



BOARD OF SUPERVISORS AGENDA ITEM REPORT
AWARDS / CONTRACTS / GRANTS

☒ Award ☐ Contract ☐ Grant

Requested Board Meeting Date: 06/04/2024

or Procurement Director Award: ☐

* = Mandatory, information must be provided

***Contractor/Vendor Name/Grantor (DBA):**

Primary – Carbon Activated Corporation (Headquarters: Compton, CA)
Secondary – Norit Americas, Inc (Headquarters: Horsham, PA)

***Project Title/Description:**

Activated Carbon and Turnkey Change Out Services

***Purpose:**

Award: Master Agreement No. MA-PO-24-174. This Master Agreement is for an initial term of one (1) year in the shared annual award amount of \$1,060,000.00 (including sales tax) and includes four (4) one-year renewal options. Administering Department: Regional Wastewater Reclamation Department.

***Procurement Method:**

Pursuant to Pima County Procurement Code 11.12.010, Competitive sealed bidding, Solicitation No. IFB-PO-2400066 was conducted. Three (3) responses were received. One (1) response was deemed non-responsive. Award is to the lowest, responsive and responsible bidders.

PRCUID: 512287

Attachments: Notice of Recommendation for Award and Master Agreements.

***Program Goals/Predicted Outcomes:**

Application of the materials acquired through this contract will reduce odor in both the Regional Wastewater Reclamation Conveyance Division systems and at the Tres Rios Treatment Facility.

***Public Benefit:**

Reduced odor from Conveyance systems and at the Tres Rios Treatment Facility will result in better quality of life for those living, working, and recreating in the vicinity of these systems and facilities.

***Metrics Available to Measure Performance:**

Number of odor complaints received for the Conveyance systems and the Tres Rios Treatment Facility.

***Retroactive:**

No.

TO: COB 5/9/2024
54 PAGES
VERSION 1

THE APPLICABLE SECTION(S) BELOW MUST BE COMPLETED

Click or tap the boxes to enter text. If not applicable, indicate "N/A". Make sure to complete mandatory (*) fields

Contract / Award Information

Document Type: MA Department Code: PO Contract Number (i.e., 15-123): 24-174
Commencement Date: 06/04/24 Termination Date: 06/03/25 Prior Contract Number (Synergen/CMS): _____
☒ Expense Amount \$ 1,060,000.00 * ☐ Revenue Amount: \$ _____

***Funding Source(s) required: Wastewater Operations**

Funding from General Fund? ☒ Yes ☒ No If Yes \$ _____ % _____

Contract is fully or partially funded with Federal Funds? ☒ Yes ☒ No

If Yes, is the Contract to a vendor or subrecipient? _____

Were insurance or indemnity clauses modified? ☒ Yes ☒ No
If Yes, attach Risk's approval.

Vendor is using a Social Security Number? ☒ Yes ☒ No
If Yes, attach the required form per Administrative Procedure 22-10.

Amendment / Revised Award Information

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____

Amendment No.: _____ AMS Version No.: _____

Commencement Date: _____ New Termination Date: _____

Prior Contract No. (Synergen/CMS): _____

☒ Expense ☒ Revenue ☒ Increase ☒ Decrease

Amount This Amendment: \$ _____

Is there revenue included? ☒ Yes ☒ No If Yes \$ _____

***Funding Source(s) required: _____**

Funding from General Fund? ☒ Yes ☒ No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards)

☒ Award ☒ Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e., 15-123): _____

Commencement Date: _____ Termination Date: _____ Amendment Number: _____

☐ Match Amount: \$ _____ ☐ Revenue Amount: \$ _____

***All Funding Source(s) required: _____**

*Match funding from General Fund? ☒ Yes ☒ No If Yes \$ _____ % _____

*Match funding from other sources? ☒ Yes ☒ No If Yes \$ _____ % _____

*Funding Source: _____

*If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)? _____

Contact: Procurement Officer: Mark Koskiniemi Digitally signed by Mark Koskiniemi
Date: 2024.04.24 09:49:26 -07'00' Acting Division Manager: Kelsey Braun-Shirley Digitally signed by Kelsey Braun-Shirley
Date: 2024.04.24 10:10:23 -07'00'

Department: Acting Procurement Director: Ana Wilber Digitally signed by Ana Wilber
Date: 2024.04.24 11:03:40 -07'00' Telephone: 520-724-3760

Department Director Signature: Jackson Jenkins Digitally signed by Jackson Jenkins
Date: 2024.05.07 11:42:02 -07'00' Date: 5/7/2024

Deputy County Administrator Signature:  Date: 5/8/2024

County Administrator Signature: _____ Date: 5/9/2024



NOTICE OF RECOMMENDATION FOR AWARD

Date of Issue: April 24, 2024

The Procurement Department hereby issues formal notice to respondents to Solicitation No. IFB-PO-2400066 for Activated Carbon and Turnkey Change Out Services that the following listed respondents will be recommended for award as indicated below. The award action is scheduled to be performed by the Board of Supervisors on or after May 21, 2024.

Award is recommended to the lowest, responsive and responsible bidders in the shared annual award amount of \$1,060,000.00 (including sales tax).

AWARDEE NAMES

Carbon Activated Corporation (Primary)
Norit Americas, Inc (Secondary)

BID AMOUNT

\$ 962,850.00
\$1,342,020.00

OTHER RESPONDENT NAMES

CARBUSA LLC

BID AMOUNT

\$1,110,000.00*

*Bid non-responsive for failing to bid all line items.

Issued by: Mark Koskiniemi, Procurement Officer

Telephone Number: 520-724-3760

This notice is in compliance with Pima County Procurement Code §11.12.010(C) and §11.20.010(C).

Copy to: Pima County SBE via e-mail at SBE@pima.gov



MASTER AGREEMENT

PIMA COUNTY, ARIZONA

THIS IS NOT AN ORDER - TRANSMISSION CONSTITUTES
CONTRACT EXECUTION

Master Agreement No: 2400000000000000174

MA Version: 1

Page: 1 of 4

Description: Activated Carbon and Turnkey Change Out Services

I S S U E R	Pima County Procurement Department 150 W. Congress St. 5th Fl Tucson AZ 85701 Issued By: MARK KOSKINIEMI Phone: 5207243760 Email: mark.koskiniemi@pima.gov	T E R M S	Initiation Date: 05-21-2024 Expiration Date: 05-20-2025 <div>NTE Amount: Used Amount: \$0.00</div>
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V E N D O R	Norit Americas Inc PO BOX 790 MARSHALL TX 75671	Contact: Sally Adkisson Phone: 903-935-4751 Email: norit.insidesales.na@cabotcorp.com Terms: 0.00 % Days: 30
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Shipping Method:	Vendor Method
Delivery Type:	
FOB:	FOB Dest, Freight Prepaid
Modification Reason Award: Master Agreement No. MA-PO-24-174 Activated Carbon and Turnkey Change Out Services. This Master Agreement is for an initial term of one (1) year in the shared annual award amount of \$1,060,000.00 (including sales tax) and includes four (4) one-year renewal options. Administering Department: Regional Wastewater Reclamation Department. Attachment: Offer Agreement	

This Master Agreement incorporates the attached documents, and by reference all instructions, Standard Terms and Conditions, Special Terms and Conditions, and requirements that are included in or referenced by the solicitation documents used to establish this agreement. All transactions and conduct are required to conform to these documents.



