Layne Bid Package



A GRANITE COMPANY



CONTRACTOR RESPONSE TO **REQUEST FOR PROPOSAL**

City of Douglas, AZ

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April 22, 2022

City of Douglas, AZ 425 10th Street Douglas, AZ 85607 Attention: Rene Rios



Re: Supply of Well No. 14 Arsenic Treatment System

Layne Christensen Company (Layne) has received your request for an arsenic removal system with a maximum capacity of 800-gpm with the option to blend based on the system media requirements outlined by City of Douglas. We understand the background and scope of this project and are pleased to provide the following products and services with this technical proposal for your review and consideration. Our intent is to meet all design, function, and performance criteria specified, with exceptions noted in scope of supply exclusions.

Please do not hesitate to call our office if you have any questions or need more information regarding this scope of work.

Regards,

Jeffrey McCartney Interim Area Manager Direct: (602) 345-8536 Cell: (602) 501-3026 jeffrey.mccartney@gcinc.com



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General comment: It appears their influent design basis does not match what was provided in the specs. Did we provide supplemental information as an addendum?

I. <u>GENERAL TECHNICAL INFORMATION</u>

All Layne water treatment equipment is designed employing the most cost-effective materials, considering both capital and maintenance costs.

Iron concentration was provided, <0.1 mg.l

The proposed system shall be comprised of two (2) vessels piped in a lead-lag configuration. Each vessel shall be capable of handling the full 800-gpm system flow. The amount of media provided is based on the design criteria of 2.10 minutes of empty bed contact time (EBCT). Each system is designed at temperatures between 60°F and 70°F. The customer (City of Douglas) will be required to provide all utilities.

II.	DESIGN BASIS	Specs ca the requi	all for 4 minutes minimum; however, if it meets ired treatment, it is fine. However, this will
	Service Water Chemistry	Well 14 be unfair	maller vessel, which would reduce cost. May
	Manganese*, mg/L	< 0.03 ppm < 0.02 ppm	We asked for the design to be 35 mg/l
	Arsenic total, ug/L Arsenic (V), ug/L	33.2 33.2 ←	total As. We did not specify if it is As (V) or As (III). Is it true that the
	Arsenic (III), ug/L	< 1.0	influent is all As (V)?
	Vanadium, mg/L	< 30 0 (assumed)	We did not provide a silica value. Is
	Phosphate, mg/L Sulfate, mg/L	0 (assumed)	< 30 mg/l true?
	Alkalinity (as CaCO3), mg/L	80	
	pH Water Temperature, °F	7.5	was 155 mg/l in 1994.
	* No data provided. Shown value maximums.	es are the recommended	We provided an alkalinity value of 144 mg/l in the spec.

III. <u>PROPOSED SYSTEM</u> 7.28 in spec

Layne Proposed System	PES-96.100
Design Flow Rate, GPM	800
Total Vessels	Two (2)
Media per Vessel, ft. ³	250
Empty Bed Contact Time (per vessel)	2.34 minutes
Vessel Diameter, in.	96
Vessel Shell Height, in.	84
Vessel Pressure Rating, PSIG	100

*The information given in this table should be used as a guideline for preliminary design only. All dimensions should be confirmed with Layne Christensen Company. Layne or its representatives will not be responsible for any liability resulting from use of this information.

IV. <u>ELECTRICAL REQUIREMENTS</u>

Location	Equipment	Power Requirement (per unit)	No. of Units
Local	Instrumentation	120 V, 1 □, 60 Hz	As required

V. <u>SCOPE OF SUPPLY</u>

Layne is pleased to furnish the following items and/or services included in our scope of work:

- a) One (1) structural support steel skid, coated after fabrication, with necessary process valves and instrumentation assembled on it.
- b) Two (2) pressure filters, 96" diameter x 84" straight shell, carbon steel construction, designed to a maximum allowable working pressure of 100-PSIG.
- c) Inlet water distribution header/lateral system, Schedule 80 PVC header and Schedule 80 PVC upturned elbow laterals with Gr. 304 stainless steel supports, installed prior to shipment.
- d) Lined carbon steel curved plate under drain with stainless steel filter nozzles located on approximately 10" centers, installed prior to shipment.
- e) Two hundred fifty (250) cubic feet of LayneRT media in each vessel; factory supplied and shipped separately in super sacks for field installation by others.
- f) Face piping (to include influent and effluent to and from the vessel(s) shall be supplied by Layne); lined ductile iron, including all hardware and gaskets (for Layne supplied piping) and to be installed as detailed below. All other interconnecting piping shall be supplied and installed by others.
- g) Air release, resin fill and resin removal piping shall be 304 stainless steel.
- h) Filter ball valves (2" or less); all stainless steel, 2-piece, full port ball valves with manual lever operator per Layne specifications.
- i) Filter butterfly valves (3" or greater); lug-style, resilient seated, cast-iron body, stainless steel disc and stem, EPDM seats, with manual lever operator per Layne specifications.
- j) One (1) bag filter housing; stainless steel construction, designed for 800-gpm total flow with 5-micron bags.
- k) One (1) drain valve, ball valve with manual operator, per vessel.
- 1) Two (2) filter pressure gauges (inlet, outlet), with sample valves on each vessel.
- m) One (1) differential pressure indicating switch across the bag filter.
- n) One (1) differential pressure transmitter across each vessel.
- o) One (1) air/vacuum combination valve, with manual isolation ball valve, per vessel.
- p) One (1) pressure relief valve located on common influent piping.
- q) One (1) magnetic flow meter for each vessel inlet; 8", flow indication and totalizer to be remote mounted and supplied with 30' of cable.

r) One (1) NEMA 12 box to house the DP switch indicating light for high DP. Light will suggest that the bag filters should be changed. Failure to maintain the bag filters may lead to shortened bed life and damaged media.

Engineering Services, Start-Up, and Installation

- s) One (1) lot engineering services including shop drawings and equipment data sheets, submittal package, and O&M manuals. Please note that all submittal documents and O&M manuals will be furnished in electronic format as Adobe (pdf) files on CDs and via electronic communication. Paper volumes of submittal and/or O&M manuals shall be made available, upon request, at an additional cost.
- t) Two (2) trips with up to three (3) total 8-hour days of field technical service onsite for installation supervision, start-up, and operator training.
- u) No installation is provided under this scope. All Layne supplied equipment is shipped loose for mechanical and electrical installation by others.
- v) Field technical services not listed in the above scope of supply shall be made available based on technician availability and schedule for an additional cost as follows:
 - Per Diem rate of \$1,200 per employee for standard 8-hour work or travel days, excluding weekends and holidays.
 - Travel and living expenses are billed at cost plus twenty percent (20%).
 - Overtime in excess of 8 hours per day is billed at 1.5 times hourly rate.
 - Saturday work is billed at 1.5 times standard daily rate.
 - Sundays and holidays are billed at 2 times standard daily rate.

First Media Changeout Services:

 w) First replacement of LayneRT Resin, complete for both vessels. Replacement to be performed in two (2) separate trips, one for lead vessel replacement and one for the lag vessel replacement after full exhaustion. Services included; supervision of removal, disposal and replacement, equipment as needed, TCLP testing, and media.

VI. <u>BENEFITS</u>

- Lower Operating cost
- No backwash required
- Regenerable
- No hazards waste
- Mitigates long-term disposal liability
- Eliminates residual disposal
- Higher capacity/Longer lasting media
- NSF/ANSI Standard 61 Certified
- Rapid adsorption kinetics/Optimal flow dynamics
- All spent media passes Toxicity Characteristics Leaching Procedure (TCLP)

VII. PRICING AND PAYMENT TERMS

The sale price of the LayneRT[™] arsenic removal system, with all appurtenances listed in the above scope of supply, is outlined on the bid form and does not include items listed as exclusions below.

Usual and customary payment terms are as follows:

- 15% upon receipt of your purchase order.
- 25% upon receipt of approved Layne submittals for construction.
- 55% upon shipment or our ability to ship.
- 5% upon system start-up not to exceed 90 days from the ship date.

Please refer to our (2) page Standard Terms and Conditions of Sale attached, which are a part of this proposal. This proposal and the attached Standard Terms and Conditions of Sale cannot be modified in any way except by the express written permission of Layne. Price quoted is and will remain valid for 30 days from quotation date. Freight is to be pre-paid and add at time of shipment due to the volatility in the market. The current estimate for the shipment of major items (vessels, piping and media) is **§24,115**, and is included in the pricing sheet but subject to change at time of shipment.

VIII. EQUIPMENT DELIVERY

Our standard delivery terms for the equipment are:

- Submittal package 2 to 3 weeks after receipt of accepted and fully executed order.
- Shipment 8 to 10 weeks after receipt of approved drawings.
 - Short lead time is based on ability to use stock vessels completed February 11, 2022. Use of alternative vessels will be 16 20-week lead time.

All delivery estimates are approximate. Layne will work with you to meet your specific delivery requirements. All deliveries, including estimated time of arrival of equipment on site, are approximate and cannot be guaranteed. Freight carriers are not under Layne's control and are subject to unpredictable delays. Layne will not accept any back charges due to shipments arriving at times other than the estimated time. This includes, but is not limited to, consequential damages, costs of delay, standby charge for equipment or personnel, etc.

IX. <u>EXCLUSIONS</u>

The following items and/or services are <u>not</u> included in Layne's scope of work:

- backwash recovery system, storage, or production equipment.
- air scour or combined air/water wash system, or production equipment.
- field services of any kind, except as noted above.
- air compressor or air supply of any kind.
- P.E. services of any kind, except as noted above.
- unloading or installation of items delivered to the jobsite.
- design, supply, or installation of anchor bolts, except as noted above.
- electrical wiring or conduit of any kind, except as noted above.
- piping or pipe fittings, hardware, and gaskets, except as detailed above.
- off-skid pipe supports of any kind.
- field painting of any kind.
- disinfection chemicals and disinfection labor.
- pumps or pump equipment of any kind, except as detailed above.
- electrical controls or instrumentation, except as noted above.
- permits of any kind.
- any hazardous materials disposal/survey/abatement/removal or environmental fees.
- temporary construction easements.
- any subsurface, subterranean, or latent physical condition at the site.
- heat tracing or insulation of any kind.
- motor starters and motor control centers, except as noted above.
- bonding of any kind.
- taxes of any kind; except as noted on the bid form.
- any items or services not listed above as part of this proposal.

X. <u>CLARIFICATIONS AND EXCEPTIONS</u>

- Layne does not offer a media life guarantee. However, based on the above stated design information provided, we can estimate the amount the media will have processed in bed volumes of media when it reaches full exhaustion upon verification of all process parameters.
- Upon selection of Layne equipment, Layne requests, in an effort to reduce life cycle costs, that the Owner's chlorination point be re-located from the well head to just downstream of the blend point, if necessary. Chlorine residual will, over time, de-crosslink Layne's base resin beads.
- All items will be shipped loose or shipped separately, except items noted as skid-mounted. Skid-mounted items will ship as a single unit.
- All inter-connecting piping outside of the provided system (both design and material) will be provided by others.
- All valves and instruments, where supplied, will be furnished with manufacturer's standard coating.
- Field technical services not listed above will be available for an additional cost.
- City of Douglas is responsible for disinfection of the system and passing a bacteria test prior to installation of the media by others.
- Layne has quoted the use of a common pressure relief valve for the complete system. We recommend this over rupture discs on individual vessels. Rupture discs have no way to shut after the pressure surge has suppressed while PRV's are self closing.
- LayneRT hybrid resin is ADEQ approved in multiple locations with a minimum EBCT of 2.0 minutes and the Layne system is designed accordingly.
- Layne system does not require a gravel underbed and it has not been quoted. One can be provided at an additional cost.

Since their system does not require a gravel bed, it is okay not to have one.

STANDARD TERMS AND CONDITIONS OF SALE

ACCEPTANCE:

Sale of any products or services (hereafter, the "Products") by Layne Christensen Company – Water Treatment Division ("Seller") to Purchaser shall be subject to the terms and conditions of sale contained herein. No change in or addition to these terms shall be binding upon Seller unless specifically accepted in writing by Seller. Seller objects in advance to any additional or different terms proposed in Purchaser's order.

PRICING:

Prices shall be Seller's price in effect at time of shipment unless otherwise specified in Seller's written quotation. Quotations automatically expire 30 calendar days from quotation date and may be canceled at any time by written notice.

FORCE MAJEURE LIMITATION:

Seller shall not be liable for any loss, damage or expense resulting from delay or failure in the performance of Seller's obligations hereunder if such delay or failure is due to acts of God or the public enemy, strikes, labor troubles, fire, explosions, riots, war, governmental orders or restrictions, shortages of materials or labor, delay in transportation, theft, accidents, or any other cause which is beyond Seller's reasonable control. Upon the occurrence of any such event preventing the Seller from performing all its then outstanding contracts, the Seller shall then be entitled to perform such of its contracts as it may select and shall incur no liability to the Purchaser by reason of performing contracts other than this agreement. The Seller's total liability for damages related to the performance of or failure to perform this agreement shall be limited to the amount of the contract price. IN NO EVENT SHALL THE SELLER BE LIABLE FOR LOSS OF PROFITS BY REASON OF PLANT SHUTDOWN, NON-OPERATION, OR INCREASE IN EXPENSE OF OPERATION OF OTHER EQUIPMENT OR FACILITIES OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

DELIVERY:

Shipping dates are estimates only and are based on Seller's projected production schedules and commitments by suppliers. DELAY IN SHIPMENT OR VARIANCE FROM SHIPPING SCHEDULE SHALL NOT BE CAUSE FOR CANCELLATION OR CLAIM FOR DAMAGE. Receipt by the Purchaser of any Products shall constitute acceptance of delivery and waiver of any claims due to delay.

