Public Notice

INVITATION TO BID

BID NUMBER 1044

The City of Springfield, Tennessee, will be accepting sealed bids for internal and external inspections of the city's six potable water tanks and the water treatment plant clearwell. Potential bidders can either pick up bid specifications at the Springfield Water and Wastewater Department (SWWD) office at 924 Central Avenue or can call the SWWD office at (615) 382-1600 to have bid specifications mailed or e-mailed out. Specifications can also be downloaded at www.springfield-tn.org. Sealed bids must be received in the Office of the City Recorder at City Hall, 405 N. Main Street, Springfield, Tennessee 37172, no later than 2:45 p.m. on Wednesday, October 25, 2017, at which time bids will be opened and read aloud. Any bids received after 2:45 p.m. on October 25, 2017, will not be opened and will be rejected. The outside of the sealed envelope shall include the BID NUMBER 1044 and that the sealed envelop contains a bid for water tank inspections. Any questions can be directed to Roger Lemasters, Director of the Springfield Water and Wastewater Department, at (615) 382-1600. The city reserves the right to reject any and all bids.

Lisa Crockett
City Recorder

BID SPECIFICATIONS
WATER TANK INSPECTIONS IN 2017
SPRINGFIELD WATER AND WASTEWATER DEPARTMENT
BID NO. 1044

The inspection services will be for six water tanks and the clearwell at the Springfield water treatment plant. The following information is being provided:

1. Mt. Denson concrete ground-level storage tank; 5,000,000 gallons.
   a. Diameter = 145 feet. There are no columns in this tank.
   b. Tank depth = 40 feet 6 inches
   c. Height from ground to top of tank = 40 feet 6 inches
   d. There is one 40" X 40" square hatch on the top of the tank, near the outside edge, near the ladder.
   e. This tank was repaired as well as painted on the outside in 2016. There should be very little sediment in the tank.
   f. Distance from the SWWD office at 924 Central Avenue is approximately 4.5 miles.
   g. Latitude = 36.544095 Longitude = -86.893256
      Northing = 805835.69 Easting = 1706192.59 Elevation = 726.01

2. East Hillcrest concrete ground-level storage tank; 3,000,000 gallons
   a. Diameter = 105 feet. There are no columns in this tank.
   b. Tank depth = 46 feet
   c. Height from ground to top of tank = 46 feet
   d. There is one 40" X 40" square hatch on the top of the tank, near the outside edge, near the ladder.
   e. This tank was repaired as well as painted on the outside in 2015. There should be very little sediment in the tank.
   f. Distance from the SWWD office at 924 Central Avenue is approximately 2.4 miles.
   g. Latitude = 36.490772 Longitude = -86.867039
      Northing = 786338.92 Easting = 1713477.81 Elevation = 768.58

3. 17th Avenue elevated steel storage tank; 750,000 gallons
   a. Diameter = 60 feet
   b. Tank depth = 35 feet
   c. Height from ground to top of tank = 127 feet
   d. There is one 26" round hatch on the top of the tank, near the middle.
   e. This tank was repaired as well as painted on the inside and outside in 2016. There should be very little sediment in the tank.
   f. Distance from the SWWD office at 924 Central Avenue is approximately 1.8 miles.
   g. Latitude = 36.496739 Longitude = -86.870201
      Northing = 788665.11 Easting = 1712641.63 Elevation = 741.90

4. York Road elevated steel storage tank; 500,000 gallons
   a. Diameter = 48 feet
   b. Tank depth = 37 feet

c. Height from ground to top of tank = 129 feet
d. There is a 24" round hatch on the top of the tank, just past the transition curve from the side to the top.
e. This tank was painted on the inside and outside in 2005 and inspected in 2012. There should be very little sediment in the tank.
f. Distance from the SWWD office at 924 Central Avenue is approximately 8 miles.
g. Latitude = 36.413805 Longitude = -87.014032
Northing = 758788.64 Easting = 1670195.34 Elevation = 773.60

5. Betts Road elevated steel storage tank; 150,000 gallons
a. Diameter = 28 feet
b. Tank depth = 28 feet
c. Height from ground to top of tank = 89 feet 6 inches
d. There is a 25" X 25" square hatch on the top of the tank, near the center.
e. This tank was painted on the inside in 1998 and inspected in 2012. This tank was emptied in 2016 when a bullet penetrated the bottom of the tank. When the tank was repaired, the contractor cleaned the tank. There should be very little sediment in the tank.
f. Distance from the SWWD office at 924 Central Avenue is approximately 9 miles.
g. Latitude = 36.415316 Longitude = -86.846933
Northing = 758937.17 Easting = 1719253.91 Elevation = 858.58