MASTER AGREEMENT DETAILS

Master Agreement No: 2400000000000000174

MA Version: 1

Page: 2 of 4

Line	Description					
1	Extruded Activated Carbon (D-Dusted) =<20,000#, delivered					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.92			
2	Extruded Activated Carbon (D-Dusted) >20,000#, delivered					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.92			
3	Siloxane pref Extruded Activated Carbon =<20,000# delivered					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$4.93			
4	Pelletized Low Humidity Iron Oxide H2S Removal Media					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.60			
5	12' Diameter Filter Screen					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$800.00			
6	14' Diameter Filter Screen					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$800.00			
7	Turnkey Change-out Service for Granular - =>20,000#					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.20			
8	Turnkey Change-out Service for Granular - less than 20,000#					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$2.80			
9	Turnkey Change-out Service for Iron Ox - see extended desc					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$2.19			
10	Turnkey Change-out Service for Ext Act Carb - => 20,000#					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.20			
11	Turnkey Change-out Service for Ext Act Carb - under 20,000#					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$2.80			
12	Turnkey Change-out Service for Siloxane pref - see ext des					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$2.40			
13	Turnkey Change-out Service Fee (if applicable)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$6,500.00			
14	Carbon bed maintenance (no carbon purchase)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	HOURL	\$140.00			

Attachment 1**OFFER AGREEMENT, Amendment No. 01****1. PURPOSE**

This contract establishes a system-generated form Master Agreement ("MA") for Contractor to provide Pima County ("County") with activated carbon and related odor control products as well as turnkey change out services on an "as required basis" by issue of Delivery Order ("DO") or Delivery Order Maximo ("DOM").

The established MA will be issued to a Primary and Secondary Contractor awarded on this contract. County will order Good/Services from the Contractor on the contract offering best value to County. Should that Contractor be unable to provide the Good/Service at the time requested, County will then order the Good/Service from another Contractor available on the contract.

2. CONTRACT TERM, RENEWALS, EXTENSIONS and REVISIONS

The MA will document the commencement date of the contract, and will be for a one (1) year period with four (4) one-year renewal options that the parties may exercise as follows: County will issue contract extensions, renewals, or revisions to Contractor with a revised MA document. Contractor must object in writing to the proposed revisions, terms, conditions, scope modifications and/or specifications within ten (10) calendar days of issuance by County. If Contractor does not notify county of any objections within that timeframe, the revision(s) will be binding on the parties.

3. CONTRACTOR MINIMUM QUALIFICATIONS

The Contractor certifies that it is competent, willing, and responsible for performing the services or providing the products in accordance with the requirements of this contract.

Contractor will check appropriate response below and provide requested documents. Failure to check appropriate response and provide copies of requested documents may cause the offer to be rejected and deemed non-responsive:

1	Contractor has been in the business of providing activated carbon and related turnkey change out services for a minimum of three (3) consecutive years. Include one (1) copy of licenses with the Offer Agreement, including current year.	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No Norit does not believe there are any licenses required for this work.
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Please advise if we are incorrect.

4. PRODUCT OR SERVICE SPECIFICATIONS & SCOPE OF WORK

This contract establishes the requirements under which the Contractor will provide Activated Carbon and Turnkey Change Out Services, in accordance herein.

4.1. General Specifications

On-time delivery of goods and services is an essential part of the consideration that COUNTY will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, COUNTY at its sole option and at no cost to COUNTY may cancel the order or extend delivery times. Such extension of delivery times will not be valid unless an authorized representative of COUNTY extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, COUNTY may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. COUNTY reserves the right to cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries, all at no cost to COUNTY. COUNTY reserves the right to cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides COUNTY immediate notice of delay. Item Specifications

4.2. Item Specifications

See **Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey Change Out Services (4 pages).**

Contractor shall supply, deliver, and provide Turnkey Change-Out service of granular (GAC), extruded (pelletize) activated carbon, and other odor control products specified, and dispose of spent media used as odor filtration media in odor control vessels at various County Wastewater Treatment Facilities (WTF).

4.3. Typical Business Process Flow

Contractor will make delivery in accordance with the Instructions to Offerors, Standard Terms and Conditions and to the following addresses as requested:

Tres Rios WTF
7101 N. Casa Grande Highway
Tucson, Arizona 85743
Monday through Friday 7:00am to 3:00pm
(520)724-6133

Conveyance Division (See Attachment A for vessel locations)
3355 N Dodge Blvd
Tucson, Arizona 85716
Monday through Friday 7:00am to 1:00pm
(520)724-3407

4.4. Safety And Security While On Regional Water Reclamation Department (RWRD) Facilities

Contractor will adhere to the Safety and Security requirements listed in **Attachment B - Safety & Security While On Regional Water Reclamation Department (RWRD) Facilities (1 page)**.

5. SUSTAINABILITY

In accordance with Board of Supervisors Resolution 2007-84, Pima County values and highly encourages contractors to utilize sustainable practices. Please **CHECK** any of the following that your business incorporates:

- ☒ Waste prevention/reduction or material recycling/reuse.
- ☐ Alternative energy/fuels (such as solar/wind energy; bio-diesel; alternative fuels; hybrid vehicles) in your program's preparation, transportation, and demonstration.
- ☐ Environmentally preferable materials (such as recycled materials; locally produced/manufactured products).
- ☒ Sustainable practices that lessen impact on non-renewable resources and global climate change (such as reduction in water/energy/paper use; minimization of hazardous materials; use of compressed/flexible work schedules).
- ☒ Other practices which coincide with County's definition of sustainable practices (such as alternative modes of transportation; transportation minimization; life-cycle costs; product/packaging "take back" practices; preference to firms located with Pima County).

6. OFFER ACCEPTANCE & ORDER RELEASES

County will accept an offer and execute this contract by issuing an MA (recurring requirements) to be effective on the document's date of issue without further action by either party. The MA will include the term of the contract.

Pursuant to the executed MA, County departments requiring the goods or services described herein will issue a DO or DOM to the Contractor. County will furnish the DO or DOM to Contractor via facsimile, e-mail or telephone. **If County gives the order verbally, the County Department issuing the order will transmit a confirming order document to Contractor within five (5) workdays of the date it gives the verbal order.**

Contractor must not supply materials or services that are not specified on the MA and are not documented or authorized by a DO or DOM at the time of provision. County accepts no responsibility for control of or payment for materials or services not documented by a County DO or DOM.

Contractor will establish, monitor, and manage an effective contract administration process that assures compliance with all requirements of this contract. In particular, Contractor will not provide goods or services in excess of the executed contract items, item quantity, item amount, or contract amount without prior written authorization by contract amendment that County has properly executed and issued. Any items Contractor provides in excess of those stated in

the contract are at Contractor's own risk. Contractor will decline verbal requests to deliver items in excess of the contract and will report all such requests in writing to County's Procurement Department within one (1) workday of the request. The report must include the name of the requesting individual and the nature of the request.

7. ACCEPTANCE OF GOODS & SERVICES

The County Department designated on the issued order (DO or DOM) will accept goods and services only in accordance with this contract. Such acceptance is a prerequisite to the commencement of payment terms.

8. COMPENSATION & PAYMENT

The MA will establish the contractual Not-to-Exceed Amount ("NTE Amount"). The NTE Amount represents the funding appropriated by County for this contract and cannot be altered without amendment. Contractor will not accept orders, or provide services or products that cumulatively exceed the contract amount.

8.1. Unit Prices

Contractor's unit prices must include all incidentals and associated costs required to comply with and satisfy all requirements of this contract, which includes the Offer Agreement and the Standard Terms and Conditions. County will make no payments for items not in the contract and Contractor will not invoice them.

Quantities in this solicitation are estimates only. County may increase or decrease quantities and amounts. County makes no guarantee regarding actual orders for items or quantities during the term of the contract. County is not responsible for Contractor inventory or order commitment.