WARRANTY:

Products manufactured by the Seller and sold under this agreement are warranted to be free from defects in materials and workmanship for one year from the date of shipment to the Purchaser. Goods manufactured by other than Seller and sold under this agreement are warranted only to the extent of such manufacturer's warranty. Seller's obligation is limited to repair or replacement F.O.B. Seller's plant when examination of any such Products shall disclose them to Seller's satisfaction to have been defective and Purchaser shall have promptly notified Seller of the discovery of any such defect. At Seller's option, such Products shall be returned to Seller, transportation charges prepaid, for such examination. This warranty is conditioned upon the Purchaser making full and complete payment to Seller pursuant to the payment terms hereof and does not apply to any Products which have been opened, disassembled, repaired, or altered by anyone other than Seller or subjected to misuse or abuse. Corrosion, erosion, deterioration from unusual causes, normal wear and tear, or operating conditions more severe than those for which the product is designed are expressly excluded from this warranty. Warranty on product repairs or replacement parts shall extend for the unexpired warranty period of the original product. THERE ARE NO WARRANTIES EXPRESS OR IMPLIED WHICH EXTEND BEYOND THOSE EXPRESSLY STATED HEREIN, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

PAYMENTS:

Terms of payment are net 30 days. The maximum legal rate of interest and all costs of collection (including attorney's fees) shall be charged on past due accounts. All orders are subject to the continuing approval of Seller's credit department. If Purchaser is in default in any payment, Seller may declare all payments for work completed immediately due and payable, stop all further work until payments are brought current and/or require advance payment for future shipments. Where delivery is prevented or delayed by Purchaser, in such event storage of goods shall be at Purchaser's expense and risk. If the financial condition of the Purchaser at any time does not in the judgment of Seller justify continuance of production or shipment on the terms of payment set forth herein, Seller may require full or partial payment in advance or shall be entitled to cancel any order then outstanding and shall receive reimbursement for its reasonable and proper cancellation charges. In the event of bankruptcy or any insolvency laws, Seller shall be entitled to cancel any order then outstanding at any time during the period allowed for filing claims against the estate and shall receive reimbursement for its reasonable and proper cancellation charges

CHANGES:

Seller reserves the right to change or modify the design and construction of its Products and to substitute other suitable materials.

DRAWINGS:

If drawings are furnished with this proposal, they are submitted only to show the general style, arrangement and approximate dimensions of the equipment offered. No work is to be based upon proposal drawings. Foundation or assembly drawings certified by the Seller will be furnished, when required, after final acceptance of Purchaser's order. It is the Purchaser's responsibility to verify that the data given certified drawings is suitable for applicable installation conditions. Any changes made after the order is released for manufacture will be subject to extra charges.

TITLE/RISK OF LOSS/DEFAULT:

Unless otherwise specified by Seller, delivery will be made F.O.B. point of shipment to Purchaser. Title to right of possession and ownership of Products covered herein shall remain vested in Seller until the entire purchase price herein provided for shall have been paid in full in cash, and the Purchaser agrees to do all acts necessary to perfect and maintain such right and title in the Seller. In case of failure or refusal to make payments when due, then and in any such event the whole of the unpaid portion of the purchase price shall, at Seller's option, become immediately due and payable and in case of such default on Purchaser's part, Seller shall thereupon have the right to enter the premises upon which such property shall be installed and take possession of and remove the same without legal process. This equipment shall retain its character as personal property regardless of its mode of attachment. Risk of loss or damage shall pass to Purchaser on delivery to carrier.

TAXES:

In addition to any price specified herein, Purchaser shall pay the gross amount of any present or future sales, use, excess, value added or other similar tax applicable to the price, sale or delivery of any Products or their use by Seller or Purchaser, or Purchaser shall furnish Seller with a tax-exempt certificate acceptable to the taxing authorities.

CANCELLATION:

Any order placed with Seller may be cancelled by the Purchaser only upon payment of reasonable cancellation charges, which shall take into account expenses already incurred and commitments made by the Seller.

RETURNED GOODS:

Unused Products of current manufacture may be returned for credit only upon written consent of Seller and with transportation charges prepaid. All such returns shall be subject to a handling charge and reduced by the amount of assembly charges involved in the original equipment, dismantling charges involved in placing the material back in stock, the number of unusable materials, plus a charge equal to any transportation costs which Seller paid in making original shipments. Products which are obsolete or made to special order are not returnable.

GENERAL:

The terms and conditions hereof cancel and supersede all previous understandings or agreements relating to the Products covered hereunder, written, or oral, between Seller and Purchaser and contain the entire understanding of the parties hereto. No waiver, alteration, deletion, or modification of or addition to any of the provisions hereof shall be binding unless in writing and signed by a duly authorized representative of the Seller. If any term, provision, or condition contained herein shall, to any expert, be invalid or unenforceable, the remainder of the terms, provisions, and conditions hereof other than those which are invalid or unenforceable, shall not be affected thereby and each term, provision and condition of this order shall be valid and enforceable to the fullest extent permitted by law. This order and all rights and obligations of the parties shall be construed and interpreted under and pursuant to the laws of the State of Texas.

THE END



Bid Documents:

WATER RESOURCES



INVITATION FOR PROPOSAL

Supply of Well No. 14 Arsenic Treatment System

CONTACT PERSONS

Jack Bryck, PE 480-244-6886 jack.bryck@stantec.com Stantec Consulting Services Inc

Mr. Rene Rios 520-417-7317 <u>rene.rios@douglasaz.gov</u> City of Douglas Procurement Specialist

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Exhibit A: Certificate of Insurability

Exhibit B: Certificate of Insurance

Exhibit C: City of Douglas Well 14 Arsenic Water Treatment System Project Specification'

Exhibit D: American Iron and Steel Requirements

Exhibit E: Contractor's American Iron and Steel Certification

Exhibit F: Non-Collusion Form

SECTION I - INSTRUCTIONS TO BIDDERS

Please read this before continuing on to the bid document.

SOLICITATION RESPONSE CHECK LIST

Check off each of the following as the necessary action is completed.

- □ 1. All forms have been signed. All of Section V, Submittals, is included.
- \Box 2. The prices offered have been reviewed.
- \Box 3. The price extensions and totals have been checked.
- □ 4. Any required drawings or descriptive literature have been included.
- \Box 5. If required, the amount of the bid surety has been checked and the surety has been included.
- □ 6. Review the insurance requirements, if any, to assure you are in compliance.
- \Box 7. The specified number of copies of your offer has been included.
- \Box 8. Any addenda have been signed and are included.
- \Box 9. The mailing envelope has been addressed to:

Mr. Rene Rios, City of Douglas, 425 Tenth Street, Douglas, AZ 85607.

The mailing envelope clearly shows:

Your company name and address, the solicitation number, and the bid opening date.

10. The response will be mailed in time to be received no later than **4:00 p.m**. local Arizona time.

1. INTRODUCTION

City of Douglas invites sealed bids <u>for building an arsenic treatment system at their Well No. 14 facility in Douglas, AZ 85607</u>. The project construction will commence on or about, **June 2022**, in accordance with the specifications and provisions contained herein.

2. SCHEDULE OF EVENTS

Bid Due Date: April 15, 2022 at 4:00 p.m. Local Arizona Time

Bid Submittal Location: City of Douglas, 425 Tenth Street, Douglas, AZ 85607.

City of Douglas reserves the right to change dates as necessary.

3. OBTAINING A COPY OF THE SOLICITATION AND ADDENDA

Interested bidders may obtain the complete solicitation and addenda by visiting our website at <u>www.douglasaz.gov/Bids.aspx</u>.

4. PREPARATION OF BID

4.1 All forms provided in Section V, Submittal, must be completed and submitted with your bid. It is permissible to copy Section V forms if necessary. Erasures, interlineations, or other modifications of your bid shall be initialed in original ink by the authorized person signing the bid. No bid shall be altered, amended or withdrawn after the specified bid due time and date. City of Douglas is not responsible for bidder's errors or omissions. All time periods stated as a number of days shall be calendar days. Any submission of an alternate term or condition to Sections I, II or III with your offer may result in rejection of your bid. This solicitation is deemed to be through and complete as to City of Douglas' needs.

- **4.2** It is the responsibility of all bidders to examine the entire solicitation and seek clarification of any requirement that may not be clear and to check all responses for accuracy before submitting a bid. Negligence in preparing a bid confers no right of withdrawal after due date and time. Offerors are strongly encouraged to:
 - A. Consider applicable laws and/or economic conditions that may affect cost, progress, performance, or furnishing of the products or services.
 - B. Study and carefully correlate Offeror's knowledge and observations with the IFB document and other related data.
 - C. Promptly notify the City of Douglas of all conflicts, errors, ambiguities, or discrepancies which an Offeror has discovered in or between the IFB document and such other related documents.
- **4.3** City of Douglas does not reimburse the cost of developing, presenting or providing any response to this solicitation. Offers submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner. The Bidder is responsible for all costs incurred in responding to this solicitation. All materials and documents submitted in response to this solicitation become the property of the City of Douglas and will not be returned.
- **4.4** Bidders are reminded that the specifications stated in the solicitation are the minimum level required and that bids submitted must be for products or services that meet or exceed the minimum level of all features specifically listed in this solicitation. Bids offering less than the minimums specified are not responsive and should not be submitted.
- **4.5** Bid responses submitted for products considered by the seller to be acceptable alternates to the brand names or manufacturer's catalog references specified herein must be submitted with technical literature and/or detailed product brochures for the City of Douglas' use to evaluate the products offered. Bids submitted without this product information may be considered as non-responsive and rejected. City of Douglas will be the sole judge as to the acceptability of alternate products offered.
- **4.6** If provisions of the detailed specifications preclude an otherwise qualified bidder from submitting a bid, a written request for modification must be received by City of Douglas at least seven (7) calendar days prior to the bid opening. City of Douglas may issue an addendum to this solicitation of any approved specification changes.
- **4.7** Prices shall be submitted on a per unit basis by line item, when applicable. In the event of a disparity between the unit price and extended price, the unit price shall prevail unless obviously in error.
- **4.8** Prices offered shall include applicable state and local taxes. City of Douglas will pay all applicable taxes. Taxes must be listed as a separate item on all invoices.

5. ADDENDA

City of Douglas shall not be responsible for any oral instructions made by any employees or officers of City of Douglas in regard to the bidding instructions, plans, drawings, specifications, or contract documents. Any changes to the plans, drawings and specifications will be in the form of an addendum. The bidder shall acknowledge receipt of an addendum by signing and returning the document with the bid submittal.

6. LICENSES

If required by law for the operation of the business or work related to this Bid, Bidder must possess all valid certifications and/or licenses as required by federal, state or local laws at the time of submittal.

7. CERTIFICATION

By signature in the offer section of the Offer and Acceptance page, bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.
- The bidder shall not discriminate against any employee, or applicant for employment in violation of Federal or State Law.

• The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer.

8. INSURANCE

The Bidder shall submit the enclosed Certificate of Insurability with their Bid to the City of Douglas.

9. SUBMISSION OF BID

Bids must be in the actual possession of City of Douglas on or prior to the exact time and date indicated in the Schedule of Events. Late bids shall not be considered. The prevailing clock shall be City of Douglas' or its representative's clock.

Bids must be submitted in a sealed envelope and the following information should be noted on the outside of the envelope:

- Bidder's Name
- Bidder's Address (as shown on the Certification Page)
- IFB Title

All bids must be completed in ink or typewritten. Include the number of copies indicated in the Submittal section.

10. WITHDRAWAL OF OFFER

At any time prior to the solicitation due date and time, a bidder (or designated representative) may withdraw the bid by submitting a request in writing and signed by a duly authorized representative. Facsimiles, telegraphic or mailgram withdrawals shall not be considered.

11. BID RESULTS

Bids will be opened on the bid due date, time and location indicated in the Schedule of Events at which time the name of each bidder and the prices shall be read. Bids and other information received in response to the Invitation for Bid shall be shown only to authorize City of Douglas personnel having a legitimate interest in them or persons assisting City of Douglas in the evaluation. Bids are not available for public inspection until after award recommendation has been made.

A preliminary bid tabulation will be made available within five (5) calendar days of the bid opening. The information on the preliminary tabulation will be as it was read during the bid opening. City of Douglas makes no guarantee as to the accuracy of any information on the preliminary tabulation. Once City of Douglas has evaluated the bids an award recommendation will be available, and the successful bidder will be notified. No further notification will be provided to unsuccessful bidders.

