

AN ORDINANCE OF THE CITY OF OSAGE BEACH, MISSOURI, AUTHORIZING THE MAYOR TO EXECUTE A CONTRACT WITH EVOQUA WATER TECHNOLOGIES, LLC TO PROVIDE ODOR CONTROL CHEMICALS, ONGOING MAINTENANCE, AND TO EXPAND AUTOMATED CHEMICAL FEEDING AT THREE DIFFERENT SITES IN THE AMOUNT NOT TO EXCEED \$158,000.

WHEREAS, the Board of Aldermen has determined it is in the best interests of the City to authorize a contract with Evoqua Water Technologies, LLC to provide odor control chemicals.

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF OSAGE BEACH, MISSOURI, AS FOLLOWS, TO WIT:

Section 1. The Board of Aldermen of the City of Osage Beach hereby authorizes the Mayor to execute a contract with Evoqua Water Technologies, LLC. providing for provide odor control chemicals, ongoing maintenance, and to expand automated chemical feeding at three different sites as indicated on the attached contract for the term ending March 31, 2022, at a total price not exceed \$ One Hundred Fifty-Eight Thousand Dollars (\$158,000.00), and in a form substantially similar in terms and content attached to this ordinance as Exhibit "A."

Section 2. Total expenditures or liability authorized under the contract shall not exceed One Hundred Fifty-Eight Thousand Dollars (\$158,000.00).

Section 3. The City Administrator is hereby authorized to take such further actions as are necessary to carry out the intent of this Ordinance and Contract.

Section 4. This Ordinance shall be in full force and effect from date of passage and approval by the Mayor.

READ FIRST TIME: March 4, 2021

READ SECOND TIME: March 18, 2021

I hereby certify that the above Ordinance No. 21.07 was duly passed on March 18, 2021, by the Board of Aldermen of the City of Osage Beach. The votes thereon were as follows:

Ayes: 6

Nays: 0

Abstentions: 0

Absent: 0

This Ordinance is hereby transmitted to the Mayor for his signature.

March 18, 2021
Date

Tara Berreth
Tara Berreth, City Clerk

Approved as to form:

Edward B. Rucker
Edward B. Rucker, City Attorney

I hereby approve Ordinance No. 21.07.

March 18, 2021
Date

John Olivarri
John Olivarri, Mayor

ATTEST:

Tara Berreth
Tara Berreth, City Clerk

February 22, 2021

Mike Welty
City of Osage Beach
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Osage Beach, MO 65065
Phone: (573) 302-2020
Fax: (573) 302-2043
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**RE: FULL-SERVICE ODOR CONTROLsm PROGRAM RENEWAL AND EXPANSION
CITY OF OSAGE BEACH, MO
Evoqua Quote No. 2018-241264R6**

Thank you for choosing Evoqua Water Technologies LLC for your odor and corrosion control needs. Evoqua is pleased to extend the current Full-Service Odor Controlsm Program for the City of Osage Beach. The following pricing will take effect on April 1, 2021 and remain firm through March 31, 2022. Scope of work and supply in the agreement are subject to the City appropriating funds during each budget cycle.

Bioxide [®] Solution:	<u>\$3.45/gallon</u> delivered in minimum 3,500-gallon bulk loads. All deliveries require 5-7 business days' notice from receipt of order. Price includes delivery, Prepaid (PPD).
Odophos [®] Plus CL Solution:	<u>\$2.98/gallon</u> delivered in minimum 3,500-gallon bulk loads. All deliveries require 5-7 business days' notice from receipt of order. Price includes delivery, Prepaid (PPD).
Alkagen [®] 45 Solution:	<u>\$4.75/Gallon</u> delivered in minimum 1,600-gallon bulk loads. All deliveries require 5-7 business days' notice from receipt of order. Price includes delivery, Prepaid (PPD). Storage tank will be ran dry and washed out leaving no product in the tank during the winter season.
Alkagen [®] 45 Equipment:	<u>\$1,000.00 per month</u> for storage and feed system (Sands Pump Station – see Appendix B)
VersaDoseLT Technology:	<u>\$1,000.00 per month</u> per feed station (3 replacement feed systems – see Appendix A), (Dude Ranch Road, Tan-Tar-A, and Passover Road) Existing VersaDoseLT Systems are included in program at no charge.
VaporLink Technology:	Included in program at no charge
Link2Site Technology:	Included in program at no charge
C35 Carbon Scrubber:	<u>\$1,150.00 per month</u>
Monthly Service Fee:	<u>\$875.00 per month</u>
Field Training:	Included in program at no charge (1 day, up to 8 hours site time)
Emergency Service Fee:	<u>\$2,000 per visit. 1 visit included at no charge.</u>
Replacement Parts:	Any parts required for service other than those covered by the manufacturer's warranty will be replaced on a parts quote basis with prior approval.