6. Tom Austin elevated steel tank that is supported by a concrete column; 1,500,000 gallons
a. Constructed in 2011
b. Diameter = 80 feet
c. Tank depth = 40 feet
d. Access to the top of the tank is by way of an access tube that passes upward through the middle of the tank. The bottom of the access tube is gained by climbing a vertical ladder (approximately 100 feet) attached to the inside of the concrete column and then using a crosswalk to get to the center of the column. The access tube contains a ladder that is used to get to the top hatch and onto the top of the tank. On the top of the tank, there is another hatch that will be used as the point where the interior of the tank can be gained. The ROV equipment will need to be raised to the top of the tank from the outside. Personnel will need to be equipped with safety tethers that will allow them to be stationed at the perimeter of the top of the tank, to pull the equipment up to the top of the tank, a vertical distance of approximately 140 feet.
e. Distance from the SWWD office at 924 Central Avenue is approximately 5 miles.
f. Latitude = 36.443017 Longitude = -86.897282
Northing = 769057.01 Easting = 1704424.35 Elevation = 768.58

7. Clearwell at the Springfield water treatment plant
a. Volume is 1,000,000 gallons
b. The 70' X 98' rectangular tank is a serpentine, two-pass structure that includes internal baffles. Also, there is a 20' X 30' pump station wetwell that is connected to the clearwell by way of a 36" circular hole in the common wall between the clearwell and wetwell.
c. Water depth = 20 feet.

d. There is a 30" X 36" rectangular entrance hatch into the clearwell and a 48" X 48" square entrance hatch into the wetwell.
e. The clearwell was inspected in 1998, when the wetwell was constructed and the 36" hole between the clearwell and wetwell was installed. It was also inspected in 2012. At that time, there may have been several inches of sediment and other debris in the clearwell.
f. Distance from the SWWD office at 924 Central Avenue is approximately 14 miles.
g. Latitude = 36.634247 Longitude = -86.989860
Northing = 839043.05 Easting = 1677954.95

Bid documents shall include the following:

1. How long the company has been in the business of performing water tank inspections;
2. The specifically-named persons who will be doing the inspections and their experience, qualifications and certifications;
3. A list of at least six references of similar inspection services, preferably in Tennessee.
4. A lump sum bid price for performing the inspection services.

The SWWD recognizes that inspections can be performed by any of three methods; however, the inspections will be conducted without draining any water from the tanks and **will be performed only by remotely operated vehicle (ROV)**.

All inspection work shall be conducted to comply with AWWA C652-02 specifications. A copy of AWWA C652-02 Section 4.4, entitled "Disinfection Procedures When Conducting Underwater Inspection of Potable-Water-Storage Facilities", is attached and it is a part of the bid specifications.

The following specifications shall govern the work to be done by the inspection company:

1. Prior to performing any inspection work, the contractor shall attend a pre-inspection meeting with SWWD personnel. The contractor shall contact the Director of the SWWD, at (615) 382-1600, to set up a time and date for the pre-inspection conference. At this meeting, the contractor shall provide the SWWD with all the documentation that is required by the specifications. Also at this meeting, the SWWD personnel and the contractor will examine the contents of AWWA C652-02 in detail and the contractor shall provide information/documentation on how the inspection will comply with each part of AWWA C652-02. No part of the actual inspection shall begin until all the necessary documentation has been submitted to and approved by the SWWD.

2. The following items are of utmost importance:

   a. Tank inspectors will work at high elevations. All personnel shall be experienced in climbing and evidence of that experience shall be provided at the pre-inspection meeting. SWWD personnel will provide the appropriate climbing trolleys but the inspectors shall provide their own harnesses, lanyards, etc. Inspectors should use footwear that is appropriate for climbing metal ladders.

   b. The company shall insure that anything that goes into the tanks is properly disinfected immediately prior to being put into the tank. The ROV and associated cables and hoses shall

touch nothing, except for disinfected gloves, after being disinfected and before entering the tanks. The contractor shall provide appropriate plastic or other types of drapes that can be disinfected and used to cover the edges of the hatches when the ROV enters and exits the tanks and clearwell.