Protest of an award recommendation must be filed within seven (7) calendar days after the award recommendation is posted on the website. Protests shall be in writing and filed with City of Douglas and must include all of the following:

- The name, address and telephone number of the protester;
- The signature of the protester or its representative;
- A detailed statement of the legal and factual grounds of protest including copies of relevant documents; and,
- The form of relief requested.

12. AWARD OF CONTRACT

Unless otherwise indicated, award(s) will be made to the lowest responsive, responsible bidder(s) who are regularly established in the service contained in this solicitation and who have demonstrated the ability to perform the required service in an acceptable manner. Factors that will be considered by City of Douglas include:

• Technical capability of the Bidder to accomplish the scope of work required in the Solicitation. This includes performance history on past and current government or industrial contracts.

- Demonstrated availability of the necessary manpower (both supervisory and operational personnel) and necessary equipment to accomplish the scope of work in the Solicitation.
- Safety record.

Notwithstanding any other provision of this solicitation, City of Douglas reserves the right to: (1) waive any immaterial defect or informality; or (2) reject any or all bids or portions thereof; or (3) reissue a solicitation.

A response to a solicitation is an offer to contract with City of Douglas based upon the terms, conditions, and specifications contained in City of Douglas' solicitation. Bids do not become contracts until they are executed by City of Douglas. A contract has its inception in the award, eliminating a formal signing of a separate contract. For that reason, all the terms, conditions and specifications of the procurement contract are contained in the solicitation, unless any of the terms, conditions, or specifications are modified by an addendum or contract amendment.

13. CITY OF DOUGLAS' RIGHT TO DISQUALIFY FOR CONFLICT OF INTEREST

City of Douglas reserves the right to disqualify any bidder on the basis of any real or apparent conflict of interest that is disclosed by the bid submitted or any other data available to City of Douglas. This disqualification is at the sole discretion of City of Douglas. Any bidder submitting a bid herein waives any right to object now or at any future time, before anybody or agency, including but not limited to, any court.

14. BIDDER'S COMPLIANCE WITH HEALTH, ENVIRONMENTAL AND SAFETY REQUIREMENTS

The Bidder's products, services and facilities shall be in full compliance with all applicable Federal, State and local health, environmental and safety laws, regulations, standards, codes and ordinances, regardless of whether or not they are referred to by City of Douglas. At the request of City of Douglas representatives, the bidder shall provide City of Douglas:

- Environmental, safety and health regulatory compliance documents (written safety programs, training and records, permits, etc.) applicable to services requested.
- A list of all Federal, State and local citations or notice of violations (including but not limited to EPA, OSHA, Cochise County) issued against the Bidder or their subcontractors including dates, disposition and resolutions.

City of Douglas further reserves the right to make unannounced inspections of the Bidder's facilities (during normal business hours).

SECTION II - STANDARD TERMS AND CONDITIONS

1. DEFINITION OF KEY WORDS USED IN THE SOLICITATION

Shall, Will, Must: Indicates a mandatory requirement. Failure to meet these mandatory requirements may result in the rejection of proposal as non-responsive.

Should: Indicates something that is recommended but not mandatory. If the bidder fails to provide recommended information, the City may, at its sole option, ask the bidder to provide the information or evaluate the offer without the information.

May: Indicates something that is not mandatory but permissible.

For purposes of this solicitation,	the following definitions shall apply:
"A.R.S."	Arizona Revised Statute
"Bidder"	Any person or firm submitting a competitive bid in response to a solicitation such as an Invitation for Bid (IFB) or Request for Quotation (RFQ).
"Buyer"	City of Douglas staff person responsible for the solicitation.
"Days"	Means calendar days unless otherwise specified.
"Contractor"	The individual, partnership, or corporation who, as a result of the competitive process, is awarded a contract by City of Douglas.
"Contract"	The legal agreement executed between City of Douglas and the Contractor.
"Contract Representative"	City of Douglas employee or employees who have specifically been designated to act as a contact person or persons to the Contractor, and responsible for monitoring and overseeing the Contractor's performance under this contract.
"Employer"	Any individual or type of organization that transacts business in this state, that has a license issued by an agency in this state and employs one or more employees in this state. Employer includes this state, any political subdivision of this state and self-employed persons. In the case of an independent contractor, employer means the independent contractor and does not mean the person or organization that uses contract labor. (A.R.S. § 23-211).
"EPA"	Environmental Protection Agency
"Offer"	Means bid or quotation.
"Solicitation"	Means an Invitation for Bid (IFB) or Request for Quote (RFQ).
"Suppliers"	Firms, entities or individuals furnishing goods or services directly to City of Douglas.
"Vendor"	A seller of goods or services.

2. CONTRACT INTERPRETATION

2.1 APPLICABLE LAW: This Contract shall be governed by the law of the State of Arizona, and suits pertaining to this Contract shall be brought only in Federal or State courts in Cochise County, State of Arizona.

2.2 IMPLIED CONTRACT TERMS: Each and every provision of law and any clause required by law to be in the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

- **2.3 CONTRACT ORDER OF PRECEDENCE:** In the event of a conflict in the provisions of the Contract, as accepted by City of Douglas and as they may be amended, the following shall prevail in the order set forth below:
 - A. Special terms and conditions
 - B. Standard terms and conditions
 - C. Statement or scope of work
 - D. Specifications
 - E. Attachments
 - F. Exhibits
 - G. Instructions to Bidders
 - H. Other documents referenced or included in the Invitation for Bid.

2.4 ORGANIZATION – EMPLOYMENT DISCLAIMER: The Agreement resulting hereunder is not intended to constitute, create, give rise to or otherwise recognize a joint venture agreement or relationship, partnership or formal business organization of any kind, and the rights and obligations of the parties shall be only those expressly set forth in the agreement. The parties agree that no persons supplied by the Contractor in the performance of Contractor's obligations under the agreement are considered to be City of Douglas' employees and that no rights of City of Douglas civil service, retirement or personnel rules accrue to such persons. The Contractor shall have total responsibility for all salaries, wage bonuses, retirement, withholdings, workmen's compensation, occupational disease compensation, unemployment compensation, other employee benefits and all taxes and premiums appurtenant thereto concerning such persons and shall save and hold the City of Douglas harmless with respect thereto.

2.5 SEVERABILITY: The provisions of this Contract are severable to the extent that any provision or application held to be invalid shall not affect any other provision or application of the contract which may remain in effect without the invalid provision or application.

2.6 NON-WAIVER OF LIABILITY: City of Douglas cannot agree to waive any lawful or legitimate right to recover monies lawfully due it. Therefore, any Contractor agrees that it will not insist upon or demand any statement whereby City of Douglas agrees to limit in advance or waive any right City of Douglas might have to recover actual lawful damages in any court of law under applicable Arizona law.

2.7 **PAROLE EVIDENCE:** This Agreement is intended by the parties as a final expression of their agreement and is intended also as a complete and exclusive statement of the terms of this agreement. No course of prior dealings between the parties and no usage in the trade shall be relevant to supplement or explain any term used in this Contract. Acceptance or acquiescence in a course of performance rendered under this contract shall not be relevant to determine the meaning of this Contract even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity to object.

3. CONTRACT ADMINISTRATION AND OPERATION

3.1 RECORDS: All books, accounts, reports, files and other records relating to the contract shall be subject at all reasonable times to inspection and audit by City of Douglas for five years after completion of the contract. Such records will be produced at City of Douglas.

3.2 PUBLIC RECORD: All bids submitted in response to this invitation shall become the property of City of Douglas and become a matter of public record available for review pursuant to Arizona State law. If a bidder believes that a specific section of its bid response is confidential, the bidder shall isolate the pages marked confidential in a specific and clearly labeled section of its bid response. The bidder shall include a written statement as to the basis for considering the marked pages confidential including the specific harm or prejudice if disclosed and City of Douglas will review the material and make a determination.

3.3 CONFIDENTIALITY AND DATA SECURITY: All data, regardless of form, including originals, images and reproductions, prepared by, obtained by, or transmitted to Contractor in connection with this agreement is confidential, proprietary information owned by City of Douglas. Except as specifically provided in this agreement, the Contractor shall not disclose data generated in the performance of the service to any third person without the prior written consent of City of Douglas. Personal identifying in information, financial account information, or restricted City of Douglas information, whether electronic format or hard copy, must be secured and protected at all times to avoid unauthorized access. At a minimum, Contractor must encrypt and/or password protect electronic files. This includes data saved to laptop computers, computerized devices or removable storage devices.

When personal identifying information, financial account information, or restricted City of Douglas information, regardless of its format, is no longer necessary, the information must be redacted or destroyed through appropriate and secure methods that ensure the information cannot be viewed, accessed or reconstructed.

In the event that data collected or obtained by the Contractor in connection with this agreement is believed to have been compromised, Contractor shall notify City of Douglas immediately. Contractor agrees to reimburse City of Douglas for any costs incurred by City of Douglas to investigate potential breaches of this data and, where applicable, the cost of notifying individuals who may be impacted by the breach.

Contractor agrees that the requirements of this section shall be incorporated into all subcontractor agreements entered into by the Contractor. It is further agreed that a violation of this section shall be deemed to cause irreparable harm justifies injunctive relief in court. A violation of this section may result in immediate termination of this agreement without notice.

Contractor shall indemnify, defend, save and hold harmless City of Douglas and its officers, directors, employees and agents, from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorney's fees and cost of claims processing, investigation and litigation) for any loss caused, or alleged to be caused, in whole or in part, by Contractor's or any of its owners', officers', directors', agents' or employees' failure to comply with the requirement of this section. This indemnity includes any claim arising out of the failure of contractor to conform to any federal, state or local law, statute, ordinance, rule, regulation or court decree.

The obligations of Contractor under this section shall survive the termination of this agreement.

3.4 LICENSES AND PERMITS: Contractor shall keep current Federal, State, and local licenses and permits required for the operation of the business conducted by the Contractor as applicable to this contract.

3.5 ADVERTISING: Contractor shall not advertise or publish new releases concerning this contract without the prior written consent of City of Douglas, and City of Douglas shall not unreasonably withhold permission.

3.6 EXCLUSIVE POSSESSION: All services, information, computer program elements, reports, and other deliverables which may be created under this contract are the sole property of City of Douglas and shall not be used or released by the Contractor or any other person except with prior written permission by City of Douglas.

3.7 OWNERSHIP OF INTELLECTUAL PROPERTY: Any and all intellectual property, including but not limited to copyright, invention, trademark, trade name, service mark, and/or trade secrets created or conceived pursuant to or as a result of this contract and any related subcontract ("Intellectual Property"), shall be considered work for hire and City of Douglas shall be considered the creator of such Intellectual Property. City of Douglas shall own the entire right, title and interest to the Intellectual Property throughout the world. Contractor shall notify City of Douglas within thirty (30) days of the creation of any

Intellectual Property by it or its subcontractor(s). Contractor, on behalf of itself and any subcontractor(s), agrees to execute any and all document(s) necessary to assure ownership of the Intellectual Property vests in City of Douglas and shall take no affirmative actions that might have the effect of vesting all or part of the Intellectual Property in any entity other than City of Douglas. The Intellectual Property shall not be disclosed by Contractor or its subcontractor(s) to any other entity without the express written authorization of City of Douglas. If by operation of law, the Intellectual Property is not owned in its entirety by City of Douglas automatically upon its creation, then Contractor agrees to assign and hereby assigns to City of Douglas the ownership of the Intellectual Property. The Contractor agrees to take such further action and execute and deliver such further agreements and other instruments as City of Douglas may reasonably request to give effect to this section 3.7.

It is expressly agreed by Contractor that these covenants are irrevocable and perpetual.

3.8 HEALTH, ENVIRONMENTAL AND SAFETY REQUIREMENTS: The Contractor's products, services and facilities shall be in full compliance with all applicable Federal, State and local health, environmental and safety laws, regulations, standards, codes and ordinances, regardless of whether or not they are referred to by City of Douglas. At the request of City of Douglas, the Contractor shall provide City of Douglas:

- Environmental, safety and health regulatory compliance documents (written safety programs, training records, permits, etc.) applicable to services provided by the Contractor in this contract
- A list of all federal, state, or local (EPA, OSHA, Cochise County, etc.) citations or notice of violations issued against their firm or their subcontractors including dates, reasons, dispositions and resolutions.

City of Douglas shall have the right, but not the obligation to inspect the facilities, transportation vehicles or vessels, containers and disposal facilities provided by the Contractor or subcontractor. City of Douglas shall also have the right to inspect operations conducted by the Contractor or subcontractor in the performance of this agreement.

3.9 COMPLIANCE WITH LAWS: Contractor agrees to fully observe and comply with all applicable Federal, State and local laws, regulations, standards, codes and ordinances when performing under this Contract regardless of whether or not they are referred to by City of Douglas. Contractor agrees to permit City of Douglas inspection of Contractor's business records, including personnel records to verify any such compliance.

Because the Contractor will be acting as an independent contractor, City of Douglas assumes no responsibility for the Contractor's acts.