Terms of payment are NET 30 days from date of invoice. These prices do not include any applicable taxes.

NOTE: Evoqua Water Technologies shall retain ownership of the VersaDoseLT Systems, VaporLink Units, and C35 Carbon Scrubber Equipment.

The previously agreed upon Scope of Supply as outlined in Evoqua Quote No. 2018-241264R2 are considered part of this proposal.

The previously negotiated Evoqua Water Technologies LLC/City of Osage Beach Terms and Conditions are considered part of this proposal and shall prevail.

Evoqua Water Technologies is committed to providing the highest standard of chemical quality and technical services in the industry.

Thanks again for your business. If you have any questions, comments, or if I can be of service to you in any way, please contact me at (618) 616-1552 or via email at mark.mcguire@evoqua.com. We look forward to working with you in the years to come.

Sincerely,

Evoqua Water Technologies LLC

Mark McGuire

Mark McGuire
Sales Representative, Municipal Services

**RE: FULL-SERVICE ODOR CONTROLSM PROGRAM RENEWAL AND EXPANSION
CITY OF OSAGE BEACH, MO
Evoqua Quote No. 2018-241264R6**

Evoqua will process your order when we receive acceptance of this proposal, by signing below and returning to municipalservices@evoqua.com or via fax to: (941) 359-7985.

Accepted by: *[Signature]*

This 17th day of March Year 2018

By: *John Sivara*

Title: *Mayor*

Company: *City of Osage Beach*



**Appendix A: Osage Beach, MO
Full-Service Odor Control Program
Versa Dose LT Feed Systems**

Evoqua Water Technologies shall provide the following equipment at the following Chemical Feed Stations:

1. Tan-Tar-A Feed Station
2. Dude Ranch Road Feed Station
3. Passover Road Feed Station

1. SCOPE OF SUPPLY

- (3) Complete UL Approved, Stainless Steel Control and Calibration Unit to Control One Feed Pump. The Control Unit shall consist of:
- 1- Operator Interface with tank level readout
 - 1- 316 SS Control Enclosure
 - 1- 15 Amp Circuit Breaker, 115 volt
 - 1- Ground Fault Convenience Receptacle
 - 3- On/Off Soft Switches
 - 1- Calibration Cylinder with Flow Control Valves
 - 1- Thermostatically Controlled Heater
 - 1- Pressure Transducer Level Probe
 - 1- 1,000 mL Calibration Cylinder with Flow Control Valves
 - 1- Cellular Modem
- (3) VersaDose® LT Advanced Dosing Packages – The automation package will be programmed at the factory and can be optimized in the field to functionally control the dose rate using [24 hour / day per week dose curves] [from station flow signals].
- (3) Single Wall Piping Kit shall consist of:
- 40 ft 1/2" schedule 80 PVC Pipe.
 - 1- 2" Stainless Steel Male Camlock
 - 1- 2" Plastic Female Camlock Cap.
 - 1- 2" Schedule 80 PVC Tank Fill Piping
- (3) Watson Marlow Peristaltic Pump with an adjustable feed rate from 0.3 to 500 mL/min and a maximum discharge pressure of 100 psi.
- (3) Manufacturer Start-up Services, which shall consist of one (1) day at eight (8) hours per day, including travel to jobsite.
- (3) Mechanical Installation

2. SITE AND UTILITIES

Contractor to provide/perform all facets of system installation including, but not limited to dewatering, concrete work, trenching, containment piping, excavation, backfill, piping and electrical. Contractor shall provide all equipment for site preparation and equipment off-loading. Only those items specifically listed in this proposal are included; all other items are specifically excluded. 120 VAC, 15 AMP electrical service required for system operation.

**Appendix B: Osage Beach, Missouri
Full-Service Odor Control Program
Alkagen® 45 Storage and Feed Equipment**

BACKGROUND

Figure 1 provides a system schematic. Alkagen® 45 is planned to be added at the Sands pump station to provide pH capture of sulfide for both force mains and treatment from Sands PS to Rockaway and to HWY D.