UNIT PRICES (Net 30-day Payment Terms)

ITEM #	ITEM NAME Items to include and satisfy all Solicitation & Offer Agreement requirements, General & Item Specifications	ESTIMATED ANNUAL USAGE QUANTITY	UOM	UNIT PRICE \$	EXTENDED AMOUNT \$
1	Extruded Activated Carbon (D-Dusted) (20,000 lbs. or less delivered)	6,000	LB	1.92	11,520.00
2	Extruded Activated Carbon (20,001 lbs. or more delivered)	300,000	LB	1.92	576,000.00
3	Siloxane preferential Extruded Activated Carbon (20,000 lbs. or less delivered)	30,000	LB	4.93	147,900.00
4	Pelletized Low Humidity Iron Oxide H2S Removal Media	40,000	LB	1.60	64,000.00
5	12' Diameter Filter Screen	8	EA	800.00	6,400.00
6	14' Diameter Filter Screen	8	EA	800.00	6,400.00
7	Turnkey Change-out Service for Granular Activated Carbon when converting to Extruded Activated Carbon	45,000	LB	1.20	See Note 1 54,000.00
8	Turnkey Change-out Service for Pelletized Low Humidity Iron Oxide H2S Removal Media with Nitrogen Purge (2 - 12 pack skids per vessel)	40,000	LB	2.19	See Note 2 87,600.00
9	Turnkey Change-out Service for Extruded Activated Carbon	260,000	LB	1.20	See Note 1 312,000.00
10	Turnkey Change-out Service for Siloxane preferential Extruded Activated Carbon with Nitrogen Purge (1 - 12 pack skid per vessel)	30,000	LB	2.40	72,000.00
11	Carbon bed maintenance (no carbon purchase)	30	HR	140.00	4,200.00
				TOTAL BID	1,342,020.00

Unless the parties otherwise agree in writing, all pricing will be F.O.B. Destination & Freight Prepaid Not Billed ("F.O.B. Destination"). Contractor will deliver and unload products or services at the destination(s) that the delivery article of this contract or accepted Order indicates. The offered Unit Price must include all freight costs.

NOTE #1: For Lines 7 and 9 pricing is good for orders of 20,000 lbs or more. Orders of less than 20,000 lbs will incur an additional \$6,500 fee plus an additional \$1.60 per pound.

NOTE #2: For Line 8, orders of less than 20,000 lbs will incur an additional \$6,500 fee.

Although an order may not fully include State and City sales tax, County will pay such taxes as are DIRECTLY applicable to County and Contractor invoices such taxes as a separate line item. Contractor must not include such taxes in the item unit price.

8.2. Price Warranty and Trade-In Allowance

Contractor will give County the benefit of any price reduction before actual time of shipment. Parties may negotiate a fair and equitable trade-in allowance value for County surplus property to be applied through either a discounted purchase price or account credit. The trade-in value must be stated on a written price quote prior to County making a purchase, or on a credit memo invoice for a prior purchase. Trade-In property will be itemized on the quote or invoice by description, model/part number, quantity and guaranteed trade-in value. County will coordinate and document the delivery of surplus trade-in property to Contractor. Award of contract constitutes disposition authority to trade-in surplus property pursuant to Board of Supervisors' Policy D.29.11, Surplus Personal Property.

8.3. Price Escalation

All unit prices shall consider/provide for current economic and market conditions, and include compensation for Contractor to implement and actively conduct cost and price control. No additional compensation shall be paid to Contractor to reimburse efforts to implement and conduct cost and price controls. **Prices shall remain fixed for the initial contract term, after which Contractor may submit no more than one (1) written Price Escalation Request ("PER") per term.** The PER must be submitted not later than 90 days prior to the contract renewal date, and must clearly demonstrate justification for the increase in price, such as continued and significant changes in economic and/or market conditions justifying any requested price escalation. The PER must reference/cite any source materials used to form the basis of the proposed justification, but must not include historical information prior to the initial contract term. County will research Bureau of Labor Statistics (BLS) Producer Price Index (PPI) and/or other related indicators or sources, and conduct an analysis to determine 1) if the submitted justification and evidence are sufficient, 2) the requested price escalation is fair and reasonable, and 3) if approving the PER is in the County's best interest. County reserves the right to negotiate, accept or reject the PER, or terminate and re-solicit the contract.

8.4. Living Wage

All pricing will conform to Pima County's Living Wage ordinance if applicable, including required annual adjustments of the wage.

8.5. Additional Items and/or Services

This following section is for items that Contractor did not list or price above but are within the scope of this contract. Contractor may provide these items under this contract. Contractor will submit Master Price List (MPL) documents, compact disc (CD) or USB flash drive and file names or identify website address, identifying all other items offered pursuant to this contract. The MPL or website address specifically designed for County must include the vendor's/manufacture's or retail price list and the discount percentage off utilized to get to include Discounted Unit Price being offered to County i.e. $\text{Manufacturer's List Price} - (\text{List price} \times \text{Discount } \%) = \text{Discounted Unit Price}$. The resulting Unit Prices must be of similar discount off List Prices for those items specifically included above. Item Unit Prices above will govern in case of conflict with the Master Price List.

List MPL Document by Title, MPL Media & Filenames or MPL Internet Address and Title(s)	Qty of Pages	Dated	Percentage Discount (Mfr List Price - (List price x Discount %) = Discounted Unit Price

The parties may negotiate and establish unit pricing in writing under the contract for items included in the scope of the contract that does not have previously listed unit pricing.

8.6. Standard Payment Term

Net (30), effective from the date of valid invoice document and does not commence until the later of 1) the receiving County Department receives goods or services into County's payment system or 2) County Financial Operations receives and verifies Contractor's invoice.

8.7. Optional Early Payment Discount Term

Pima County Administrative Procedure No. 22-35 Section 2.2.4 describes County's practice regarding discounts for early payment. Contractor offers the following discounts to those prices to be used for all orders issued pursuant to this contract. County will utilize the existing payment code that best matches that offered and does not exceed the offered discount percentage. Payment days cannot be less than ten (10) calendar days. Contractor will submit valid invoice document consistent with the associated DO or DOM to County's Finance Department at least seven (7) calendar days prior to the date on which the discounted payment is due. If desired, for any order issued pursuant with this contract, Contractor may offer early payment discounts that exceed this Early Payment Discount.

Optional Early Payment Discount: 0 % if payment tendered within n/a Days as indicated above.

8.8. Invoicing

Contractor will submit Request(s) for Payment or Invoices to the location and entity identified by County's DO or DOM document.

All Invoice documents will reference County's DO or DOM number under which the services or products were ordered. Contractor must utilize the item description, precise unit price, **AND** unit of measure included in County's order document for **ALL** Invoice line items. County may return invoices that include line items or unit prices that do not match those documented by County's order to Contractor unprocessed for correction.

Contractor will provide detailed documentation in support of payment requests, which should be consistent with and not exceed County's DO or DOM document. Contractor will bill County within one (1) month after the date on which Contractor's right to payment accrues ("Payment Accrual Date"), which, unless this contract specifically provides otherwise, is the date Contractor delivers goods, performs services or incurs costs. Invoices must assign each billed amount to an appropriate line item of County's order and document each Payment Accrual Date. County may refuse to pay any amount that Contractor bills in which does not conform to County's DO or DOM document. County will refuse to pay any amount that Contractor bills more than six (6) months after the Payment Accrual Date, pursuant to A.R.S. § 11-622(C).

9. VENDOR RECORD MAINTENANCE

Contractor must establish and maintain a complete Pima County Vendor record, which includes the provision of a properly completed and executed "Request for Taxpayer Identification Number and Certification" document (Form W-9). The record must be registered with a valid and monitored email address for Contractor. In the event of any change that renders the information on that record inaccurate Contractor must update the record within ten (10) calendar days of the change and prior to the submission of any invoice or request for payment. Contractor must register through <https://www.pima.gov/208/Vendor-Self-Service-System-VSS>.

10. DELIVERY

"On-Time" delivery is an essential part of the consideration that Contractor is to provide to County under the contract. Contractor will make delivery in accordance with the Standard Terms and Conditions and to the location(s) on the DO or DOM document.

Delivery Address:

Tres Rios WTF

7101 N. Casa Grande Highway

Tucson, Arizona 85743

Monday through Friday 7:00am to 3:00pm

(520)724-6133

Conveyance Division (See Attachment A for vessel locations)

3355 N Dodge Blvd

Tucson, Arizona 85716

Monday through Friday 7:00am to 1:00pm

(520)724-3407

11. TAXES, FEES, EXPENSES

Pursuant to IRS Publication 510, County is exempt from federal excise taxes for goods. County is subject to State and City sales tax. County will pay no separate charges for delivery, drayage, express, parcel post, packing, insurance,

license fees, permits, costs of bonds, surcharges, or bid preparation unless the contract expressly includes such charges and the solicitation documents itemize them.