3.10 CONTINUATION DURING DISPUTES: Contractor agrees that notwithstanding the existence of any dispute between the parties, insofar as is possible, under the terms of the contract, the Contractor shall continue to perform the obligations required of Contractor during the continuation of any such dispute unless enjoined or prohibited by an Arizona Court of competent jurisdiction.

3.11 EMERGENCY PURCHASES: City of Douglas reserves the right to purchase from other sources those items which are required on an emergency basis and cannot be supplied immediately from stock by the Contractor.

3.12 STRICT PERFORMANCE: Failure of either party to insist upon the strict performance of any item or condition of the contract or to exercise or delay the exercise of any right or remedy provided in the contract, or by law, or the acceptance of materials or services, obligations imposed by this contract or by law shall not be deemed a waiver of any right of either party to insist upon the strict performance of the contract.

4. COSTS AND PAYMENTS

4.1 PAYMENT TERMS: City of Douglas shall make every effort to process payment for the purchase of material or services within 30 calendar days after receipt of a correct invoice unless a good faith dispute exists to any obligation to pay all or a portion of the account. Payment terms are specified in the bid.

4.2 PAYMENT DEDUCTION OFFSET PROVISION: Contractor acknowledges City of Douglas will make no payment to any Contractor as long as there is an outstanding obligation due to City of Douglas. Contractor agrees that any obligation it owes to City of Douglas will be offset against any payment due to the Contractor from City of Douglas.

4.3 LATE SUBMISSION OF CLAIM BY CONTRACTOR: City of Douglas will not honor any invoices or claims which are tendered one (1) year after the last item of the account accrued.

4.4 NO ADVANCE PAYMENTS: Advance payments are not authorized. Payment will be made only for actual services or commodities that have been received.

4.5 MAXIMUM PRICES: City of Douglas shall not be invoiced at prices higher than those stated in any contract resulting from this bid. Bidder certifies, by signing this bid that the prices offered are no higher than the lowest price the Bidder charges other buyers for similar quantities under similar conditions. Bidder further agrees that any reductions in the price of the goods or services covered by this bid and occurring after award will apply to the undelivered balance. The bidder shall promptly notify City of Douglas of such price reductions.

4.6 F.O.B. POINT: All prices are to be quoted F.O.B. delivered, unless otherwise specified elsewhere in this solicitation.

5. CONTRACT CHANGES

5.1 CONTRACT AMENDMENTS: Contracts shall be modified only by a written contract amendment signed by City of Douglas and persons duly authorized to enter into contracts on behalf of the Contractor.

5.2 ASSIGNMENT - DELEGATION: No right or interest in this contract nor monies due thereunder shall be assigned in whole or in part without written permission of City of Douglas, and no delegation of any duty of Contractor shall be made without prior written permission of City of Douglas, which may be withheld for good cause. Any assignment or delegation made in violation of this section shall be void.

5.3 NON-EXCLUSIVE CONTRACT: Any contract resulting from this solicitation shall be awarded with the understanding and agreement that it is for the sole convenience of City of Douglas reserves the right to obtain like goods or services from another source when necessary.

5.4 AUTHORIZED CHANGES: City of Douglas reserves the right at any time to make changes in any one or more of the following: (a) specifications; (b) methods of shipment or packing; (c) place of delivery; (d) time of delivery; and/or (e) quantities. If the change causes an increase or decrease in the cost of or the time required for performance, an equitable adjustment may be made in the price or delivery schedule, or both. Any claim for adjustment shall be deemed waived unless asserted in writing within thirty (30) days from the receipt of the change. Price increases or extensions of delivery time shall not be binding on City of Douglas unless evidenced in writing and approved by City of Douglas prior to the institution of the change.

6. RISK OF LOSS AND LIABILITY

6.1 TITLE AND RISK OF LOSS: The title and risk of loss of material or service shall not pass to City of Douglas actually receives the material or service at the point of delivery; and such loss, injury, or destruction shall not release seller from any obligation hereunder.

6.2 ACCEPTANCE: All material or service is subject to final inspection and acceptance by City of Douglas. Material or service failing to conform to the specifications of this contract shall be held at Contractor's risk and may be returned to the Contractor. If so returned, all costs are the responsibility of the Contractor. Noncompliance shall conform to the cancellation clause set forth in this document.

6.3 **GENERAL INDEMNIFICATION:** Contractor shall indemnify, defend, save and hold harmless City of Douglas and its officers, directors, agents, and employees (hereinafter referred to as "Indemnitee") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorneys' fees, and costs of claim processing, investigation and litigation) (hereinafter referred to as "Claims") for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of Contractor or any of its owners, officers, directors, agents, employees or subcontractors. This indemnity includes any claim or amount arising out of or recovered under the Workers' Compensation Law or arising out of the failure of such Contractor to conform to any Federal. State or local law, statute, ordinance, rule, regulation or court decree. It is the specific intention of the parties that the Indemnitee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnitee, be indemnified by Contractor from and against any and all claims. It is agreed that Contractor will be responsible for primary loss investigation, defense and judgment costs where this indemnification is applicable. In consideration of the award of this contract, the Contractor agrees to waive all rights of subrogation against City of Douglas, its officers, directors, agents, and employees for losses arising from the work performed by the Contractor for City of Douglas.

6.4 INDEMNIFICATION – PATENT, COPYRIGHT AND TRADEMARK. The Contractor shall indemnify and hold harmless the City against any liability, including costs and expenses, for infringement of any patent, trademark or copyright or other proprietary rights of any third parties arising out of contract performance or use by City of Douglas of materials furnished or work performed under this contract.

The Contractor agrees upon receipt of notification to promptly assume full responsibility for the defense of any suit or proceeding which is, has been, or may be brought against City of Douglas and its agents for alleged infringement, as well as for the alleged unfair competition resulting from similarity in design, trademark or appearance of goods by reason of the use or sale of any goods furnished under this contract and the Contractor further agrees to indemnify City of Douglas against any and all expenses, losses, royalties, profits and damages including court costs and attorney's fees resulting from the bringing of such suit or proceedings including any settlement or decree of judgment entered therein. City of Douglas may be represented by and actively participate through its own counsel in any such suit or proceedings if it so desires. It is expressly agreed by the seller that these covenants are irrevocable and perpetual.

6.5 FORCE MAJEURE: Except for payment of sums due, neither party shall be liable to the other nor deemed in default under this contract if and to the extent that such party's performance of this contract is prevented by reason of force majeure. The term "force majeure" means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Force majeure shall not include late performance by a subcontractor unless the delay arises out of a force majeure occurrence in accordance with this force majeure term and condition.

If either party is delayed at any time in the progress of the work by force majeure, the delayed party shall notify the other party in writing of such delay, as soon as is practical, of the commencement thereof and shall specify the causes of such delay in such notice. Such notice shall be hand-delivered or mailed certified-return receipt and shall make a specific reference to this provision, thereby invoking its provisions. The delayed party shall cause such delay to cease as soon as practicable and shall notify the other party in writing when it has done so. The time of completion shall be extended by contract modification for a period of time equal to the time that results or effects of such delay prevent the delayed party from performing in accordance with this contract.

6.6 LOSS OF MATERIALS: City of Douglas does not assume any responsibility, at any time, for the protection of or for loss of materials, from the time that the contract operations have commenced until the final acceptance of the work by the project manager.

6.7 DAMAGE TO CITY OF DOUGLAS PROPERTY: Contractor shall perform all work so that no damage to the building or grounds results. Contractor shall repair any damage caused to the satisfaction of City of Douglas at no cost to City of Douglas.

Contractor shall take care to avoid damage to adjacent finished materials that are to remain. If finished materials are damaged, Contractor shall repair and finish to match existing material as approved by City of Douglas at Contractor's expense.

7. WARRANTIES

7.1 GUARANTEE: Unless otherwise specified, all items shall be guaranteed for a minimum period of one (1) year from date of acceptance by City of Douglas against defects in material and workmanship. At any time during that period, if a defect should occur in any item that item shall be replaced or repaired by the Contractor at no obligation to City of Douglas except where it be shown that the defect was caused by misuse and not by faulty design.

7.2 QUALITY: Contractor expressly warrants that all goods or services furnished under this contract shall conform to the specifications, appropriate standards, and will be new and free from defects in material or workmanship. Contractor warrants that all such goods or services will conform to any statements made on the containers or labels or advertisements for such goods, or services, and that any goods will be adequately contained, packaged, marked and labeled. Contractor warrants that all goods or services furnished hereunder will be merchantable, and will be safe and appropriate for the purpose which goods or services of that kind are normally used. If Contractor knows or has reason to know the particular purpose for which City of Douglas intends to use the goods or services, Contractor warrants that goods or services furnished hereunder shall not affect the Contractor's obligation under this warranty, and such warranties shall survive inspection, test, acceptance and use. Contractor's warranty shall run to City of Douglas, its successors, and assigns.

7.3 RESPONSIBILITY FOR CORRECTION: It is agreed that the Contractor shall be fully responsible for making any correction, replacement, or modification necessary for specification or legal compliance. In the event of any call back, Contractor agrees to give City of Douglas the first priority. Contractor agrees that if the product or service offered does not comply with the foregoing, City of Douglas has the right to cancel the purchase at any time with full refund within 30 calendar days after notice of non-compliance and Contractor further agrees to be fully responsible for any consequential damages suffered by City of Douglas.

7.4 LIENS: Contractor shall hold City of Douglas harmless from claimants supplying labor or materials to the Contractor or his subcontractors in the performance of the work required under this contract. Contractor shall provide written certification that all liens against materials and labor have been satisfied, before City of Douglas will make payment.

7.5 QUALITY STANDARDS OF MATERIAL AND SERVICES: If desired by City of Douglas, items/services bid shall be subjected to testing, dissection or analysis by a recognized testing laboratory or consultant selected by City of Douglas to determine that the material(s) submitted for bid conform to the bid specifications. The cost of testing, dissection or analysis shall be borne by the bidder.

7.6 REPAIR AND REPLACEMENT PARTS: Repair or replacement parts for existing equipment may be accomplished by the Contractor using other than original equipment manufacturer's (OEM) parts. However, all parts or equipment furnished must be equal or exceed that of the original equipment manufacturer(s) in material and warranty.

7.7 WORKMANSHIP: Where not more specifically described in any of the various sections of these specifications, workmanship shall conform to all of the methods and operations of best standards and accepted practices of the trade or trades involved, and shall include all items of fabrication, construction or installation regularly furnished or required for completion of the services. All work shall be executed by personnel skilled in their respective lines of work.

8. CITY OF DOUGLAS' CONTRACTUAL RIGHTS

8.1 RIGHT TO ASSURANCE: Whenever one party to this contract in good faith has reason to question the other party's intent to perform, the former party may demand that the other party give a written assurance of this intent to perform. In the event that a demand is made and no written assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of this contract.

8.2 NON-EXCLUSIVE REMEDIES: The rights and remedies of City of Douglas under this Contract are non-exclusive.

8.3 DEFAULT IN ONE INSTALLMENT TO CONSTITUTE BREACH: Each installment or lot of the agreement is dependent on every other installment or lot and a delivery of nonconforming goods or a default of any nature under one installment or lot will impair the value of the whole agreement and constitutes a total breach of the agreement as a whole.

8.4 ON TIME DELIVERY: Because City of Douglas is providing services which involve health, safety and welfare of the general public, delivery time is of the essence. Delivery must be made in accordance with the delivery schedule promised by the Bidder.

8.5 DEFAULT: In case of default by the bidder, City of Douglas may, by written notice, cancel this contract and repurchase from another source and may recover the excess costs by (1) deduction from an unpaid balance due; (2) collection against the bid and/or performance bond, or (3) a combination of the aforementioned remedies or other remedies as provided by law.

8.6 COVENANT AGAINST CONTINGENT FEES: Seller warrants that no person or selling agent has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employers or bona fide established commercial or selling agencies maintained by the seller for the purpose of securing business. For breach or violation of this warranty, City of Douglas shall have the right to annul the contract without liability or in its discretion to deduct from the contract price a consideration, or otherwise recover the full amount of such commission, brokerage or contingent fee.

8.7 ESTIMATED QUANTITIES OR DOLLAR AMOUNTS (REQUIREMENTS CONTRACTS

ONLY): Quantities and dollar amounts listed are City of Douglas' best estimate and do not obligate City of Douglas to order or accept more than City of Douglas' actual requirements during period of this agreement, as determined by actual needs and availability or appropriated funds. It is expressly understood and agreed that the resulting contract is to supply City of Douglas with its complete actual requirement for the contract period, except that the estimated quantity shown for each bid item shall not be exceeded by 10 percent without the express written approval of City of Douglas. Any demand or order made by any employee of City of Douglas, other than its designated representative, for quantities in excess of the estimated quantities and dollar amounts shall be void if the written approval of City of Douglas was not received prior to the Contractor's performance.

8.8 COST JUSTIFICATION: In the event only one response is received, City of Douglas may require that the bidder submit a cost proposal in sufficient detail for City of Douglas to perform a cost/price analysis to determine if the bid price is fair and reasonable.