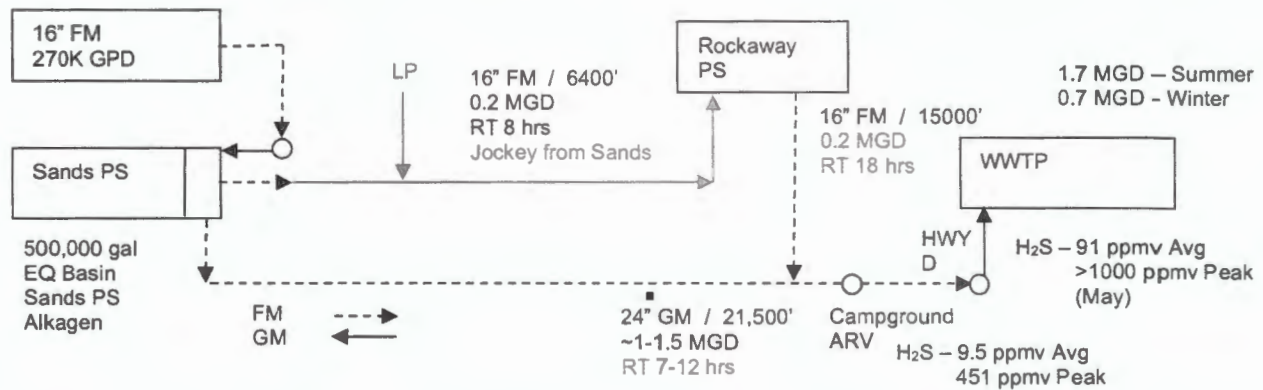


Figure 1 – Osage Beach Wastewater Block Diagram (Sands to WWTP)

- (1) HDR Tech Memo dated Nov 12, 2015

Table 1 below lists key factors for parallel FM network as follows

Item	Description	Notes
1	FM Length 16" Rockaway to WWTP	15,000'
2	FM Length 24" Sands to WWTP	21,500'
3	Avg Flow WWTP Summer	1.7
4	Avg Flow WWTP Winter	0.7
5	Avg Flow 16" without scour	60,000
6	Avg Flow 16" with scour	200,000
6	Retention Time 24" Summer	7-12 hrs
7	Retention Time 16" without scour	2.5 days
8	Retention Time 16" with scour	18 hrs
8	Current Treatment – Sands PS	Nitrate Salts
9	Control Point 24"	WWTP
10	Sulfide Expected at Control Point – 24"	7-12 ppm