12. OTHER DOCUMENTS

Contractor and County are entering into this contract have relied upon information provided or referenced by Pima County Solicitation No. IFB-PO-2400066 including the IFB, Offer Agreement, Standard Terms and Conditions, Solicitation Amendments, Contractor's Bid Offer, documents submitted by Contractor or References to satisfy Minimum Qualifications and any other information and documents that Contractor has submitted in its response to County's Solicitation. The Contract incorporates these documents as though set forth in full herein, to the extent not inconsistent with the provisions of this contract.

13. INSURANCE

The Insurance Requirements herein are minimum requirements for this contract and in no way limit the indemnity covenants contained in this contract. Contractor's insurance shall be placed with companies licensed in the State of Arizona and the insureds shall have an "A.M. Best" rating of not less than A- VII, unless otherwise approved by County. County in no way warrants that the minimum insurer rating is sufficient to protect Contractor from potential insurer insolvency.

13.1. Minimum Scope and Limits of Insurance

Contractor will procure and maintain at its own expense, until all contractual obligations have been discharged, the insurance coverage with limits of liability not less than stated below. County in no way warrants that the minimum insurance limits contained herein are sufficient to protect Contractor from liabilities that arise out of the performance of the work under this contract. If necessary, Contractor may obtain commercial umbrella or excess insurance to satisfy County's Insurance Requirements.

13.1.1. Commercial General Liability (CGL)

Occurrence Form with limits of \$2,000,000 Each Occurrence and \$2,000,000 General Aggregate. Policy shall include cover for liability arising from premises, operations, independent contractors, personal injury, bodily injury, property damage, broad form contractual liability coverage, personal and advertising injury and products – completed operations.

13.1.2. Business Automobile Liability

Bodily Injury and Property Damage for any owned, leased, hired, and/or non-owned automobiles assigned to or used in the performance of this contract with a Combined Single Limit (CSL) of \$1,000,000 Each Accident.

13.1.3. Workers' Compensation (WC) and Employers' Liability

Statutory requirements and benefits for Workers' Compensation. In Arizona, WC coverage is compulsory for employers of one or more employees. Employers' Liability coverage with limits of \$1,000,000 each accident and \$1,000,000 each person - disease.

For a Sole Proprietor: The Workers' Compensation requirement shall not apply to a Contractor that is exempt under A.R.S. § 23-901, and when such Contractor executes the appropriate "Pima County Sole Proprietor/Independent Contractor Waiver Form".

13.2. Additional Insurance Requirements

The policies shall include, or be endorsed to include, as required by this contract, the following provisions:

13.2.1. Claims-Made Insurance Coverage

If any part of the Required Insurance is written on a claims-made basis, any policy retroactive date must precede the effective date of this contract, and Contractor must maintain such coverage for a period of not less than three (3) years following contract expiration, termination or cancellation.

13.2.2. Additional Insured Endorsement

The General Liability, and Business Automobile policies must each be endorsed to include Pima County and all its related special districts, elected officials, officers, agents, employees and volunteers (collectively "County and its Agents") as additional insureds with respect to vicarious liability arising out of the activities performed by or on behalf of the Contractor. The full policy limits and scope of protection

must apply to County and its Agents as an additional insured, even if they exceed the Insurance Requirements.

13.2.3. Subrogation Endorsement

The General Liability, Business Automobile Liability, Workers' Compensation Policies shall each contain a waiver of subrogation endorsement in favor of County, and its departments, districts, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

13.2.4. Primary Insurance Endorsement

Contractor's policies shall stipulate that the insurance afforded Contractor shall be primary and that any insurance carried by County, its agents, officials, or employees shall be excess and not contributory insurance. The Required Insurance policies may not obligate County to pay any portion of Contractor's deductible or Self Insurance Retention (SIR).

Insurance provided by Contractor shall not limit Contractor's liability assumed under the indemnification provisions of this Contract.

13.2.5. Subcontractors

Contractor must either (a) include all subcontractors as additional insureds under its Required Insurance policies, or (b) require each subcontractor to separately meet all Insurance Requirements and verify that each subcontractor has done so. Contractor must furnish, if requested by County, appropriate insurance certificates for each subcontractor. Contractor must obtain County's approval of any subcontractor request to modify the Insurance Requirements as to that subcontractor.

13.3. Notice of Cancellation

Each Required Insurance policy must provide, and certificates specify, that County will receive not less than thirty (30) days advance written notice of any policy cancellation, except 10-days prior notice is sufficient when the cancellation is for non-payment of a premium. Notice must be mailed, emailed, hand-delivered or sent via facsimile transmission to County's Contracting Representative, and must include the project or contract number and project description.

13.4. Verification of Coverage

Contractor shall furnish County with certificates of insurance (valid ACORD form or equivalent approved by County) as required by this contract. An authorized representative of the insurer shall sign the certificates. Each certificate must include:

- County's tracking number for this contract, which is shown on the first page of the contract, and a project description, in the body of the Certificate;
- A notation of policy deductibles or SIRs relating to the specific policy; and
- Certificates must specify that the appropriate policies are endorsed to include additional insured and subrogation waiver endorsements for County and its Agents. Note: Contractors for larger projects must provide actual copies of the additional insured and subrogation endorsements.

13.4.1. All certificates and endorsements, as required by this contract, are to be received and approved by County before, and be in effect not less than 15 days prior to, commencement of work. A renewal certificate must be provided to County not less than 15 days prior to the policy's expiration date to include actual copies of the additional insured and waiver of subrogation endorsements. Failure to maintain the insurance coverages or policies as required by this contract, or to provide evidence of renewal, is a material breach of contract.

13.4.2. All certificates required by this contract shall be sent directly to the appropriate County Department. The Certificate of Insurance shall include County's project or contract number and project description on the certificate. County may require complete copies of all insurance policies required by this contract at any time.

13.5. Approval and Modifications

County's Risk Manager may approve a modification of the Insurance Requirements without the necessity of a formal contract amendment, but the approval must be in writing. County's failure to obtain a required insurance

certificate or endorsement, County's failure to object to a non-complying insurance certificate or endorsement, or County's receipt of any other information from the Contractor, its insurance broker(s) and/or insurer(s), do not constitute a waiver of any of the Insurance Requirements.

14. PERFORMANCE BOND

Not applicable to this contract.

15. ACKNOWLEDGEMENT OF SOLICITATION AMENDMENTS

Contractor must acknowledge in the table below to have read all published solicitation amendments and must ensure they are submitting all amended pages of the solicitation (if any) with their response:

Amendment #	Date	Amendment #	Date	Amendment #	Date
1	March 27, 2024				
2	April 2, 2024				

16. SMALL BUSINESS ENTERPRISE (SBE) CERTIFICATION

Not applicable to this contract.

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17. BID/OFFER CERTIFICATION

CONTRACTOR LEGAL NAME: Norit Americas Inc.

BUSINESS ALSO KNOWN AS: _____

MAILING ADDRESS: 3200 University Ave.

CITY/STATE/ZIP: Marshall, TX 75670

REMIT TO ADDRESS: P.O. Box 734390

CITY/STATE/ZIP: Chicago, IL 60673-4390 ACH is preferred

CONTACT PERSON NAME/TITLE: Sally Kelly

PHONE: 903-930-0290 **FAX:** None

CONTACT PERSON EMAIL ADDRESS: sally.kelly@norit.com

EMAIL ADDRESS FOR ORDERS & CONTRACTS: ORDERS: customerarena@norit.com CONTRACTS sally.kelly@norit.com

CORPORATE HEADQUARTERS ADDRESS: 1155 Business Center Dr., Suite 240, Horsham, PA 19044

WEBSITE: www.norit.com

By signing and submitting the Offer Agreement, the undersigned certifies that they are legally authorized to represent and bind Contractor to legal agreements, that all information submitted is accurate and complete, that Contractor has reviewed the County's Procurement website for solicitation amendments and has incorporated all such amendments to its offer, that Contractor is qualified and willing to provide the items requested, and that Contractor will comply with all requirements of the contract. The Unit Pricing includes all costs incidental to the provision of the items in compliance with the contract; no additional payment will be made. County may deem conditional offers that modify the solicitation requirements not 'responsive' and County may not evaluate them. Contractor's submission of a signed Offer Agreement will constitute a firm offer and upon the issuance of a MA or PO document issued by County's Procurement Director or authorized designee will form a binding contract that will require Contractor to provide the goods or services and materials described in this contract. The undersigned hereby offers to furnish the goods or services in compliance with all terms, conditions, and specifications in this Offer Agreement.