9. CONTRACT TERMINATION

9.1 GRATUITIES: City of Douglas may, by written notice to the Contractor, cancel this contract if it is found that gratuities, in the form of entertainment, gifts or otherwise, were offered or given by the Contractor or any agent or representative of the Contractor, to any employee of City of Douglas making any determinations with respect to the performing of such contract. In the event this contract is canceled by City of Douglas pursuant to this provision, City of Douglas shall be entitled, in addition to any other rights and remedies, to recover or withhold from the Contractor the amount of the gratuity.

9.2 CONDITIONS AND CAUSES FOR TERMINATION: This contract may be terminated at any time by mutual written consent, or by City of Douglas, with or without cause, upon giving thirty (30) days written notice to Contractor. City of Douglas at its convenience, by written notice, may terminate this contract, in whole or in part. If this contract is terminated, City of Douglas shall be liable only for payment under the payment provisions of this contract for services rendered and accepted material received by City of Douglas before the effective date of termination. Title to all materials, work-in-process and completed but undeliverable goods, will pass to City of Douglas after costs are claimed and allowed. The Seller shall submit detailed cost claims in an acceptable manner and shall permit City of Douglas to examine such books and records as may be necessary in order to verify the reasonableness of any claims.

City of Douglas reserves the right to cancel the whole or any part of this contract due to failure of Contractor to carry out any term, promise, or condition of the contract. City of Douglas will issue a written notice of default to Contractor for acting or failing to act as in any of the following:

In the opinion of City of Douglas, Contractor provides personnel who do not meet the requirements of the contract;

In the opinion of City of Douglas, Contractor fails to perform adequately the stipulations, conditions or services/specifications required in this contract;

In the opinion of City of Douglas, Contractor attempts to impose on City of Douglas personnel or materials, products or workmanship, which is of an unacceptable quality. Contractor fails to furnish the required service and/or product within the time stipulated in the contract;

In the opinion of City of Douglas, Contractor fails to make progress in the performance of the requirements of the contract and/or give City of Douglas a positive indication that Contractor will not or cannot perform to the requirements of the contract.

9.3 CONTRACT CANCELLATION: All parties acknowledge that this contract is subject to cancellation by City of Douglas pursuant to the provision of Section 38-511, Arizona Revised Statutes.

10. DISPUTE RESOLUTION

10.1 ALTERNATIVE DISPUTE RESOLUTION. The parties hereby agree that there shall be a sixty (60) day moratorium on litigation commencing on the day that a claim is filed by CONTRACTOR pursuant to A.R.S. § 12-821.01 during which time the parties will negotiate in good faith to resolve the dispute and evaluate the viability of pursuing alternative dispute resolution procedures such as mediation and arbitration.

10.2 ARIZONA LAW. This Agreement shall be governed and interpreted according to the laws of the State of Arizona.

10.3 JURISDICTION AND VENUE. The parties agree that this Agreement is made in and shall be performed in Cochise County. Any lawsuits between the Parties arising out of this Agreement shall be brought and concluded in the courts of Cochise County in the State of Arizona, which shall have exclusive jurisdiction over such lawsuits.

10.4 FEES AND COSTS. Except as otherwise agreed by the parties, the prevailing party in any adjudicated dispute relating to this Agreement is entitled to an award of reasonable attorney's fees, expert witness fees and costs including, as applicable, arbitrator fees; provided, however, that no award of attorney's fees shall exceed ten percent (10%) of the damages awarded the prevailing party unless the non-prevailing party has been determined to have acted in bad faith or in a frivolous manner during the adjudication.

11. INSURANCE REQUIREMENTS

11.1 REQUIREMENTS. Contractor, at its own expenses, shall purchase and maintain insurance of the types, amounts and coverage required in the most recent Maricopa Associations of Governments (MAG) sponsored and distributed "Uniform Standard Specifications for Public Works Construction".

11.2 PROOF OF INSURANCE. Prior to commencing work or services, Contractor shall furnish to City of Douglas Certificates of Insurance, issued by Contractor's insurer(s), as evidence that policies providing the required coverage, conditions and limits required by this document are in full force and effect and obtain from the City of Douglas' approval of such Certificates.

If a policy does expire during the life of this document, a renewal certificate must be sent to City of Douglas five (5) days prior to the expiration date.

SECTION III – SPECIAL TERMS AND CONDITIONS

Construction Contract Language

All contracts must have a clause requiring compliance with the AMERICAN IRON AND STEEL requirements of the Act.

The Contractor acknowledges to and for the benefit of _____ ("Owner") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Owner or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Owner resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Owner). While the Contractor has no direct contractual privity with the State, as a lender to the Owner for the funding of its project, the Owner and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

1. FOB POINT

Prices quoted shall be FOB destination and delivered, as required, to the following point(s): Well No. 14 site in Douglas, AZ 85607.

Additional locations may be added through-out the life of the contract.

2. PRICE ADJUSTMENTS

All prices submitted shall be firm and fixed for a period of one-year from the bid opening date. Pass through price adjustments will be considered annually after that date provided said adjustments are submitted in writing with thirty (30) calendar days advanced notice. Requests shall be accompanied with written documentation from the manufacturer confirming the price increase. City of Douglas will be the sole judge in determining the allowable adjustment. Price and discount adjustment requests shall be sent to <u>City of Douglas at 425 Tenth Street, Douglas, AZ 85607.</u> The contractor acknowledges and agrees that it will repay all monies paid a requested price increase unless price increase was specifically approved, in writing by City of Douglas.

3. CATALOGS AND PRICE PROPOSAL

Contractor must provide with their submittal the date of the current manufacturer's price proposal, and must identify the catalog that will be in effect at the commencement of the contract. Contractor shall provide the manufacturer's documented price proposal in the form of hard copy or CD or DVD. City of Douglas reserves the right to request additional manufacturer catalogs or CD/DVD copies throughout the life of the contract.

Unless the vendor takes specific exception, any terms and conditions contained in price proposal or product catalog(s) submitted shall not take precedence over the terms and conditions specified herein.

All invoices must include the manufacturer's part number, list price, net price extended and totaled. City of Douglas reserves the right to request hard copy of manufacturer's documented prices for any item(s) invoiced.

4. TAX EXEMPTION

Pursuant to A.R.S. § 42- 5061, pipes or valves four inches in diameter or larger used to transport oil, natural gas, artificial gas, water or coal slurry, including compressor units, regulators, machinery and equipment, fittings, seals and any other part that is used in operating the pipes or valves are exempt from the imposition of sales or use tax.

5. AWARD

Award will be made on an "all or none" basis. Bids submitted without individual item price listed will be considered as nonresponsive and rejected.

6. METHOD OF ORDERING

Individuals specifically authorized by City of Douglas, will notify the Contractor to proceed construction either with a purchase order number or the project name. Vendor invoices, packing slips, and delivery tickets must contain City of Douglas' project name or order number.

7. METHOD OF INVOICING (VENDOR INVOICE)

Invoice must include the following:

- A. City of Douglas project name or purchase order number.
- B. Items listed individually by the written description and part number.
- C. Unit price, extended and totaled.
- D. Quantity ordered, back ordered, and shipped.
- E. Applicable tax.
- F. Invoice number and date.

- G. "Ship-to" address.
- H. Payment terms.
- I. FOB terms.
- J. Payment schedule as follows:
 - a. 20% upon receipt of purchase order
 - b. 20% upon receipt of submittals for construction
 - c. 50% upon receipt of all equipment, parts, and materials, to be completed in no longer than 14 weeks after the approval of the shop drawings
 - d. 10% upon system startup

8. METHOD OF PAYMENT

Payment to be made from Vendor's invoice, and a copy of the signed delivery invoices, submitted to cover items received and accepted. Invoices must contain the project name or the order number. The invoice shall be included with each delivery or promptly mailed directly to City of Douglas.

9. PERFORMANCE INTERFERENCE

Contractor shall notify City of Douglas immediately of any occurrence and/or condition that interferes with the full performance of the contract and confirm it in writing within twenty-four (24) hours.

10. DELIVERY TIME

All deliveries shall be made between the hours of 7:00 a.m. and 4:30 p.m., local time, Monday through Friday, excluding holidays.

11. NEW EQUIPMENT

All items bid shall be new equipment supplied from the manufacturer. Bids for remanufactured equipment will be considered as non-responsive and rejected.

SECTION IV - SCOPE OF WORK

1. **REQUIREMENTS**

Contractor shall give at least seven (7) days of advanced notice to City of Douglas prior to commencing construction. Contractor shall coordinate and cooperate with the Owner for any constructions that may affect the existing facility operation and maintenance.

Vendor shall prepare and submitted a construction schedule to City of Douglas for review and approval within seven (7) calendar days of contract award, and at least seven (7) calendar days prior to beginning construction.

The complete pre-engineered arsenic treatment system shall be delivered to the Well 14 no later than fourteen (14) weeks after the date of Approval of Shop Drawings for the pre-engineered arsenic treatment system.

2. SCOPE OF WORK DESCRIPTION

The project includes the furnishing and commissioning a pre-engineered arsenic treatment system consisting of two vessels in lead-lag series configuration, as described in **Exhibit C** 'City of Douglas Well 14 Arsenic Water Treatment System Project Specification'. This includes the two arsenic adsorber vessels, the adsorbent media for startup and for the first changeout of both vessels, center piping rack, media support gravel, vent and pressure relief devices with piping, process piping, flow to waste, media backwash and utility connections, valves and instruments, and auxiliary systems. The completed system shall be complete and functional as the design intended. Project specifications 'City of Douglas Well 14 Arsenic Water Treatment System Project Specification' are provided in **Exhibit C**.

SECTION V - SUBMITTAL

Please submit one (1) original and one (1) copy of the Submittal (Section V). **Please submit only Section V, do not submit a copy of the entire IFB document.** This offer will remain in effect for a period of 120 calendar days from the bid opening date and is irrevocable unless it is in the City of Douglas' best interest to do so.

1. ALL OR NONE BID PRICE SCHEDULE AND DELIVERY SCHEDULE

Note: Prices offered shall include applicable state and local taxes. City of Douglas will pay all applicable taxes. Taxes must be listed as a separate item on all invoices.

ITEM NO.	WORK DESCRIPTION	QUANTITY	UNIT	EQUIPMENT PRICE OR UNIT PRICE	TOTAL INSTALLED PRICE INCLUDING TAX
1	Prepare and submit shop drawings and modify as requested for final approval by City of Douglas	1	LS	\$16,500.00	\$17,506.50
2	Furnish and install the arsenic treatment system including associated piping, valves, flow meters, pressure gauges, media and miscellaneous accessories.	1	LS	\$550,825.00	\$582,824.08
3	Assist contractor with installation, testing, and commissioning the arsenic treatment system	1	LS	\$6,950.00	\$7,373.95
4	Perform the first media changeout of both vessels, including supplying and replacing new media and removal and disposal of the previous media, as well as any operational changes between the two vessels for lead-lag configuration	1	LS	\$282,520.00	\$299,753.72
	Grand Total			\$856,795.00	\$907,458.25

GRAND TOTAL IN WORDS Nine Hundred Seven Thousand Four Hundred Fifty-Eight Dollars and Twenty-Five Cents

2. PAYMENT TERMS

Bidder offers a prompt payment discount of <u>0</u>% <u>30</u> calendar days to apply after receipt of invoice or final acceptance of the products, whichever is later. If no prompt payment discount is offered, enter 0 in the % space to indicate net 30 days, otherwise payment terms shall be 2% 20 days, net 30 days; effective after receipt of invoice or final acceptance of the products, whichever is later. Payment terms offering less than 20 calendar days will not be considered in the price evaluation of your bid. Any prompt payment terms offered must be clearly noted by the Contractor on all invoices submitted to City of Douglas for the payment of goods or services received.

3. EMERGENCY TWENTY-FOUR HOUR SERVICE CONTACT

Name: Jeffrey McCartney

Telephone Number: (602) 345-8600

Alternate Contact: Paul McAlpine

Telephone Number : (480) 895-9404

4. REFERENCES FOR PREVIOUS WORK

The following Table 4 shall be completed with a minimum of 3 references of work of a similar nature [raw and finished water quality, pressure, flow rates, media] completed in the last 10 years in the State of Arizona.

Reference Name	Phone Number	Dates of Work	Address
Steve Shepard Metro Water District Diablo Well Site	Office: (520) 209-2838	Completed 2014	6265 N La Canada Drive Tucson, AZ 85704
Joey Romo City of Buckeye Airport Facility	Office: (623) 349-6149	Completed 2016	423 Arizona Eastern Buckeye, AZ 85326
Don Wilson Forest Lakes Snow Well Facility	Office: (928) 535-5438	Completed 2014	4 Merzville Road Forest Lakes, AZ 85931
Steven R. Garabed SUEZ Water New York Grandview Wells Arsenic Site	Office: (845) 620-3319	Completed 2018	360 West Nyack Road West Nyack, NY 10994

Bid Opening Date: April 4, 2022

5. Media information and performance

The following Table 5 shall be completed identifying the arsenic removal media to be provided, the media volume per adsorber vessel, the EBCT per adsorber vessel, a number of bed volumes before media changeout for the Well 14 water quality characteristics and finished water quality goals, the cost as of March 31, 2022 for media changeout including the media, removal of the media and disposal of the media at an approved site and media purchase cost as of March 31, 2022 FOB Well 14.