Table 1 – Force Main Key Factors

ALKAGEN TECHNOLOGY

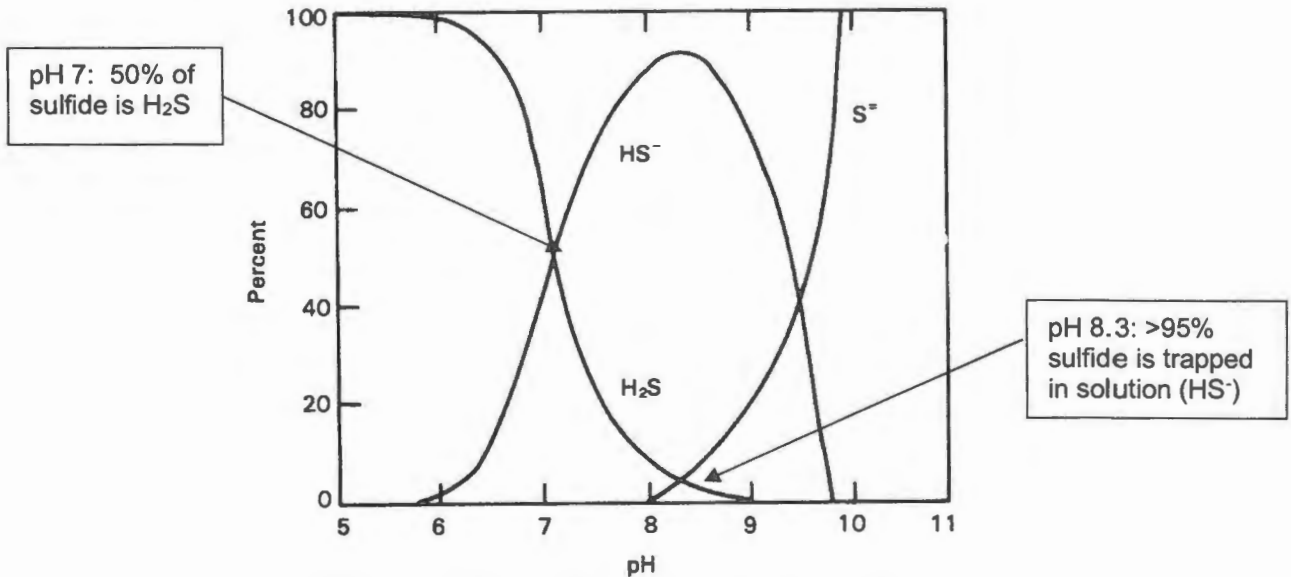


Figure 2 – Hydrogen Sulfide pH Shift Equilibrium

Hydrogen sulfide (H₂S) is a partially soluble gas which exists in aqueous solutions (i.e., wastewater) in equilibrium with the hydrosulfide ion (HS⁻) and sulfide ion (S²⁻). At a neutral pH of 7.0, roughly 50% of the sulfide in solution will be in the H₂S form and can escape to the atmosphere causing odor and corrosion problems. By shifting the pH of the solution to nearly 8.3, more than 95% of sulfide will be trapped in solution as HS⁻ form. This relationship is shown above in Figure 2.

Alkagen[®] is a non-hazardous source of alkalinity that can be used to increase the pH of your wastewater to achieve the necessary pH for controlling hydrogen sulfide emissions. With all Alkagen[®] systems, VersaDose[®] Dose-to-Demand technology is used to carefully control the metering of chemicals by programming daily dose curves that match sewage flow rates in your system. By using the VersaDose[®] we can maintain the necessary pH level for odor and corrosion control and prevent over-feeding of product and wasteful spending.

Benefits of an Alkagen[®] chemical dosing package are shown below:

- **Rapid Dissolution.** Alkagen[®] rapidly dissolves in wastewater, providing an almost instantaneous effect. Pump stations can typically be treated by applying Alkagen[®] to an influent manhole.
- **pH Range.** Alkagen[®] can elevate the pH of wastewater to 9.0 and greater if required, providing a shift of over 99% of dissolved sulfide to the non-volatile HS⁻ ion.
- **Controllability.** With its wide pH range, Alkagen[®] can be adjusted to the pH needed for a given application and controlled to maintain that pH using Evoqua VersaDose[®] technology, eliminating product overfeed and wasteful spending.
- **Increased Alkalinity.** Alkalinity is beneficial for maintaining effective biological activity in treatment plants. Bacteria and other biological entities which have important roles in wastewater treatment are



most effective at pH ranges from neutral to slightly alkaline (7.0 - 8.5). Alkagen® can provide the additional alkalinity needed to neutralize acids generated by natural biological pathways in a wastewater treatment plant and maintain an optimum wastewater pH.

TREATMENT OBJECTIVES

The following treatment objectives are expressed for odor and corrosion control downstream of the Sands Lift Station.

- a. Provide a non or low hazard treatment program for Osage Beach at Rockaway PS.
- b. Provide safe feed and storage platforms for odor control liquid phase products.
- c. Control hydrogen sulfide to minimize emissions near the control point – Rockaway LS.
- d. Control hydrogen sulfide from Sands to Hwy D.
- e. Minimize impacts to the WWTP from the use of sulfide neutralization chemistry.

SCOPE OF SERVICES

1. EQUIPMENT

Evoqua Water Technologies shall provide the following equipment:

- (1) 2,500 Nominal Gallon, Single Wall, High Density Cross Linked Polyethylene Chemical Storage Tank with baffles, (8' Diameter, 8' 9" Tall, Specific Gravity 1.65)
- (1) Self-contained Polyethylene Skid Assembly with Complete Control Unit, consisting of:
 - (1) Operator Interface with touch-screen controls
 - (1) Tank level readout
 - (2) Auto/Off switches with indicator lights
 - (1) Peristaltic Chemical Metering Pump
 - (2) Dry contacts to receive digital inputs
 - (1) Disconnect switch
- (1) VersaDose® Advanced Dosing Package – The automation package will be programmed at the factory
- (1) Level Indicator with local and internet display
- (1) Piping Kit shall consist of:
 - 40 ft 1/2" Polyethylene Tubing.
 - 40 ft 2" Schedule 40 PVC Pipe for Discharge Line
 - (1) 2" Schedule 80 Pipe Tank Fill Piping
 - (1) 2" Stainless Steel Male Camlock
 - (1) 2" Plastic Female Camlock Cap
- (1) All necessary piping and fittings for the installation

Evoqua Water Technologies retains ownership of all provided equipment. Evoqua will maintain spare parts for the equipment for emergency replacement.