SIGNATURE: **DATE:** April 4, 2024Sally Kelly, Inside Sales Manager**PRINTED NAME & TITLE OF AUTHORIZED CONTRACTOR REPRESENTATIVE EXECUTING OFFER****PHONE AND EMAIL:** 903-930-0290 sally.kelly@norit.com**County Attorney Contract Approval "As to Form".**

PIMA COUNTY STANDARD TERMS AND CONDITIONS**1. WARRANTY**

Contractor warrants goods or services to be satisfactory and free from defects. Contractor also warrants that all products and services provided under this contract are non-infringing.

2. PACKING

Contractor will make no extra charges for packaging or packing material. Contractor is responsible for safe packaging conforming to carrier's requirements.

3. DELIVERY

On-time delivery of goods and services is an essential part of the consideration that County will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, County may cancel the order or extend delivery times at no cost to County. Any extension of delivery times will not be valid unless an authorized representative of County extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, County may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. County may cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries at no cost to County. County may cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delivery delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides County immediate notice of delay.

4. SPECIFICATION CHANGES

County may make changes in the specifications, services, or terms and conditions of an order. If such changes cause an increase or decrease in the amount due under an order or in time required for performance, County will make an acceptable adjustment and will modify the order in writing. No verbal agreement for adjustment is acceptable.

Nothing in this clause reduces Contractor's responsibility to proceed without delay in the delivery or performance of an order.

5. INSPECTION

County may inspect or test all goods and services at place of manufacture, destination, or both. Contractor will hold goods failing to meet specifications of the order or contract at Contractor's risk and County may return such goods to Contractor and Contractor will be responsible for costs for transportation, unpacking, inspection, repacking, reshipping, restocking or other like expenses. In lieu of return of nonconforming supplies, County may waive any nonconformity, receive the delivery, and treat the defect(s) as a warranty item, but any waiver of any condition will not apply to subsequent shipments or deliveries.

6. ACCEPTANCE OF MATERIALS AND SERVICES

County will not execute an acceptance or authorize payment for any service, equipment or component prior to delivery and verification that the delivery meets all specification requirements.

7. RIGHTS AND REMEDIES OF COUNTY FOR DEFAULT

If Contractor furnishes items that do not conform to the contract requirements, or to the sample that Contractor submitted, County may reject the items. Contractor must then reclaim and remove the items, without expense to County. Contractor must also immediately replace all rejected items with conforming items. Should Contractor fail, neglect, or refuse immediately to do so, County may purchase in the open market a corresponding quantity of any such items and deduct from any monies due or that may become due to Contractor the difference between the price named in the MA or Purchase Order ("PO") and the actual cost to County.

If Contractor fails to make prompt delivery of any item, County may purchase the item in the open market and invoke the reimbursement condition above apply, except when delivery is delayed by fire, strike, freight embargo, or acts of god or of the government. If County cancels a MA, PO or associated order, either in whole or in part, by reason of the default or breach by Contractor, Contractor will pay for any loss or damage sustained by County in procuring any items

which Contractor was obligated to supply. These remedies are not exclusive and are in addition to any other rights and remedies provided by law or under the contract.

8. FRAUD AND COLLUSION

Contractor certifies that no officer or employee of County or of any subdivision thereof has aided or assisted Contractor in securing or attempting to secure a contract to furnish labor, materials or supplies at a higher price than that proposed by any other Contractor. Contractor also certifies that it is not aware of any County employee 1) favoring one Contractor over another by giving or withholding information or by willfully misleading a Proposer in regard to the character of the material or supplies called for or the conditions under which the proposed work is to be done; 2) knowingly accepting materials or supplies of a quality inferior to those called for by any contract; or 4) directly or indirectly having a financial interest in the proposal or resulting contract. Additionally, during the conduct of business with County, Contractor will not knowingly certify, or induce others to certify, to a greater amount of labor performed than has been actually performed, or to the receipt of a greater amount or different kind of material or supplies that has been actually received. If County finds at any time that Contractor has in presenting any proposal(s) colluded with any other party or parties for the purpose of preventing any other proposal being made, then County will terminate any contract so awarded and that person or entity will be liable for all damages that County sustains.

9. COOPERATIVE USE OF RESULTING CONTRACT

As allowed by law, County has entered into cooperative procurement agreements that enable other public agencies to utilize County's contracts. Those public agencies may contact Contractor with requests to provide services and products pursuant to the pricing, terms and conditions in the MA, or PO. A public agency and Contractor may make minor adjustments by written agreement to the contract to accommodate additional cost or other factors not present in the contract and required to satisfy particular public agency code or functional requirements and within the intended scope of the solicitation and resulting contract. The parties to the cooperative procurement will negotiate and transact any such usage in accordance with procurement rules, regulations and requirements. Contractor will hold harmless County, its officers, employees, and agents from and against all liability, including without limitation payment and performance associated with any cooperative agreement with another public agency. Contractor may view a list of agencies that are authorized to use County contracts at the Procurement Department Internet home page: <http://www.pima.gov/procure>, under the Vendor Information tab, by selecting the link titled County Cooperative Agreements – Authorized Agencies.

10. INTELLECTUAL PROPERTY INDEMNITY

Contractor will indemnify, defend and hold County, its officers, agents, and employees harmless from liability of any kind, including costs and expenses, for infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the contract and any MA, PO, and associated orders. County may require Contractor to furnish a bond or other indemnification to County against any and all loss, damage, costs, expenses, claims and liability for patent or copyright infringement.

11. INDEMNIFICATION

Contractor will indemnify, defend, and hold harmless County, its officers, employees, and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs, including attorney's fees arising out of any act, omission, fault or negligence by Contractor, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of the contract and any MA, PO or associated orders. Contractor will indemnify, defend and hold County harmless from any claim of infringement arising from services provided under this contract or from the provision, license, transfer or use for their intended purpose of any products provided under this Contract.

12. UNFAIR COMPETITION AND OTHER LAWS

Responses must comply with Arizona trade and commerce laws (Title 44 A.R.S.) and all other applicable County, State, and Federal laws and regulations.

13. COMPLIANCE WITH LAWS

Contractor will comply with all federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation. In the event any services that Contractor provides under this contract require a license issued by the Arizona Registrar of Contractors ("ROC"), Contractor certifies that a Contractor licensed by ROC to perform those services in Arizona will provide such services. The laws and regulations of the State of Arizona govern the interpretation and construction of this contract, and the rights, performance and disputes of and between the parties. Any action relating to this Contract must be filed and maintained in a court of the State of Arizona in Pima County.

14. ASSIGNMENT

Contractor may not assign its rights to the contract, in whole or in part, without prior written approval of County. County may withhold approval at its sole discretion, provided that County will not unreasonably withhold such approval.

15. CANCELLATION FOR CONFLICT OF INTEREST

This contract is subject to cancellation pursuant to A.R.S. §§38-506 and 38-511, the pertinent provisions of which are incorporated into this Contract by reference.

16. NON-DISCRIMINATION

Contractor agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 which is hereby incorporated into this contract as if set forth in full herein including flow down of all provisions and requirements to any subcontractors. During the performance of this contract, Contractor must not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

17. NON-APPROPRIATION OF FUNDS

County may cancel this contract if for any reason County's Board of Supervisors does not appropriate funds for the stated purpose of maintaining the contract. In the event of such cancellation, County has no further obligation, other than payment for services or goods that County has already received.

18. PUBLIC RECORDS

Disclosure. Pursuant to A.R.S. § 39-121 et seq., and A.R.S. § 34-603(H) in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all documents submitted in response to the solicitation resulting in award of this Contract, including, but not limited to, pricing schedules, product specifications, work plans, and any supporting documents, are public records. As such, those documents are subject to release and/or review by the general public upon request, including competitors.