3. The inspector shall perform a detailed evaluation of each tank and tank site, as well as the water treatment plant clearwell, including but not limited to the following:
   a. Visually inspect and record the physical condition of the following items, if applicable:
      (1) Pressure sensor/transducer
      (2) Security features, such as fencing, the ladder gate, and locks on gates, hatches, etc.
      (3) Ladders (interior and exterior), balconies and railings
      (4) Safety climbing devices (interior and exterior)
      (5) Access hatches
      (6) Overflow and vent screens
      (7) Foundations, anchor bolts, and all tower members
      (8) Any other aspect that could have an effect on the ability of the tanks to protect the quality of the water that will enter and exit the tank.
      (9) Whether or not any antennas and associated cables interfere with tank operation and maintenance.
   b. Identify and inspect the condition of the existing coating systems on the interior and exterior of each tank.
   c. Any movement inside tanks shall be done in such a manner that it does not raise clouds of sediment inside the tanks.
   d. The inspection method shall be able to determine the depth of any sediment in the tanks/clearwell.

4. The contractor shall provide proof of commercial general liability insurance of at least $2 million and workman insurance for all employees. Contractor must provide proof of bonding ability to demonstrate financial stability. The City of Springfield shall be held harmless regarding any work by the contractor.

5. The contractor shall furnish two copies of a final written report and one electronic (CD) version of the report, containing a sufficient number of photographs to adequately document the inspection of each tank. The report for each tank inspection shall give specific information, including photographs, of the procedures that were used to disinfect the ROV and cables. The report shall include recommendations of repair work.

No bidder shall withdraw his/her bid within 45 days after the date on which bids are opened.

The inspection work, including submission of the required reports, shall be completed within 90 days of the date of award of the contract. All unsuccessful bidders will be provided with a tabulation of the bids.

This contract will be administered by the Springfield Water and Wastewater Department (SWWD), located at 924 Central Avenue, Springfield, TN 37172. Any questions are to be directed to Roger D. Lemasters, P.E., Director of the SWWD at 615-382-1600 or to the director's email address at rlemasters@springfield-tn.org.

acceptable aesthetic quality, the remaining water may be delivered to the distribution system.

4.3.3.1 Adding chlorine. Chlorine shall be added to the storage facility by the method described in Sec. 4.3.1.1, 4.3.1.2, or 4.3.1.3. The actual volume of the 50-mg/L chlorine solution shall be such that, after the solution is mixed with filling water and the storage facility is held full for 24 hr, there will be a free-chlorine residual of not less than 2 mg/L.

Sec. 4.4 Disinfection Procedures When Conducting Underwater Inspection of Potable-Water-Storage Facilities

4.4.1 *Pre-job meeting.* A pre-job meeting involving the constructor and water utility representatives shall be held to ensure the following; that the personnel understand the configuration of the reservoir, the disinfection procedures, that underwater appurtenances are identified, that time restrictions are discussed, that the diving conditions are considered, that safety procedures are in place, and that inspection requirements are understood. Any problems associated with logistics should be resolved at this time. Clear communications between utility operations personnel and the constructor are essential.

4.4.2 *Storage-facility isolation.* In certain instances, safe diving operations may require the water-storage facility to be removed from service and isolated from the system prior to inspection by closing all inlet and outlet valves. Flowmeters and the tank level should be monitored to verify that the facility has been isolated. The underwater inspection should be made with the reservoir as full as possible, while still leaving room for access to the roof area. If the reservoir must be inspected with the inlet/outlet valves in the open position, then system valves further upstream or downstream should be closed. Off-line inspection/cleaning of storage facilities may not be possible or convenient for certain tanks or clearwells. On-line diving work may be completed safely, but strict attention to safety is required. If special operational conditions necessitate underwater inspection or cleaning without isolation, then diving work should be done during periods when positive flow into the reservoir is maintained and rates into or out of the water-storage facility are minimal. For underwater inspection of nonisolated facilities having a common inlet/outlet pipe, it is strongly recommended that a positive flow into the storage facility be maintained during the dive.

4.4.3 *Storage-facility access.* Before the facility access hatch is opened, the hatch and immediate area shall be cleaned of all loose dirt and debris. Special care

should be taken to keep the equipment and personnel clean prior to entering the tank. Dirt and contaminants on the reservoir roof, adjacent to the hatch can re-contaminate the equipment. If any equipment that will enter the tank makes contact with the roof, it shall be re-disinfected prior to entering the tank.

4.4.4 *Initial water quality.* The first step of any in-service inspection project shall be for the utility to establish the chlorine residual and turbidity in the reservoir contents before entering the reservoir for any other purpose. The utility should take representative water samples from several depth locations, if possible, and analyze for chlorine residual and turbidity. Turbidity testing is especially important if the reservoir is being cleaned or inspected while on line. The results shall be recorded for future reference.