2. SITE, UTILITIES AND CUSTOMER REQUIREMENTS

City of Osage Beach shall be responsible for having certain facets of site preparation completed prior to Evoqua's mechanical installation of the feed equipment. This includes, but is not limited to dewatering, concrete work, trenching, containment piping, excavation, backfill, piping and electrical. Additionally, the customer shall be required to supply the following for the storage and feed system:

- Power – 15A / 480VAC / 3PH (provided within 10' of equipment)
- Floor Space – 12' x 15' concrete pad
- Tanker Access for chemical delivery
- Potable water for safety shower and eye wash
- Plant water for backflush and rinse water

Mechanical Installation Services include:

- Tank penetrations
- Installation of fill piping on tank
- Installation of U-vent
- Installation of suction piping from tank to pumps
- Installation overfill site gauge
- Installation of calibration relief/overfill line
- Installation of pressure transducing sensor
- Placement of tank and feed system

Mechanical Installation Services exclude:

- Electrical supply or connections
- Any concrete work, trenching, excavation, and backfill
- Any Below grade piping

Figure 3 provides a drawing of the system.

3. SCHEDULE

Evoqua can begin the program within 4 – 6 weeks of authorization to proceed after Evoqua contract approval and depending on scheduling.

4. PREVENTATIVE MAINTENANCE AND MONITORING SERVICES

An Evoqua service technician will perform routine maintenance for the product feed site as part of the odor control program.

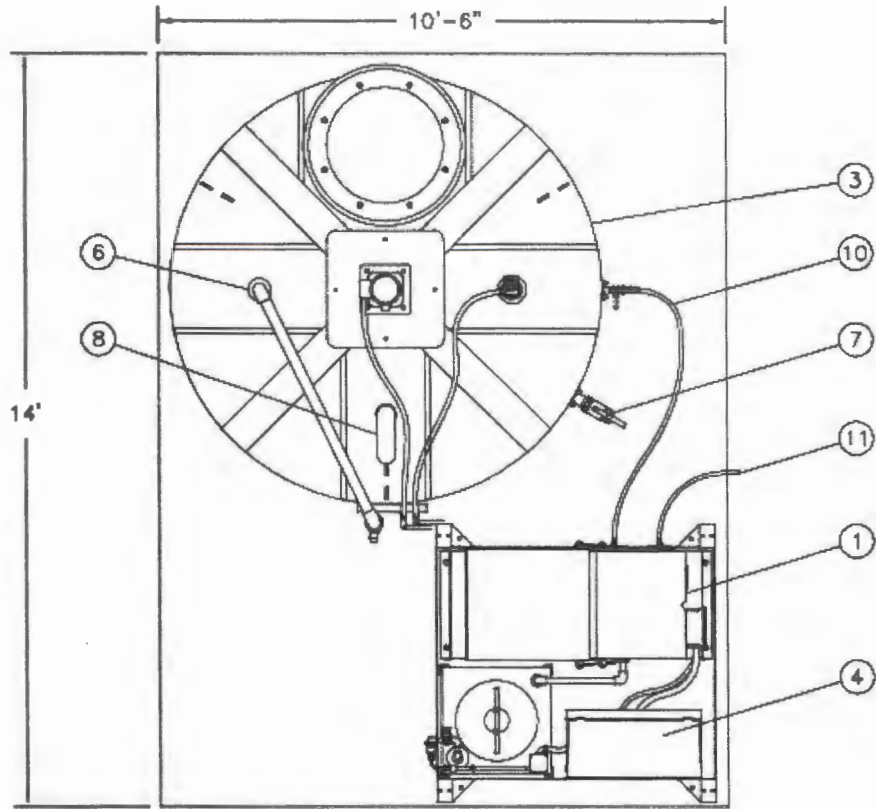


Figure 3 - 2500 Gallon Alkagen® Storage and Feed System Plan View