Media provided	LayneRT
Media volume (ft³)/adsorber vessel	250 ft ³ /vessel
EBCT per tank (minutes)	2.34 minutes
Number of bed volumes before media changeout	82,600 to 97,600
Days in operation until changeout assuming 24-hr operation at 800 gpm	134 to 160 days. See appendix for additional information.
Cost of media changeout, including removal and disposal	\$20,260.00 per vessel for changeout including removal and disposal plus applicable taxes
Cost per cubic foot to purchase the media FOB Well 14.	\$485.00 per ft ³ plus applicable taxes

6. RECEIPT OF ADDENDA

Addendum No.	<u>Date</u>
1	4/8/2022
2	4/8/2022

City of Douglas 425 Tenth Street Douglas, AZ 85607 Phone: 520-417-7317 Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022

TO CITY OF DOUGLAS:

OFFER

The Undersigned hereby offers and agrees to furnish the material and or service(s) in compliance with all terms, conditions, specifications, and addenda issued as a result of Invitation for Bid and any written exceptions in the offer.

Arizona Sales Tax No. 07246330

Taxpayer's Federal Identification No. 48-0920712

Bidder certifies that bidder has read, understands, and will fully and faithfully comply with this Invitation for Bid, its attachments and any referenced documents. Bidder also certifies that the prices offered were independently developed without consultation with any of the other bidders or potential bidders.

Authorized Signature Date:	4/22/2022
Printed Name and Title:	Jeffrey C. McCartney, Interim Area Manager
Company Name:	Layne Christensen Company
Address:	1811 S Alma School Road, Suite 260
City, State and Zip Code:	Mesa, AZ 85210-3042
Telephone Number:	(602) 345-8600
Company's Fax Number:	(602) 345-8632
Email Address:	jeffrey.mccartney@gcinc.com
Payment Address: (If different fr Name:	om above) Layne Christensen Company
Address:	PO Box 743609
City, State and Zip Code:	Los Angeles, CA 90074-3609

City, State and Zip Code:

City of Douglas 425 Tenth Street Douglas, AZ 85607 Phone: 520-417-7317 Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022

ACCEPTANCE OF OFFER

The Offer is hereby accepted.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specifications, amendments, etc. and the Contractor's Offer as accepted by .

This contract shall henceforth be referred to as Contract No._____. The Contractor has been cautioned not to commence any billable work or provide any material or service under this contract until Contractor receives fully executed contract documentation.

City of Douglas Authorized Signature

Award Date
Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022

EXHIBIT A: CERTIFICATE OF INSURABILITY

I hereby certify that as an Offeror to City of Douglas for Supply of Well No. 14

Arsenic Treatment System

project, I am fully aware of Insurance Requirements contained in the Contract and by the submission of this offer, I hereby assure City of Douglas that I am able to produce the Insurance coverage required should I be selected to be awarded the Contract.

Should I be awarded the Contract by City of Douglas, and then become unable to produce the Insurance coverage specified within ten working days, I am fully aware and understand that I may not be considered for further projects by City of Douglas.

Signature of Offeror Jeffrey C. McCartney, Interim Area Manager Layne Christensen Company

Company

4/22/2022

Date

Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022

EXHIBIT B: CERTIFICATE OF INSURANCE

Project No:_____

The

_____ Certifies that the following insurance policies have been

issued on behalf of Name of Insured:

Address of Insured:

Type Of Insurance Effective Limits Of Carrier Policy No. Minimum Expiration Liability Date Amount of Date Coverage (1) Workmen's Statutory Compensation (2) Contractor's \$500.000 Each Protective occurrence **Bodily Injury** (3) Contractor(s) \$100,000 Each accident Protective \$100,000 aggregate Property Damage (4) Contractual \$500,000 Each Bodily Injury occurrence (5) Contractual \$100,000 Each accident aggregate Property \$100.000 Damage (6) Automobile \$500,000 Each **Bodily Injury** occurrence & Property Damage (7) Owner's liability \$1,000,000 Each occurrence

When the project includes construction of a new, or modification of an existing building (**in addition to the above types**):

(8) Fire and Extended Coverage plus Vandalism and Malicious Mischief For the Full Amount of the Contract, with the <u>City of Douglas</u> named as an additional insured.

Policy No. _____Exp. Date_____Amount_____

(9) Umbrella Coverage:

Policy Includes Coverage For:

A. 1. Damage caused by blasting

- 2. Damage caused by collapse or structural injury
 - 3. Damage to underground utilities
- B. Liability assumed in construction agreements and other types of contracts or agreements in effect in connection with insured operations.

C. All owned, hired or non-owned automotive equipment used in connection with the insured operation.

Bid Opening Date: April 4, 2022

D. Owner's Liability Policy shall remain in effect from date of final acceptance until the time limit for filing against the project has passed. Prior to final acceptance, Contractor shall provide an executed Certificate of Insurance extending the policy to this date.

It is agreed that none of these policies will be canceled or changed so as to affect this certificate until ten (10) days written notice of such cancellation or change has been delivered to <u>City of Douglas</u>.

It is further agreed that:

(1) These policies shall not expire until all work has been completed and the project has been accepted by the <u>Chaparral City Water Company</u>. (If a policy does expire during the life of the Contract, a renewal Certificate of the required coverage must be sent to the <u>City of Douglas</u> not less than five days prior to expiration date.)

This certificate is not valid unless countersigned by an authorized representative of the Insurance Company.

Date_____Countersigned by_____

Signature

Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022

Exhibit C: City of Douglas Well 14 Arsenic Water Treatment System Project Specification'

Well No. 14 Arsenic Treament System

City of Douglas 425 Tenth Street Douglas, AZ 85607 Phone: 520-417-7317

Bid Opening Date: April 4, 2022

American Iron and Steel Requirement P.L. 113-76, Section 436

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an "American Iron and Steel (AIS)" requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works.

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the "Administrator") finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States insufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

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(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following guidance excerpt has been provided from EPA:

(Complete guidance may be downloaded from: https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-aisrequirement)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

Lined or unlined pipes or fittings; Manhole Covers; Municipal Castings (defined in more detail below); Hydrants; Tanks; Flanges; Pipe clamps and restraints; Valves; Structural steel (defined in more detail below);

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Reinforced precast concrete; and Construction materials (defined in more detail below).

12) What does the term 'primarily iron or steel' mean?

'Primarily iron or steel' places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc.). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items,

must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon,

and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does 'produced in the United States' mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All

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manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from nonUS sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site

temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of 'municipal castings'?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They

typically provide access, protection, or housing for components incorporated into utility owned drinking

water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile

iron, or steel. Examples of municipal castings are:

Access Hatches; Ballast Screen; Benches (Iron or Steel); Bollards; Cast Bases; Cast Iron Hinged Hatches, Square and Rectangular; Cast Iron Riser Rings; Catch Basin Inlet; Cleanout/Monument Boxes;

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Construction Covers and Frames: Curb and Corner Guards; Curb Openings; Detectable Warning Plates; Downspout Shoes (Boot, Inlet); Drainage Grates, Frames and Curb Inlets; Inlets: Junction Boxes; Lampposts; Manhole Covers, Rings and Frames, Risers; Meter Boxes: Service Boxes: Steel Hinged Hatches, Square and Rectangular; Steel Riser Rings; Trash receptacles: Tree Grates: Tree Guards: Trench Grates; and Valve Boxes, Covers and Risers.

20) What is 'structural steel'?

Structural steel is rolled flanged shapes, having at least one dimension of their crosssection three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a 'construction material' for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered "structural steel". This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a 'construction material' for purposes of the AIS requirement?

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Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system. The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place

outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced

precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case,

the reinforcing bar and wire must be produced in the US and meet the same standards as for any other

iron or steel product. Additionally, the casting of the concrete product must take place in the US. The

cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Certification and Compliance

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Bid Opening Date: April 4, 2022

The attached "Contractor's American Iron and Steel Certification" must be executed and included in Envelope 1 of the bid package. Failure to complete the certification will result in Envelope 2 remaining sealed and the bid being returned. The contractor will supply to the loan recipient manufacturers' certifications for each iron and steel item documenting/asserting that all manufacturing processes occurred in the United States. Such certifications will be submitted with shop drawings.

Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022

CONTRACTOR'S AMERICAN IRON AND STEEL CERTIFICATION

As the contractor for the <u>City of Douglas Supply of Well No. 14 Arsenic Treatment System</u> project, I certify that I have read, understand, and will comply with the "American Iron and Steel (AIS)" requirements of section 436 of P.L. 113-76, Consolidated Appropriations Act, 2014 (Act) that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works.

Jeffrey C. McCartney

Layne Christensen Company

Name (Printed)

Company

Name (Signature)

4/22/2022

Date

Well No. 14 Arsenic Treament System

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AFFIDAVIT BY VENDOR CERTIFYING THAT THERE WAS NO COLLUSION IN RESPONSE TO SOLICITATION

STATE OF ARIZONA

CITY OF MESA

Jeffrey C. McCartney

(Name of Individual)

BEING DULY SWORN, DEPOSES AND SAYS: That he is Interim Area Manager

Of Layne Christensen Company

(Title)

(Name of Business)

That Pursuant to Section 34-253 of the Arizona Revised Statutes, he certifies as follows: That neither he nor anyone associated with said Layne Christensen Company

(Name of Business)

has directly, or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this project.

(Name) Interim Area Manager (Title) Layne Christensen Company (Name of Business)

Subscribed and sworn to before me this 21st day of April 2023

My commission Expires:

-12.2025

RHONDA J RODRIGUEZ NOTARY PUBLIC - ARIZONA MARICOPA COUNTY COMMISSION # 569919 MY COMMISSION EXPIRES JANUARY 12, 2025

Well No. 14 Arsenic Treament System

Bid Opening Date: April 4, 2022 This Temporary Authorization is made pursuant to, and in accordance with, GMS <u>FOA-SP-001 Limits of</u> <u>Authority Procedure</u> ("Procedure"). The undersigned authorizes and appoints <u>Jeffrey C. McCartney</u>, <u>Engineer IV</u> to bid projects, provide proposals, execute contract documents including change orders and purchase orders, and other necessary functions to advance projects and opportunities within their authority as dictated by the Limits of Authority Matrix Exhibit C for the period from January 1, 2022 through and including June 30, 2022.

This authority is subject to the terms and conditions of the Policy, the limits of authority granted to the undersigned pursuant to such Policy, the <u>FOA-GD-001 Limits of Authority Matrix</u> (Exhibits A & B & C) and all other applicable GMS policies.

Comments: Temproary Authorization expires June 30, 2022

Dated: January 11, 2022 Authorizing Individual:

Print Name: Kent M. Wartick, Vice President and Division Manager (WRD)

Instructions:

Form to be retained by authorizing individual and designee.

This form may be used to delegate signature authority for a bid, including an electronic bid. The comments section may be used to further identify the specific project. Please upload an executed copy to the opportunity in Granite's bidding system (CAM360).

Granite Management System (GMS)	Form #: FOA-F-005	Page 1 of 1
The printed version of this document is uncontrolled.	Effective Date: 12/22/20	Version No.: 2
The current version is stored in electronic format.	Approved: Treasurer; VP, General Counsel	and a second second



Appendix:

WATER RESOURCES



Drawings:

WATER RESOURCES



INSTRUMENT IDENTIFICATION LETTERS

	SUCCEEDING LETTERS	
READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
ALARM		
USER'S CHOICE (3)	USER'S CHOICE (3)	USER'S CHOICE (3)
	CONTROL	
SENSOR (PRIMARY ELEMENT)		
GLASS OR VIEWING DEVICE		
		HIGH
INDICATE		
	CONTROL STATION	
LIGHT		LOW
		MIDDLE OR INTERMEDIATE
USER'S CHOICE (3)	USER'S CHOICE (3)	USER'S CHOICE (3)
ORIFICE (RESTRICTION)		
TEST OR SAMPLE POINT		
RECORD OR PRINT		
	SWITCH	
	TRANSMIT	
MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
	VALVE, DAMPER OR LOUVER	
WELL		
UNCLASSIFIED (4)	UNCLASSIFIED (4)	UNCLASSIFIED (4)
	RELAY, COMPUTE, CONVERT	
	DRIVE , ACTUATOR, ETC.	

(1) ANY FIRST LETTER COMBINED WITH MODIFIER REPRESENTS A NEW AND SEPARATE MEASURED VARIABLE. EXAMPLES: PD= DIFFERENTIAL PRESSURE, FQ= INTEGRATED OR TOTALIZED FLOW. EXCEPTION IS THE MODIFIER "J" FOR MULTIPOINT SCANNING.