Records Marked Confidential; Notice and Protective Order. If Contractor reasonably believes that some of those records contain proprietary, trade-secret or otherwise-confidential information, Contractor must prominently mark those records "CONFIDENTIAL." In the event a public-records request is submitted to County for records marked CONFIDENTIAL, County will notify Contractor of the request as soon as reasonably possible. County will release the records 10 business days after the date of that notice, unless Contractor has, within that period, secured an appropriate order from a court of competent jurisdiction, enjoining the release of the records. County will not, under any circumstances, be responsible for securing such an order, nor will County be in any way financially responsible for any costs associated with securing such an order.

Contractor agrees to waive confidentiality of any price terms.

19. CUSTOM TOOLING, DOCUMENTATION AND TRANSITIONAL SUPPORT

Costs to develop all tooling and documentation, such as and not limited to dies, molds, jigs, fixtures, artwork, film, patterns, digital files, work instructions, drawings, etc. necessary to provide the contracted services or products and unique to the services or products supplied to County are included in the agreed upon Unit Price unless the contract specifically states otherwise. Such tools and documentation are the property of County and will be marked, as is practical, as the "Property of Pima County" and County so requests, Contractor will deliver a copy of the tooling and documentation to County within twenty (20) days of acceptance by County of the first article sample, or not later than ten (10) days of termination of the contract associated with their development, without additional cost to County. Contractor also agrees to act in good faith to facilitate the transition of work to a subsequent Contractor if and as reasonably requested by County at no additional cost. Should exceptional circumstances be present that may justify an additional charge, Contractor may submit said justification and proposed cost and negotiate an agreement acceptable to both Contractor and County, but Contractor may not withhold any requested tooling, document or support as described above that would delay the orderly, efficient and prompt transition of work. Should conduct by Contractor result in additional costs to County, Contractor will reimburse County for said actual and incremental costs provided that County has given Contractor reasonable time to respond to County's requests for support.

20. AMERICANS WITH DISABILITIES ACT

Contractor will comply with all applicable provisions of the Americans with Disabilities Act (public law 101-336, 42 USC 12101-12213) and all applicable federal regulations under the act, including 28 CFR parts 35 and 36.

21. NON-EXCLUSIVE AGREEMENT

Contractor understands that this Contract is nonexclusive and is for the sole convenience of County. County may obtain like services from other sources for any reason.

22. TERMINATION

County may terminate any contract and any MA, PO, Delivery Order; DOM or issued NORFA, in whole or in part, at any time for any reason or no reason, without penalty or recourse, when in the best interests of County. Upon receipt of written notice, Contractor will immediately cease all work as directed by the notice, notify all subcontractors of the effective date of termination, and take appropriate actions to minimize further costs to County. In the event of termination under this paragraph, all documents, data, and reports prepared by Contractor under the contract become the property of County and Contractor must promptly deliver them to County. Contractor is entitled to receive just and equitable compensation for work in progress, work completed, and materials accepted by County before the effective date of the termination.

23. ORDER OF PRECEDENCE – CONFLICTING DOCUMENTS

In the event of inconsistencies between contract documents, the following is the order of precedence, superior to subordinate, that will apply to resolve the inconsistency: MA or PO; DO or DOM; Offer Agreement; these standard terms and conditions; any Contractor terms (Terms of Sale; End User Licenses Agreement; Service Agreement; etc.) attached to an MA, PO, DO or DOM, if applicable; any other solicitation documents.

24. INDEPENDENT CONTRACTOR

Contractor is an independent Contractor. Contractor and Contractor officer's agents or employees are not considered employees of County and are not entitled to receive any employment-related fringe benefits under County's Merit System. Contractor is responsible for paying all federal, state and local taxes associated with the compensation received pursuant to this Contract and will indemnify and hold County harmless from any and all liability which County may incur because of Contractor's failure to pay such taxes.

25. BOOK AND RECORDS

Contractor will keep and maintain proper and complete books, records and accounts, which will be open at all reasonable times for inspection and audit by duly authorized representatives of County. In addition, Contractor will retain all records relating to this contract at least five (5) years after its termination or cancellation or, if later, until any related pending proceeding or litigation has been closed.

26. COUNTERPARTS

The parties may execute the MA or PO that County awards pursuant to this solicitation in any number of counterparts, and each counterpart is considered an original, and together such counterparts constitute one and the same instrument. For the purposes of the MA and PO, the signed proposal of Contractor and the signed acceptance of County are each an original and together constitute a binding MA, if all other requirements for execution are present.

27. AUTHORITY TO CONTRACT

Contractor warrants its right and power to enter into the MA or PO. If any court or administrative agency determines that County does not have authority to enter into the MA or PO, County is not liable to Contractor or any third party by reason of such determination or by reason of the MA or PO.

28. FULL AND COMPLETE PERFORMANCE

The failure of either party to insist on one or more instances upon the full and complete performance with any of the terms or conditions of the contract and any MA, PO, DO or DOM to be performed on the part of the other, or to take any action permitted as a result thereof, is not a waiver or relinquishment of the right to insist upon full and complete performance of the same, or any other covenant or condition, either in the past or in the future. The acceptance by either party of sums less than may be due and owing it at any time is not an accord and satisfaction.

29. SUBCONTRACTORS

Contractor is fully responsible for all acts and omissions of any subcontractor and of persons directly or indirectly employed by any subcontractor, and of persons for whose acts Contractor may be liable to the same extent that Contractor is responsible for the acts and omissions of persons that it directly employs. Nothing in this contract creates any obligation on the part of County to pay or see to the payment of any money due any subcontractor, except as may be required by law.

30. SEVERABILITY

Each provision of this contract stands alone, and any provision of this contract that a court finds to be prohibited by law is ineffective to the extent of such prohibition without invalidating the remainder of this contract.

31. LEGAL ARIZONA WORKERS ACT COMPLIANCE

For the procurement of services in the State of Arizona, Contractor hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to Contractor's employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). Contractor will further ensure that each subcontractor who performs any work for Contractor under this contract likewise complies with the State and Federal Immigration Laws.

County has the right at any time to inspect the books and records of Contractor and any subcontractor in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of Contractor's or any subcontractor's warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, is a material breach of this Contract subjecting Contractor to penalties up to and including suspension or termination of this Contract. If the breach is by a subcontractor, and the subcontract is suspended or terminated as a result, Contractor will take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subcontractor as soon as possible so as not to delay project completion.

Contractor will advise each subcontractor of County's rights, and the subcontractor's obligations, under this Section by including a provision in each subcontract substantially in the following form:

"Subcontractor hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to Subcontractor's employees, and with the requirements of A.R.S. § 23-214 (A). Subcontractor further agrees that County may inspect the Subcontractor's books and records to ensure that Subcontractor is in compliance with these requirements. Any breach of this paragraph by Subcontractor is a material breach of this contract subjecting Subcontractor to penalties up to and including suspension or termination of this contract."

Any additional costs attributable directly or indirectly to remedial action under this Section is the responsibility of Contractor. In the event that remedial action under this Section results in delay to one or more tasks on the critical path of Contractor's approved construction or critical milestones schedule, such period of delay will be excusable delay for which Contractor is entitled to an extension of time, but not costs.

32. CONTROL OF DATA PROVIDED BY COUNTY

For those projects and contracts where County has provided data to enable the Contractor to provide contracted services or products, unless County otherwise specifies and agrees in writing, Contractor will treat, control and limit access to said information as confidential and will under no circumstances release any data provided by County during the term of this contract and thereafter, including but not limited to personal identifying information as defined by A.R.S. § 44-1373, and Contractor is further prohibited from selling such data directly or through a third party. Upon termination or completion of the contract, Contractor will either return all such data to County or will destroy such data and confirm destruction in writing in a timely manner not to exceed sixty (60) calendar days.

33. ISRAEL BOYCOTT CERTIFICATION

Pursuant to A.R.S. § 35-393.01, if Contractor engages in for-profit activity and has ten (10) or more employees, and if this Contract has a value of \$100,000.00 or more, Contractor certifies it is not currently engaged in, and agrees for the duration of this Contract to not engage in, a boycott of goods or services from Israel. This certification does not apply to a boycott prohibited by 50 U.S.C. § 4842 or a regulation issued pursuant to 50 U.S.C. § 4842.