4.4.5 *Equipment and personnel requirements.*

4.4.5.1 Equipment and clothing. All equipment to be used for inspection/cleaning of potable-water-storage facilities shall be dedicated for that purpose only. All equipment shall be constructed and maintained in such a fashion so that water quality will not be affected. All equipment shall be available for inspection.

4.4.5.1.1 According to this standard, both SCUBA (self-contained underwater breathing apparatus) and externally supplied air methods are acceptable air sources.

4.4.5.1.2 All equipment exposed to the water shall be suitable for disinfection. Divers shall be completely encapsulated with no bare skin exposed. Diving clothing shall be of the dry-suit type and shall be in good condition, free from tears, scrapes, unrepaired areas, or other imperfections that may impair the integrity of the suit. The diver and the clothing shall be disinfected after the diver is suited up and on top of the tank as per Sec. 4.3.2. All equipment and dry suits dedicated for potable-water underwater inspection work shall be stored in a manner that prevents both chemical and bacteriological contamination. Personnel entering a tank for the purposes of a float-down inspection must wear a dry suit that can be disinfected properly.

4.4.5.1.3 There shall be no contact of the mouth or head with the water during any underwater operations. The head shall be fully encapsulated by one or a combination of the following: helmet or dry suit hood with full-face mask.

4.4.5.1.4 Divers shall have communication in accordance with federal, state, provincial, and local regulations.

4.4.5.1.5 Underwater operations may be videotaped or documented with still photographs at the utility's request.

4.4.5.1.6 Disturbing tank bottom sediment may impair water quality. Sediment may contain bacteria, which if resuspended can cause contamination. Disturbed sediment will create localized turbidity. In some cases, it may be desirable to disturb a small area of thin sediment in order to inspect the underlying coating or floor condition. Divers or ROVs shall not disturb the sediment in any way unless explicitly approved by the utility to do so; this includes "walking on the floor."

4.4.5.2 Personnel requirements. Because of the hazardous nature of this work, combining confined-space entry and diving, the constructor performing the work shall comply with all federal, state, provincial, and local regulations.

4.4.5.2.1 Certain diving constructors who have been providing these services for many years may not have the formal certifications listed below. Utilities should carefully review the documentation of training and experience for these firms and require a detailed personal diver's log for the personnel who will conduct the on-site work. Simply, the presentation of a sport diver certification card for SCUBA by itself is not acceptable proof of proper training.

The following is a limited list of examples of diver qualifications that are acceptable—but not without detailed documentation of training and direct tank inspection—cleaning work experience:

2nd Class US Navy Diver Training

ANSI/ACDE 01 (latest version) Commercial Diver Certification

ADC Commercial Certification

4.4.5.2.2 All personnel on the dive or float-down team must be OSHA Confined Space Certified. These certificates should be provided on the job site for all personnel.

4.4.5.2.3 All personnel on the dive or float-down team shall be free of communicable disease and shall not have been under a physician's care within the seven-day period prior to the entering of the facility. No person who knowingly has an abnormal temperature or symptoms of illness shall work in a water-storage facility.

4.4.5.2.4 The American Red Cross or an equivalent agency shall certify all dive team members in the use of CPR and First Aid.

4.4.5.3 Safety. The dive team shall comply with all applicable local, state, and federal safety requirements and shall provide all necessary safety equipment suitable for the specific access opening, depth to water, and other aspects of the water-storage facility to be inspected.

4.4.5.3.1 The constructor shall have a comprehensive safety manual on site, which addresses all of the potential hazards encompassed by the in-service

operations. The safety manual shall include certifications for all on site employees for diving, confined space, first aid, and CPR. The constructor shall have a method and the equipment readily available for the extraction of an injured diver and a method for lowering a person to the ground who is incapacitated. This may include the use of a properly trained and equipped local fire department or rescue squad. The use of an outside response team must be covered in the pre-job meeting, and they must be able to respond quickly or be on site during the work.

4.4.6 *Equipment disinfection.* All equipment that will enter the water-storage facility must be disinfected immediately prior to entry into the potable-water reservoir. Any equipment making contact with the tank roof must be disinfected again prior to entry into the water. The method of equipment disinfection can be submersion in, spraying with, or sponging with disinfectant solution as defined in Sec. 4.3.2. Care must be taken when applying disinfectant solution to the diver and equipment so that any excess, runoff, or spillage is controlled so it does not enter the reservoir.