(2) FOR ANALYSIS NOT IDENTIFIED BY A SPECIFIC LETTER IN THE TABLE, USE FIRST LETTER "A". NEAR THE INSTRUMENT SYMBOL, SPECIFY THE NATURE OF THE ANALYSIS. EXAMPLE: SILICA. (3) MEANING OF A "USER CHOICE" LETTER SHALL BE CONSISTENT THROUGHOUT A PROJECT AND SHALL BE SPECIFIED IN THE DRAWING LEGEND.

(5) THE MODIFIER "SCAN" APPLIES TO MULTIPOINT PRINTING INSTRUMENTS,

	CONL		ORDER WITH	ALARM SWITCHES).
LIST (DF RE	<u>ELAY</u>		
	EXTRACT	n <u>s</u> I square root	REV	REVERSE
]	INTEGRA	TE	d∕ tt	DERIVATIVE
x ^N	RAISE T	0 POWER	A∕D	ANALOG DIGITAL
F(X)	GENERA	te function	DA	DIGITAL - ANALOG
1:1	VOLUME	BOOST	E/A 1/A	CONVERT SIGNAL FORM (TYPICAL EXAMPLES)
\geq	high se	ELECT		E = VOLTAGE $F = FREQUENCY$ $H = HYDRAULIC$
\leq	LOW SELECT			I = CURRENT O = ELECTROMAGNETIC OR SONIC P = PNEUMATIC (I ESTRUC)
\geq	HIGH -	LIMIT	R = RESISTANCE (ELECTRICAL)	
\leq				
		<u>INSTRU</u>	MENT COM	NNECTION SYMBOLS
EVICE		(ALL LINES	shall be fine II	n relation to process piping lines)
PE ACTUAT	OR			CONNECTION TO PROCESS
				PNEUMATIC SIGNAL
S .625	;			ELECTRICAL SIGNAL
	1	×	<u> </u>	FILLED, CAPILLARY TUBING
		· · ·	HYDRAULIC CONTROL	
OW LOOP)		_~~	\sim	. RADIO LIGHT OR SOUND SIGNAL (WITHOUT WIRE OR TUBING)
			• •	MECHANICAL LINKAGE
	i	_o_c	-0-0-	. INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)

U-S SHEE	DR	JOE	D OWNER:					
12E	AW C	3 N	CITY OF DOUGLAS, AZ.					
SC/	1N()22	D.:	Z CUSTOMER:	INSTALLATION LOCATION:				
ALE TO	3 N 2-(Q	► 🕅 STANTEC	DOUGLAS, AZ				
-: FAL 2	10	/IF 22						
).:)7	-1t 2-(EQUIPMENT TYPE:	MODEL NO .:	1138 North Alma School RD, Suite 207 Mesa, AZ 85201 (602) 345-8600			
1	-/			200 100 700	THIS INFORMATION IS THE DRODED TV OF LAVIE CHRISTENSEN AND IS			
<u>۱</u>	40	;)7			THIS INFORMATION IS THE FROFENT FOF EATINE OF MULTENSEN AND IS FOUND TO VOT STIDIE OF TO BETTIDIE AND DEVELVED THE CONTREMESTING AND			
REN)9				LUANED TO TOUSOBJECT TO RETURN ON DEMAND. IT'S CONTENTS ARE			
. <u>s.</u> A	90				CONFIDENTIAL AND MUST NOT BE COPIED OR GIVEN TO ANY THIRD PARTIES FOR LISE OR EXAMINATION INDI ESS OTHER WISE AGREED TO IN	A PRELIMINARY FOR QUOTE ONLY	MLP	3/10/2022
					WRITING BY LAYNE CHRISTENSEN.	D. REVISIONS	ВΥ	DATE







Installations:

WATER RESOURCES



τ 602-345-8600 graniteconstruction.com



PROJECT NAME:Hyde SchoolFLOWRATE:100 GPMCONTAMINANT:ArsenicEQUIPMENT:PES36YEAR BUILT:2010





Hickman Farms
350 GPM
Arsenic
PES84
2011





PROJECT NAME:	Buckeye, AZ – Airport Facility
FLOWRATE:	680 GPM
CONTAMINANT:	Arsenic
EQUIPMENT:	PES108
YEAR BUILT:	2016





PROJECT NAME:	Forest Lakes – Snow Well
FLOWRATE:	350 GPM
CONTAMINANT:	Arsenic
EQUIPMENT:	PES84
YEAR BUILT:	2014





PROJECT NAME:	Grandview Arsenic Wells
FLOWRATE:	450 GPM
CONTAMINANT:	Arsenic
EQUIPMENT:	PES96
YEAR BUILT:	2018



Media Information:

WATER RESOURCES







A **GRANITE** COMPANY

PUMP EQUIPMENT

- Pump Equipment Design and Installation
- Pump Equipment Maintenance and Repair
- ✓ Full Service Machine Shops
- Predictive Well Maintenance
 Programs (Annual Well Pump
 Efficiency & Performance Testing)
- ✓ Variable Frequency Drive Installations

MAINTENANCE & REHABILITATION

- ✓ Mechanical Methods
- ✓ Chemical Methods
- Self-Contained Mobile Treatment Units (CTU)
- ✓ Well Testing Services
- ✓ Logging Services
- ✓ Well Development & Redevelopment
- Well Abandonment

CONSTRUCTION & ELECTRICAL

- ✓ Design Build Well Sites
- Electrical Upgrades
- ✓ Booster Stations

DRILLING

- ✓ Air Rotary Drilling
- ✓ Direct Mud Rotary
- ✓ Reverse Circulation Rotary
- ✓ Dual and Triple Wall Reverse Circulation
- ✓ Dual Wall Percussion Hammer
- ✓ Dual Rotary Casing Advance

WATER TREATMENT TECHNOLOGIES: LANYERT[®] ADSORPTIVE ARSENIC MEDIA

LayneRT is a long-lasting, high-capacity technology that provides rapid adsorption kinetics without generating any fines. Not only does LayneRT provide optimal flow dynamics, no backwashing (no onsite residuals), and a low pressure drop, but it is also regenerable, thereby mitigating the liability associated with waste disposal.

The LayneRT Media Service Program was developed to significantly reduce the operating costs associated with the treatment of arsenic in potable water supply systems. This turn-key program can be applied to existing adsorption and coagulation-filtration systems in addition to new construction projects.

EVALUATION OF TREATMENT EFFICIENCY

Understanding the full life-cycle costs of each treatment option is imperative for responsible investment. Layne understands the design, construction, and operation costs of infrastructure and provides an informed analysis of the costs and benefits of different solutions through pilot testing services.

HIGH CAPACITY AND LONG LASTING

LayneRT provides a significant improvement in the efficiency and longevity of adsorptive arsenic media, thus reducing the operating cost associated with removing arsenic (arsenate and arsenite) from water. Its ideal blend of selectivity and durability means that LayneRT can reliably and efficiently reduce arsenic to safe consumption levels.

DURABLE STRUCTURE

LayneRT is comprised of a hybrid resin bead that is attrition resistant and does not generate fines. Hydrous metal oxides are impregnated to the surface and throughout the resin beads.

SMALLER FOOTPRINT

LayneRT's minimum contact time is two minutes, which is substantially less than other adsorptive technologies. A lower contact time enables systems using LayneRT to have a smaller system footprint, reducing facility requirements and system costs.

SERVICE PROGRAM

Regenerating LayneRT eliminates onsite disposal residuals and reduces the amount of waste that must be disposed of by over 90% compared to most sorbents. Convenient regeneration services are available throughout the United States.

WATER TREATMENT TECHNOLOGIES:

LANYERT® ADSORPTIVE ARSENIC MEDIA

LAYNERT – THE BEST SELECTION FOR BLENDED OR FULL FLOW ARSENIC TREATMENT



Component	Well #14 (mg/l)	Well #18 (mg/l)
As	0.028 - 0.032	0.009 - 0.013
pH	8.2 - 8.5	7.6 – 8.1
SiO ₂	27	18
Fe	< 0.010	< 0.030
Mn	0.03	0.04
SO ₄	25	25
PO ₄	<0.150	< 0.250
Species	V:100%	V:100%

Wells located in Tucson, Arizona area.

THE LAYNERT DIFFERENCE

- + NSF/ANSI Standard 61 Certified
- + Longer lasting

aune

A GRADITE COMPANY

- + Higher capacity
- Lower operating cost
- + Proven iron chemistry
- + No fines
- ✤ No backwash
- + Regenerable
- + Limits liability associated with disposal
- + Optimal flow dynamics
- + Rapid adsorption kinetics
- Spent media passes Toxicity Characteristic Leaching Procedure (TCLP)

MEDIA SERVICE PROGRAM BENEFITS

- Reduces life cycle treatment costs
- + Eliminates residuals disposal
- + Mitigates long-term disposal liability
- + Consistent annual operating costs
- No backwash required
- Saves water

HIGHLIGHTS OF THE MEDIA SERVICE PROGRAM* Evaluation

- + Sample process water
- + Analyze water chemistry

Analysis

+ Provide financial performance evaluation

Replacement

+ Replace existing media

Service

+ Monitor system performance

Regeneration

- + Media regeneration
- + Arsenic monitoring

*Available service is provided on service contract basis and is available in most states.



SPECIFICATION					
	SPECIFICATION				
Flow Characteristics	Intermittent Flow (Peak Design)	Continuous Flow			
Service Flow Rate, gpm/ft ³	7.50	3.75			
Capacity*, gallons treated	Water Chemistry	and Usage Required			
Empty Bed Contact Time, min.	1.0	2.0			
Filter Media	Layr	neRT™			
Minimum Bed Depth, in.	24	- 30			
Underbedding Required (Tanks > 14 in.)	1/8 x 1/	16 NSF 61			
Loading Rate, gpm/ft ²	8 -	- 15			
Rated Service Flow @ Pressure Drop	See Tab	ble Below			
Temperature Range, F.	40°	- 100°			
Operating Pressure, psi	30 -	- 120			
Backwash, gpm/ft ²	Not Required	l (Maximum 4)			
Bulk Density (As Sold), lb/ft³		49			
Specific Gravity, g/mL	1.25	- 1.30			
	WATER QUALITY CRITERIA				
pH Range	5.5	- 8.5			
Arsenic**, mg/L	0.005	- 0.300			
Arsenic Type***	Pentavaler	nt / Trivalent			
Phosphate (PO4) / Phosphorous (P), mg/L	< 0.15	0 / <0.05			
Silica, mg/L	<	20			
Iron, mg/L	<	0.3			
Manganese, mg/L	<	0.05			
Hydrogen Sulfide	Non De	etectable			
Chlorine Residual	Non De	etectable			
Tannins	Non De	etectable			
Hardness	Not Ar	plicable			

*Capacity will vary by individual site based on water quality and usage. See Arsenic Facts, pg. 2.

**Arsenic concentration is above 0.300 mg/L please consult Layne Christensen Company.

***LayneRT[™] removes As (V) & As (III). Although, if As (III) is present, oxidation is recommended.





Media used for arsenic removal are affected by a number of water parameters. LayneRT[™] is designed to reduce pentavalent and trivalent arsenic. Actual performance of the system may vary depending on specific water conditions at the consumer's installation. Following installation of the system, the consumer should have the treated water tested for arsenic to verify that arsenic reduction is being achieved and the system is functioning properly.

The arsenic removal component of this system must be replaced at the end of its useful life when the treated water exceeds 0.010 mg/L (0.005 mg/L in NJ & SC) of arsenic.

ARSENIC FACTS

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two (2) forms (valences or oxidation states): pentavalent arsenic, also known as As(V), As(+5), or arsenate, and trivalent arsenic, also known as As(III), As(+3), or arsenite. In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both.

More information about arsenic and it toxicity can be found on the Agency for Toxic Substances and Disease Registry (<u>https://www.atsdr.cdc.gov/toxprofiles/phs2.html</u>) and United States Environmental Protection Agency at (<u>http://www.epa.gov/safewater/arsenic</u>).

Arsenic does not generally impart color, taste or smell to water and therefore, can only be detected by a chemical analytical test. Public water supplies are required to monitor delivered water for arsenic (trivalent plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. It is recommended that the test be done by a laboratory.

TOTAL ARSENIC

If the total arsenic concentration is above 0.300 mg/L please contact

ARSENITE As(III)

LayneR[™] is designed to remove As(V) and As(III). If arsenite is present it is recommended that you oxidize the water prior to the arsenic removal media. Contact your Water Systems Professional for oxidizing options

рΗ

Adsorption media operate most effectively between pH 5.5 and 8.5. At elevated pH, silica becomes a more aggressive interfering species. Do not use organic acids (such as citric or acetic acid) to adjust the pH ahead of the media.

SILICA

Levels above 20 mg/L begin to interfere with arsenic adsorption on the media when combined with a pH above 7.5.

PHOSPHATE (PO4)

Levels above 0.150 mg/L as PO4 or levels above 0.05 mg/L as P will reduce media life for arsenic adsorption.

IRON & MANGANESE

Soluble iron and manganese may precipitate onto the media bed. If iron and manganese are above the secondary MCLs (0.30 mg/L and 0.05 mg/L respectively), it is recommended to remove them before the arsenic removal system.

