90/gallon	\$245,700.00
Brenntag Great Lakes	\$1.03/gallon	\$281,190.00
Univar USA	\$1.065/gallon – See Note 9	\$290,745.00
<b>11. Chlorine (Liquid) - truck load lots varying from 2 to 6 one-ton cylinders</b>		
Viking Chemical Company	\$360.00 – See Note 11	\$39,240.00
Alexander Chemical Corporation, A Carus Company	\$398.00/ton	\$43,382.00
Brenntag Mid-South, Inc.	\$407.00	\$44,363.00
DPC Enterprises, L.P.	\$520.00/dry ton	\$56,680.00
Airgas North Central	\$1,900.00/ea	\$207,100.00
<b>12. Citric Acid - lots of 5-10, 100 lb. bags</b>		
Brenntag Great Lakes	\$.90/lb.	\$2,340.00
Viking Chemical Company	\$.90/lb. or \$45.00 – 50 lb. bag – See Note 11	\$2,340.00
Harcros Chemicals	\$.99/lb.	\$2,574.00
Hawkins, Inc.	\$1.00/lb. – 50 lb. bag	\$2,600.00
Brenntag Mid-South, Inc.	\$1.10/lb.	\$2,860.00
<b>13. Copper Sulfate - lots of 20-30, 50 lb. bags</b>		
Brenntag Great Lakes	\$1.54/lb.	\$9,240.00
Univar USA	\$1.72/lb. – See Note 9	\$10,320.00
Water Solutions Unlimited	\$1.94/lb.	\$11,640.00
Brenntag Mid-South, Inc.	\$2.18/lb.	\$13,080.00
Harcros Chemicals	\$2.99/lb.	\$17,940.00

SUPPLIER	COST PER UNIT	TOTAL
<b>14. Hydrofluosilicic Acid - bulk tank truck</b>		
Brenntag Mid-South, Inc.	\$3.79 (This is what they bid – pap)	\$2,671.95
Viking Chemical Company	\$.299 – East Moline Only – See Note 11	\$22,425.00
Hawkins, Inc.	\$.30/lb. – East Moline only	\$22,500.00
Mosaic Global Sales, LLC	\$.213/lb. – Rock Island & Moline only – See Note 6	\$34,612.50
Alexander Chemical Corporation, A Carus Corporation	\$.226/lb. – Rock Island & Moline only	\$36,725.00
Rowell Chemical Corporation	\$.2435/lb. – Rock Island & Moline only	\$39,568.75
Univar USA	\$.244/lb. – Rock Island & Moline only – See Note 9	\$39,650.00
Brenntag Great Lakes	\$.221/lb. – Total amount reflects a bid for all participants	\$52,487.50
<b>15. Hydrofluosilicic Acid - 15 gallon buckets</b>		
Water Solutions Unlimited	\$3.64/gallon	\$2,566.20
Hawkins, Inc.	\$.36/lb. = \$3.65/gallon	\$2,573.25
Viking Chemical Company	\$3.88/gallon – See Note 11	\$2,735.40
Brenntag Great Lakes	\$.54/lb.	\$3,906.00
Harcros Chemicals	\$.57/lb. = \$5.85/gallon	\$4,124.25
<b>16. Lime - bulk trucks of 50,000 pound loads</b>		
Mississippi Lime Company	\$.09240/lb. = \$184.80/ton	\$175,560.00
Carmeuse Lime & Stone	\$.122135/lb. = \$244.27/ton	\$232,056.50
Harcros Chemicals	\$.19/lb.	\$361,000.00
<b>17. Liquid Carbon Dioxide – Tank Supply</b>		
Praxair, Inc.	\$.06/lb. – See Note 7	\$22,500.00
Airgas North Central	\$.075/lb.	\$28,125.00
Lhoist North America of Missouri, Inc.	\$236.80/ton – See Note 5	\$224,960.00
<b>18. Liquid Ferric Sulfate 18%+++ - bulk tank truck, 4,500 gallon loads</b>		
Kemira Water Solutions, Inc.	\$.118/lb.	\$33,630.00
Chemtrade Chemicals US, Inc.	\$.138/wet lbs. – See Note 3	\$39,330.00
Harcros Chemicals	\$.19/lb.	\$54,150.00
<b>19. Magnesium Bisulfite - lots of approximately four to eight - 30 gallon plastic drums</b>		
Brenntag Mid-South, Inc.	\$.57	\$1,140.00
<b>20. Potassium Permanganate - lots of ten -110 lb. (50Kg) drums</b>		
Marubeni Specialty Chemicals	\$1.82/lb. delivered	\$6,734.00
Viking Chemical Company	\$1.89 – 55 gallon drum – See Note 11	\$6,993.00
Shannon Chemical Corporation	\$2.77/lb.	\$10,249.00