4.4.7 *Post-inspection chlorine residual and bacteriological testing.* If proper disinfection procedures are followed, there should be no need to increase the chlorine residual in the storage facility after completion of the inspection. However, after all personnel and equipment are removed from the water-storage facility, the chlorine residual in the facility should be re-tested. If the chlorine residual has dropped from that indicated by the initial test made prior to entry, sufficient chlorine solution or granules shall be added to the storage facility to return the chlorine residual to pre-entry levels, but not to exceed a chlorine concentration of 2 mg/L.

Disinfectant shall be added in a manner to achieve maximum distribution over the surface and achieve all possible mixing. Adequate mixing can be promoted by circulation, if available, or with portable mixers or portable pumps suitably disinfected. (NOTE: The pre- and post-dive residuals may not match exactly because of sampling and analytical variability).

When chlorine residual is at pre-entry levels, samples for coliform organisms should be taken by the owner and analyzed in accordance with Sec. 5.1.

If the chlorine residual in the storage facility did not drop during the inspection, the facility can be returned to service (if it was isolated) as soon as the bacteriological samples have been confirmed as acceptable. However, if it was necessary to rebuild the chlorine residual in the storage facility, the facility should not be placed in service until after completion of a satisfactory bacteriological analysis.

IRAN DIVESTMENT ACT NOTICE

Tenn. Code Ann. § 12-12-106 requires the chief procurement officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105.

For these purposes, the State intends to use the attached list of "Entities Ineligible to Contract with the State of South Carolina or any Political Subdivision of the State per the Iran Divestment Act of 2014, S.C. Code Ann §§ 11-57-10, et. Seq."

While in conclusion on the list would make a person ineligible to contract with the state of Tennessee, if a person ceases its engagement in investment activities in Iran, it may be removed from the list.

If you feel as though you have been erroneously included on this list, please contact the Central Procurement Office at CPO.Website@tn.gov.

SFAA
State Fiscal Accountability Authority

OFFICE OF THE EXECUTIVE DIRECTOR

List Date: July 1, 2016

Entities Ineligible to Contract with the State of South Carolina or any Political Subdivision of the State per the Iran Divestment Act of 2014, S.C. Code Ann. §§ 11-57-10, et seq.

1. Abadan Petrochemical Co.
2. Absan Offshore Ltd.
3. Arak Petrochemical Co.
4. Arvandan Oil & Gas
5. Behran Oil Co.
6. Bharat Petroleum Corporation Ltd.
7. China National Petroleum Corp. (CNPC)
8. China Petroleum & Chemical Corp.
9. Cosmo Energy Holdings Company Limited
10. Dragon Oil Plc
11. Eni Spa
12. Esfahan Oil Refining Co.
13. Essar Oil Ltd.
14. Fanavaran Petrochemical Co.
15. Farabi Petrochemical Co.
16. Gail (India) Ltd.
17. Gazprom OAO
18. Gubre Fabrikalari T.A.S.
19. Hindustan Petroleum Corporation Ltd.
20. Hyundai Heavy Industries
21. Idemitsu Kosan Co. Ltd.
22. Indian Oil Corporation Ltd.
23. JX Holdings, Inc.
24. Koc Holding A.S.
25. Lukoil Oil Co.
26. Maire Tecnimont S.P.A.
27. Mangalore Refinery & Petrochemicals Ltd.
28. Mitsubishi Corporation
29. Mitsui & Co. Ltd.
30. National Iranian Oil Co.
31. National Iranian South Oil Co.
32. Oil & Natural Gas Corporation Ltd.
33. Pardis Petrochemical Co.
34. Pars Oil Co.
35. Parsian Oil and Gas Development Co.
36. Petro China Co. Ltd.
37. Polskie Gornictwo Naftowe I Gazownictwo SA
38. Royal Dutch Shell Plc
39. Sepehr Energy
40. Shiraz Petrochemical Co.
41. Showa Shell Sekiyu K K
42. Tabriz Oil Refining Co.
43. Total S.A.
44. Toyota Tsusho Corporation
45. Tupras Turkiye Petrol Rafinerileri AS

Contact irandivestment@mmo.sc.gov with questions regarding this list.

IRAN DIVESTMENT ACT

"By the submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each of a joint bid each party thereto certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not a person included within the list created pursuant to § 12-12-106."

Signature:_____

Date: _____

Title: _____