HARDNESS

Hardness does not significantly affect the performance of the arsenic removal media.

CAUTIONS

Oxidation / Disinfection: Oxidizing agents, such as chlorine or sodium hypochlorite (bleach), can degrade the LayneRT[™] media. If chlorine is present in the raw water (> 1.0 ppm residual), it should be removed prior to the media with activated carbon filtration.

Hydrogen Sulfide: If hydrogen sulfide is present, the LayneRT[™] media will temporarily remove it from the water before it is displaced by sulfates. Once it is displaced, the hydrogen sulfide will impart an odor to the water.

Acids: Do not use organic acids, such as citric or acetic acid, to adjust the pH ahead of the media.

		Assump	otions					
Scenario	As (V) ppb	As (III) ppb	Silica	рН	EBCT	Amount of Media (ft^3)	Bed Volumes	Estimated Lead vessel Life in total gallons (to full exhaustion)
Well 14	20	0	10	7.28	2.34	250.0	97,600	182,512,000
2	25	0	10	7.28	2.34	250.0	92,000	172,040,000
3	30	0	10	7.28	2.34	250.0	87,000	162,690,000
4	35	0	10	7.28	2.34	250.0	82,600	154,462,000
5	\uparrow							
	O	K						



City of Douglas Well 14 Arsenic Water Treatment Plant

Layne Responses to City/Stantec Questions in Regard to Bid Submission

May 15, 2022



Water Treatment 1811 S. Alma School Rd. Suite 260 Mesa, AZ 85210

т 602-345-8600 graniteconstruction.com

May 6, 2022

Jack Bryck P.E. BCEE Stantec Consulting Services 3133 W. Frye Rd. Suite 300 Chandler, AZ 85226

Re: Project: City of Douglas, AZ Well 14 Arsenic Treatment System

Dear Mr. Bryck,

We are pleased to provide the following responses to comments received by on our proposal date on 05/05/2022.

Review Comments:

- 1. The influent design basis was from previous discussions. See updated table below outlining the appropriate design information provided. The correct information was used to size and estimate bed life.
- 2. Iron concentration updated to <0.1-mg/L.
- 3. Layne's hybrid adsorptive resin media is ADEQ approved and installed in Arizona at an EBCT as low as 2.0 minutes due to it's increased capacity and superior adsorption kinetics. Correct, Layne can offer smaller vessels as a result of our resin performance. However, the increased performance of our resin comes with an increased cost in materials and production of the media on a per cubic foot basis. Forcing Layne to provide a full 4 minutes of EBCT will increase our costs compared to other bidders and may be unfair to Layne.
- 4. Arsenic design basis was per the bid specifications with a minimum of 20-ppb and maximum of 35-ppb.
- 5. The silica value presented at <30-ppm is a recommended maximum based on data not being available. At elevated pH levels (>7.8 S.U.) silica tends to come out of solution and can coat the media leading to shortened bed life. This is especially true when/if the plant is operated intermittently. If the silica value is higher than the represented value, Layne would want to take steps to mitigate the impact silica may have on the system.
- 6. Sulfate concentration updated to 155-mg/L.
- 7. Alkalinity concentration updated to 144-mg/L.
- 8. pH value updated to 7.28.
- 9. Noted on the gravel bed.

See supplemental documentation attached. Please do not hesitate to contact Layne should you have any additional questions, comments or clarifications.

Sincerely,

Layne Christensen Company

Jeffrey McCartney Interim Area Manager Water Treatment Group



Water Treatment 1811 S. Alma School Rd. Suite 260 Mesa, AZ 85210

τ 602-345-8600 graniteconstruction.com

I. <u>DESIGN BASIS</u>

Service Water Chemistry	Well 14
Iron*, mg/L	< 0.1 ppm
Manganese*, mg/L	< 0.02 ppm
Arsenic total, ug/L	35
Arsenic (V), ug/L	35
Arsenic (III), ug/L	< 1.0
Silica, mg/L	< 30
Vanadium, mg/L	0 (assumed)
Phosphate, mg/L	0 (assumed)
Sulfate, mg/L	155
Alkalinity (as CaCO3), mg/L	144
pH	7.28
Water Temperature, °F	70

* No data provided. Shown values are the recommended maximums.

Layne Proposal – Email Correspondence
From:	McCartney, Jeffrey <jeffrey.mccartney@gcinc.com></jeffrey.mccartney@gcinc.com>
Sent:	Friday, May 6, 2022 1:38 PM
То:	Bryck, Jack
Cc:	Simko, Chris; Lim, Kahao; Rene Rios; Luis Pedroza
Subject:	RE: Well 14 City of Douglas - Arsenic Water Treatment Plant - Layne Proposal
Attachments:	Douglas, AZ Well 14_Layne Response Letter_22.05.06.pdf

Jack,

Thank you for the feedback. Please see attached response letter with each comment addressed in the order they were noted on the proposal. Please let me know if you need anything additional.

Sincerely,



From: Bryck, Jack <<u>Jack.Bryck@stantec.com</u>>
Sent: Thursday, May 5, 2022 9:42 PM
To: McCartney, Jeffrey <<u>Jeffrey.McCartney@gcinc.com</u>>
Cc: Simko, Chris <<u>chris.simko@stantec.com</u>>; Lim, Kahao <<u>Kahao.Lim@stantec.com</u>>; Rene Rios
<<u>rene.rios@douglasaz.gov</u>>; Luis Pedroza <<u>luis.pedroza@douglasaz.gov</u>>
Subject: Well 14 City of Douglas - Arsenic Water Treatment Plant - Layne Proposal

CAUTION: This email originated from outside of Granite

Jeffery: Good evening. We have reviewed the Layne Bid Proposal for the above project. We have noted several items in regard to the Layne proposal. A copy of the Layne proposal with the specific items notes accompanies. It would be appreciated if you could review and address our comments by the COB on May 7, 2022. Thank you. Jack

Jack Bryck P.E. BCEE

Email jack.bryck@stantec.com Cell 480 244 6886

StantecConsulting Services 3133 West Frye Road Suite 300 Chandler, AZ 85226





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Layne Bid Information Request – Email Correspondence

From:	McCartney, Jeffrey <jeffrey.mccartney@gcinc.com></jeffrey.mccartney@gcinc.com>
Sent:	Friday, May 13, 2022 5:12 AM
То:	Bryck, Jack
Subject:	RE: Well 14 City of Douglas- Arsenic Treatment Plant Layne Bid- Information
	Request

Jack,

The \$20,260 is for change out services per vessel no media included. That would be for the following:

- Layne supervision of the following activities coordinated by Layne.
 - Media sample and lab fees for TCLP testing
 - Removal of media from vessels
 - Use of vacuum truck
 - Dewatering supersacks
 - o Disposal costs
 - Transportation of media to landfill
 - Landfill fees
 - o Disinfection of empty vessel
 - Isolated from current
 - Installation of new media into vessel
 - Review of system with operator

The full \$282k is an upfront cost for both change outs, in two trips and includes the new media.

They were split up that way because the line below was for a per cubic foot cost of the media so it seemed redundant to include the media in both.

Sincerely,





From: Bryck, Jack <<u>Jack.Bryck@stantec.com</u>>
Sent: Thursday, May 12, 2022 5:29 PM
To: McCartney, Jeffrey <<u>Jeffrey.McCartney@gcinc.com</u>>
Subject: RE: Well 14 City of Douglas- Arsenic Treatment Plant Layne Bid- Information Request

CAUTION: This email originated from outside of Granite

Jeffrey: God afternoon. Just a quick update. To confirm 2a below in the amount of \$20,260 is complete changeout of the media in one vessel?

3a. I am not sure I understand what the changeout cost of \$282K for two vessels of \$141K for one vessels is for.

Clarification would be appreciated.

Jack

Jack Bryck BCEE PE Principal, Process Engineering



Direct: 480 508-1369 Mobile: 480-244-6886 Jack.Bryck@stantec.com

Stantec

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From: McCartney, Jeffrey <<u>Jeffrey.McCartney@gcinc.com</u>>
Sent: Monday, May 9, 2022 9:54 AM
To: Bryck, Jack <<u>Jack.Bryck@stantec.com</u>>
Cc: Flores, Cassandra <<u>Cassandra.Flores@stantec.com</u>>; Hamblin, Elizabeth
<<u>Elizabeth.Hamblin@stantec.com</u>>; Simko, Chris <<u>chris.simko@stantec.com</u>>; Luis Pedroza
<<u>luis.pedroza@douglasaz.gov</u>>; <u>elberto.acosta@douglasaz.gov</u>; Carlos De La Torre
<<u>carlos.delatorre@douglasaz.gov</u>>
Subject: RE: Well 14 City of Douglas- Arsenic Treatment Plant Layne Bid- Information Request

Jack,

See responses below in red.

Sincerely,



JEFFREY MCCARTNEY

Interim Area Manager

602-345-8536 🗍 602-501-3026

graniteconstruction.com



From: Bryck, Jack <<u>Jack.Bryck@stantec.com</u>>

Sent: Friday, May 6, 2022 5:19 PM

To: McCartney, Jeffrey <<u>Jeffrey.McCartney@gcinc.com</u>>

Cc: Flores, Cassandra <<u>Cassandra.Flores@stantec.com</u>>; Hamblin, Elizabeth

<<u>Elizabeth.Hamblin@stantec.com</u>>; Simko, Chris <<u>chris.simko@stantec.com</u>>; Luis Pedroza

<<u>luis.pedroza@douglasaz.gov</u>>; <u>elberto.acosta@douglasaz.gov</u>; Carlos De La Torre

<<u>carlos.delatorre@douglasaz.gov</u>>

Subject: Well 14 City of Douglas- Arsenic Treatment Plant Layne Bid- Information Request

CAUTION: This email originated from outside of Granite

Jeffery: Good afternoon. On behalf of the City of Douglas, the following additional information related to the submitted bid of April 22, 2022 is requested of Layne:

- 1. Is the Layne supplied media proprietary to Layne or can it be provided by others?
 - a. This in reference to the subsequent media change outs. The LayneRT resin is a patented product owned by Layne and can only be provided by Layne. However, other resin suppliers have similar hybrid resins that could be considered "or equals" for future change outs if the City decided to go another route.
- 2. Bid Sheet Submitted Information. Line labeled 'Cost of Media Changeout, Including Removal and Disposal'.
 - a. Layne shows \$20,260.00
 - b. Details on the scope of this changeout is requested.
 - i. Isolation of Vessel 1 (lead vessel); place vessel 2 (lag vessel) into lead position.
 - ii. Removal of media from Lead vessel 1
 - iii. Installation of new media in to lead vessel 1
 - iv. Place Vessel 1 back into service in the Lag position (review valve changes with operators)
 - v. Take resin sample for TCLP testing
 - vi. Transport spent resin to appropriate landfill location.
 - c. How does align with the Bid Sheet Line 4' with a quoted media first changeout of \$282K for two vessels? The changeout services, for \$20,260, are included in the \$282k. The \$282k is the full changeout scope inclusive of resin.
- 3. Bid sheet 'Line Four'
 - a. The price for the first changeout of each vessel is quoted by Layne at \$282K
 - b. Details on this pricing is requested; Price is for turnkey resin changeout for both lead and lag vessels provided in two separate trips. Scope is outlined above in item 2.b. and includes the resin and the listed services twice. Once for the Vessel 1 and once for vessel 2.
 - c. Is this cost that the City can expect for every changeout of both vessels after the initial two changeouts are made? Yes, for full turnkey services provided and supervised by Layne.
 - d. Can Layne identify the media changeout steps that the City can expect to undertake with changeouts subsequent to the initial first two changeout managed and completed by Layne. Steps outlined in item 2.b.
- 4. Review with Layne the City's historic water quality in comparison with the water quality data they provided in their bid document

- a. This in reference to the disconnect between the City provided Well 14 water quality and the water quality identified in the Bid Submittal by Layne.
- b. The City's concern is that the City does not have all the historic water quality data requested by Layne to judge possible interference with the Layne resin? Some were provided by the City but not recognized by Layne in their submission.
- c. The City will have ADEQ requested New Water Source water quality results after Layne's well rehabilitation group has completed the Well 14 rehabilitation. This may be mid to alter June 2022.
- d. Does Layne have any concerns with resin interference with the water quality as presented by the City? No, Layne does not have any concerns with the water quality as presented. Historically, the outstanding parameters that could create some resin interference are note typically found in AZ groundwater. Layne simply wants to be as transparent as possible so we can provide the most efficient and effective treatment system possible for the City.
- 5. Bid Sheet' Delivery Time'.
 - a. Layne has noted a delivery schedule with 'stock vessels' and delivery schedule with 'alternative vessels'
 - b. Please provide the difference between the two vessel strategies and when the information to base the decision will be made on which approach to take. Based on Layne's previously ADEQ approved resin technology with a minimum EBCT of 2.0 minutes, we can confidently utilize the vessels we have and stay within our recommended design parameters. The only reason we would provide larger vessels would be at the City's request to move above and beyond our standard and effective system design.

Your help is appreciated.. Jack

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