SUPPLIER	COST PER UNIT	TOTAL
<b>21. Potassium Permanganate – 55lb drum (25Kg pails) with handles</b>		
Carus Corporation	\$1.80/lb.	\$27,540.00
Marubeni Specialty Chemicals	\$1.82/lb. delivered	\$27,846.00
Viking Chemical Company	\$1.89/lb. – See Note 11	\$28,917.00
Water Solutions Unlimited	\$2.52/lb.	\$38,556.00
Shannon Chemical Corporation	\$2.77/lb.	\$42,381.00
Harcros Chemicals	\$3.32/lb.	\$50,796.00
American International Chemical	\$3.97/Kg - \$99.25/pail	\$60,741.00
Univar USA	\$4.14/lb. – See Note 9	\$63,342.00
<b>22. Aqua Mag – 55 gallon drums</b>		
Viking Chemical Company	\$.55/lb. – Aqua King 1700 – See Note 11	\$1,724.25
Carus Corporation	\$.56/lb.	\$1,755.60
Hawkins, Inc.	\$.60/lb.	\$1,881.00
Shannon Chemical Corporation	\$.727/lb.	\$2,279.15
<b>23. Liquid Phosphoric Acid – Bulk tank truck</b>		
Brenntag Great Lakes	\$.495/lb.	\$22,275.00
Carus Corporation	\$.496/lb.	\$23,320.00
Brenntag Mid-South, Inc.	\$.54/lb.	\$24,300.00
Shannon Chemical Corporation	\$.557/lb.	\$25,065.00
Harcros Chemicals	\$.59/lb.	\$26,550.00
<b>24. Liquid Ferric Chloride – Bulk Tank Truck</b>		
Harcros Chemicals	\$.19/lb. x 30,000 lbs. =	\$5,700.00
PVS Technologies, Inc.	\$.118/liquid lb. x 30,000 lbs. = \$3,540.00 Gallon Pricing - \$1.375/gallon =	\$41,250.00
Kemira Water Solutions	\$1.45/gallon	\$43,500.00
<b>25. Liquid Sodium Bisulfite - Totes</b>		
Viking Chemical Company	\$1.51/gallon – See Note 11 (Viking Bid - \$1.51 x 15,000 gallons = \$22,650.00 – pap)	\$1,989.00
Brenntag Great Lakes	\$.155/lb. x 15,000 lbs. =	\$2,325.00
Harcros Chemicals	\$.245/lb. x 15,000 lbs. =	\$3,675.00
Brenntag Mid-South, Inc.	\$2.34/gallon	\$35,100.00

## No Bids

1. Continental Carbonic
2. Linwood Mining & Minerals
3. Nalco Company
4. Pencco, Inc.
5. SNF Polydyne, Inc.

## NOTES

1. Cabot Norit Activated Carbon – See cover letter and provisions to the specifications.
2. Calgon Carbon Corporation – Bid for Items #6, 7, and 8 are for Calgon Carbon's Type Pulsorb WP 220-90 powdered activated carbon. Samples have been sent under separate cover. Affidavit of Compliance. Specification Sheet and MSDS are attached. Calgon Carbon will be taking exception to the Ash spec of 10 Max.
3. Chemtrade Chemicals US, LLC – Chemtrade Chemicals does not accept credit card payments. Terms – Net 30 days after receipt of order.
4. KA Steel Chemical – Price for Sodium Hypochlorite is based on minimum 4,500 gals per shipment as requested in bid documents delivered to one tank at facility. Price for Sodium Hydroxide is based on minimum 12.06 dry tons equal to 47,000 wet lbs. per shipment to one tank at facility. Payment Terms: Net 30 days. Yes, we accept credit cards as a form of payment for shipments delivered to facility at no additional charge. Lead Time: 1-2 day notice is preferred, but KASC, we are able to make deliveries next day or same day if needed in an emergency as requested.
5. Lhoist North America of Missouri, Inc. – Additional truck fuel surcharge based on rate at time of shipment applies. Material per attached product specification sheet.
6. Mosaic Global Sales, LLC – Above price is based on 23% assay adjusted basis and 40,000/lb. minimum releases.
7. Praxair, Inc. – See exceptions to the bid specifications contained in the bid response letter attached to the bid. See Customer-owned Tank Checklist attached to bid. Checklist must be completed before Praxair fills your tank.
8. Standard Carbon d/b/a Standard Purification – Does not accept credit cards.
9. Univar USA – Univar provided no totals for items specified. See additional notes on bid cover letter.  
  
    #5 Caustic Soda – Full 48,000 loads  
  
    #14 price is based on 23% assay adjusted basis, and 40,000 lb. minimum releases.  
    No bid East Moline.
10. Vertex Chemical Corporation – See attached quotation information attached to the bid.
11. Viking Chemical Company – Does not accept credit cards. Next day delivery is standard, usually no longer than 48 hours.