34. FORCED LABOR OF ETHNIC UYGHURS

Pursuant to A.R.S. § 35-394 if Contractor engages in for-profit activity and has 10 or more employees, Contractor certifies it is not currently using, and agrees for the duration of this Contract to not use (1) the forced labor of ethnic Uyghurs in the People's Republic of China; (2) any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; and (3) any contractors, subcontractors or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China. If Contractor becomes aware during the term of the Contract that the Company is not in compliance with A.R.S. § 35-394, Contractor must notify the County within five business days and provide a written certification to County regarding compliance within one hundred eighty days.

35. ENTIRE AGREEMENT

This document constitutes the entire agreement between the parties pertaining to the subject matter it addresses, and this Contract supersedes all prior or contemporaneous agreements and understandings, oral or written.

END OF PIMA COUNTY STANDARD TERMS AND CONDITIONS

**Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey
Change Out Services (4 pages)**

1. ACTIVATED CARBON (☐ Check box to acknowledge requirement)

- ☒ Contractor will submit product brochure(s) or specification sheets to include warranty information with offer. Carbons impregnated with Sodium Hydroxide, Potassium Hydroxide or Calcium Hydroxide will not be accepted.
- ☒ The activated carbon supplies will be suitable for continuous removal of odor causing H₂S and other compounds found in wastewater or similar vapors generated by liquid or solid treatment processes, such as mercaptans, indoles, skatoles, and volatile organic compounds.
- ☒ The activated carbon will be virgin and derived from acceptable raw materials including, but not limited to, coconut, bituminous coal, and lignite coal.
- ☒ Prior to activation, the carbon may have had magnesium oxide added. If alternative metal oxide additives are used (pre-activation), then the Contractor must submit product specifications with offer.

a) Extruded (Pelletized) Activated Carbon Specifications:

Acceptable extruded activated carbon dimensions are:

Pellet diameter range	mm, range	3 – 5 mm
-----------------------	-----------	----------

Acceptable extruded activated carbon properties are:

Sulfur Capacity	gram sulfur /cm ³ carbon, range	0.18-0.32
% Moisture	% mass, range	5 – 8
Apparent Density	# carbon / cubic foot, range	20 - 40

b) Granular Activated Carbon (GAC) Specifications:

Acceptable granular activated carbon dimensions are:

Grain diameter range	Sieve range	4x6 to 4x8
Mean grain diameter	mm, minimum	≥ 2.4

Acceptable granular activated carbon properties are:

Sulfur Capacity	gram sulfur/cm ³ carbon, range	0.18 – 0.32
% Moisture	% mass, range	5 – 18
Apparent Density	# carbon / cubic foot, range	20 - 40

- ☒ The granular activated carbon may contain up to a 30% (by mass) blend granular carbon activated with a magnesium oxide additive. **NOTE:** Sodium, Potassium or Calcium Hydroxide additives will not be accepted.
- ☒ The contractor must completely mix the granular carbon blend prior to delivery.

2. Odor removal media currently being used by County -

- a. COL H2S-60
- b. WOD SHL-60 D-Dusted
- c. COL PA-60 D-Dusted
- d. Ferrosorp SHL
- e. Norit Silpure

**Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey
Change Out Services (4 pages)**

3. TURNKEY CHANGE-OUT SERVICE (☐ Check box to acknowledge requirement)

- a) Upon receipt of DO/DOM document, Contractor will schedule and notify County of the following requirements:
- ☒ Carbon Delivery
 - ☒ Forklift Delivery
 - ☒ Vactor System Delivery
 - ☒ Work Crew Delivery
 - ☒ Spent Carbon Removal
- b) Contractor must provide the following materials and equipment to safely complete carbon change-out:
- ☒ PPE including, but not limited to portable gas meter, tyvek suit, facemask, safety glasses, hearing protection, gloves, steel toe boots, fall protection harness (Tres Rios WRF will provide a portable fall arrest system), LOTO equipment (Devices, locks, tags, zip ties).
 - ☒ Confined Space paperwork
 - ☒ Hand Tools
 - ☒ Ladders
 - ☒ Traffic Cones (if required)
 - ☒ Drinking Water
- c) Contractor/Driver must provide the following items prior to performing Turnkey change-out service:
- ☒ Carbon Bill of Lading to include Carbon Type, Delivery Quantity, and Carbon origination point/location.
 - ☒ Carbon Packing List to include Carbon Lot Number(s)
 - ☒ Carbon Certificate of Analysis (COA) which must, at a minimum, provide the capacity of the carbon for sulfur in [grams sulfur/cc carbon] for each Lot# delivered to 2 significant digits.
 - ☒ Pima County will collect samples from each lot with a Contractor's representative present and maintain a chain of custody for each sample.
 - ☒ Samples will be tested if product quality issues arise.
- d) Contractor must complete the following actions prior to performing Turnkey change-out service:
- ☒ Contact Plant Operations staff prior to first carbon change-out each day.
 - ☒ Notify Plant Operations Control Center upon arrival at the vessel being serviced.
 - ☒ Confirm required PPE is on-hand to perform change-out service.
 - ☒ Notify Plant Operations staff of any discrepancies or issues prior to beginning work.
- e) Contractor must complete the following actions while performing Turnkey change-out service:
- ☒ Notify Plant Operations Control Center when entering and exiting a confined space.
 - ☒ Assure that screens are not displaced during the filling process.
 - ☒ Notify Plant Operations staff after each carbon vessel bed is emptied and after each bed is filled and leveled.
 - ☒ Dispose of spent carbon in an Arizona Dept of Environmental Quality-permitted solid waste facility.
- f) Contractor must provide the following items upon completion of Turnkey change-out service:
- ☒ Electronic detailed completion report to include:
 - _ Carbon change-out dates per vessel, per bed.
 - _ Quantity of carbon added per vessel, per bed.
 - _ Carbon lot numbers per vessel, per bed.
 - _ Pictures from each carbon bed before Contractor removes carbon, after Contractor removes carbon, and after Contractor has added/leveled carbon, per vessel, per bed.

**Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey
Change Out Services (4 pages)**

- _ Inspection findings (Condition of: removed carbon, vessel, outlet stacks, sample ports and valves, bed support grating and screens, access doors and gaskets) per vessel, per bed.
 - _ Copies of waste disposal receipts showing weight of the carbon disposed.
- g) Inspect and correct carbon bed issues (labor only) without carbon removal or fill (minimum eight (8) hours).

4. **WARRANTY** - Manufacturer's warranty terms apply, except in case of a claims concerning product quality and efficacy, Pima County will test samples obtained during delivery:
- a. **Carbon:** If product does not meet County specifications, Contractor agrees that payment of the original order will be adjusted by the certified percentage of the product's inability to remove H2S:
 - ☒ Payment reduction will include the cost of analysis and associated expenses to County.
 - ☒ Product will be tested at an independent laboratory selected by Pima County.
 - b. **Turnkey Change-Out Service:** Workmanship must meet the following Pima County standards:
 - ☒ Contractor will ensure that vessels screens are not displaced at any time during service.
 - ☒ Contractor guarantees no more than three (3) inch variation between high- and low-level points in the fill bed.
 - ☒ Contractor will correct service deficiencies at no additional cost to Pima County.

5. **CARBON VESSEL LOCATION AND INFORMATION**

County maintains forty (44) granular and extruded activated carbon vessels at six (6) locations within twenty-five (25) miles of the metropolitan Tucson area. The following list provides vessel location and specifications. County reserves the right add, change or remove information on this list.

Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey Change Out Services (4 pages)

Location Listing

Vessel Address	Bldg/Gle	Vessel ID	Bed Type	Bed X-Section	Pass-Through Dust Area on Upper and Lower Bed [ft]	Bed Dimension(s) [ft]	Bed Area (sq/ft)	Carbon Density [lb/cu ft]	# Beds	Bed Depth [ft]	Vessel Total Bed(s) Capacity in K lbs	Carbon Type
Tree Rise WTF												
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 35	Bldg 35 #1	DBV	Circular	5.3	D = 11	148.6	25	2	2	14.9	Granular
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 35	Bldg 35 #2	DBV	Circular	5.3	D = 14	148.6	25	2	2	14.9	Granular
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 35	Bldg 35 #3	DBV	Circular	5.3	D = 14	148.6	25	2	2	14.9	Granular
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 23	23-1	SBV	Circular	0	D = 12	113.1	25	1	2	5.7	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 23	23-2	SBV	Circular	0	D = 12	113.1	25	1	3	8.5	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 23	23-3	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 23	23-4	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 23	23-5	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 30	Head works #1	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 30	Head Works #2	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 30	Head Works #3	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 30	Head Works #4	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 30	Head Works #5	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 30	Head works #6	SBV	Circular	0	D = 12	113.1	30	1	3	10.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 32	PS	SBV	Circular	0	D = 6	28.3	20	1	3	5.0	Extruded
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	East Plant GAC #1	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	East Plant GAC #2	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	East Plant GAC #3	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	East Plant GAC #4	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	East Plant GAC #5	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	East Plant GAC #6	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #1	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #2	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #3	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #4	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #5	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #6	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #7	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #8	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #9	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #10	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #11	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 49	West Plant GAC #12	DBV	Circular	3.1	D = 12	110.0	30	2	2	13.2	Pelletized
7101 N Casa Grande Hwy Tucson AZ 85743	Bldg 11	Bldg 11 Sump	SBV	Circular	0.0	D = 6	28.3	30	1	3	5.0	Pelletized
7102 N Casa Grande Hwy Tucson AZ 85743	BLDG 80	(Small Vessel - 2009)									7.7 & 1.1	North Silos & WOOD SHL 80
7102 N Casa Grande Hwy Tucson AZ 85743	BLDG 87	RXG plant Carbon Vessel #1									7.7 & 1.1	North Silos & WOOD SHL 80
7103 N Casa Grande Hwy Tucson AZ 85743	BLDG 87	RXG plant Carbon Vessel #2									<0.5	COL RAC or Silos
7104 N Casa Grande Hwy Tucson AZ 85743	BLDG 20	Ferrosorp Filter #1										Not Carbon iron oxide
7105 N Casa Grande Hwy Tucson AZ 85743	BLDG 20	Ferrosorp Filter #2										Not Carbon iron oxide
CONVEYANCE DIVISION												
3233 N Dodge Blvd Tucson AZ 85710			SDBV	Rectangular		5.0 x 14	77	25	1	3	5.8	Granular
			SDBV	Rectangular		8 x 10	80	25	1	3	4.5	
			SDBV	Rectangular		0 x 6	38	25	1	3	2.7	
10050 N Coalinga Blvd, Tucson AZ 85719 (Note: This unit is currently shut down)	CRBPS	Continental Ranch	DBV	Rectangular		0 X 11	66	30	2	28	0.0	Extruded
3409 N Silverbell Rd, Tucson AZ 85745	RAW Outfall	S&W Bed GC	SBV	Circular		D = 12	13	25	1	3	85.9	Granular
6001 N 110 WB Frontage Rd Tucson, 85743	Plant Inter	R/W Silos	SBV	Circular		D = 10	78.5	25	1		4.9	Granular
8731 N Casa Grande Hwy Tucson AZ 85743	Plant Inter	COO Silos	SBV	Circular		D = 10	78.5	25	1	2.5	4.0	Granular
DBV - Dual, Cylindrical Beds Vertical Flow SB - Single cylindrical Bed Vertical Flow DB - Dual Annular Bed Horizontal Flow SDBV - Single Rectangular Bed Vertical Flow DRBV - Dual Rectangular Bed Vertical Flow												

DARCO® H2S LP

Extruded Activated Carbon



DARCO H2S LP extruded activated carbon is our premier pelletized product for removal of H₂S and other odorous sulfur compounds where low dust and low pressure drop are required.

DARCO H2S LP extruded activated carbon is produced from the same raw material and using the same activation process as our groundbreaking DARCO H2S granular product. This new product provides the same ideal porosity and natural catalytic activity. However, its extruded form provides greater hardness and lower pressure drop resulting in less nuisance dust upon handling and lower blower operating costs. Our DARCO H2S LP extruded activated carbon is made exclusively in the United States for improved product and supply consistency.

SPECIFICATIONS

Hydrogen sulfide capacity	min. 0.2	g/ml
Ball-pan hardness	min. 85	-
Moisture (as packed)	max. 5	%

GENERAL CHARACTERISTICS

Apparent density	0.50	g/cc
Diameter	4	mm

DARCO® H2S LP

Extruded Activated Carbon

NOTES

1. For important product safety, health, environmental and regulatory information, please refer to the Safety Data Sheet (SDS) which is available upon request.
2. General characteristics reflect representative values of product parameters and are not to be used as purchase specifications.
3. All analyses based on standard test methods and specifications are guaranteed values based on lot-to-lot quality control, as covered by Norit Activated Carbon's ISO 9001 certification.

PACKAGING

This product is available in:

- Woven polypropylene bulk bag, 1000 lb (453.6 kg) net on a pallet

Product availabilities depend on the type of packaging.



norit.com

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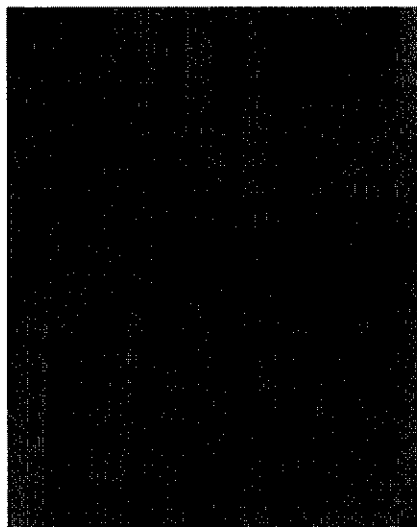
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NORIT® SILPURE

Extruded Activated Carbon



NORIT SILPURE extruded activated carbon: designed for the removal of siloxanes from biogas.

This very high activity mesoporous carbon is especially suitable where:

- High performance of siloxane removal is required
- A range of low to high molecular weight siloxanes must be removed
- Siloxanes are to be preferentially adsorbed over VOC's
- High durability, low pressure drop is required.

NORIT SILPURE extruded activated carbon is produced by a dedicated activation process. This activated carbon type is based on a unique renewable raw material which results in a well-developed pore structure. NORIT SILPURE extruded activated carbon is a 2 mm pellet with high activity, medium density, and good mechanical strength to avoid dust generation.

We operate our production plant for NORIT SILPURE extruded activated carbon consistent with the following certifications:

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System



SPECIFICATIONS

Apparent density	max. 400	kg/m ³
	min. 320	kg/m ³
Moisture (as packed)	max. 10	mass-%

GENERAL CHARACTERISTICS

Ball-pan hardness	75	-
Particle size > 2 mm	95	mass-%
Norit Siloxane Index (NSI)	100	-

NORIT® SILPURE

Extruded Activated Carbon

NOTES

1. For important product safety, health, environmental and regulatory information, please refer to the Safety Data Sheet (SDS) which is available upon request.
2. General characteristics reflect representative values of product parameters and are not to be used as purchase specifications.
3. All analyses based on standard test methods and specifications are guaranteed values based on lot-to-lot quality control, as covered by Norit Activated Carbon's ISO 9001 certification.
4. For detailed information on NSI (Norit Siloxane Index) please contact a Norit applications specialist.

PACKAGING

This product is available in:

- Flexible Intermediate Bulk Containers (FIBC), 350 kg (772 lb) net weight per pallet.

Product availabilities depend on the type of packaging.



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FerroSorp SLH®
H₂S Removal Media - Low Humidity
PRODUCT DESCRIPTION

FerroSorp® SLH is a product based on Iron(III) oxide-hydroxide, FeO(OH), that is used for the desulfurization of gases and air. The use of special granulating and drying methods in the production of FerroSorp® SLH creates a high form stability, abrasion hardness, and reactivity.

TYPICAL APPLICATIONS

FerroSorp® SLH is used for desulfurization of gas with relative humidity in the range of 50-60%. Applications include treatment of gas from landfills and anaerobic digesters.

TYPICAL CHEMICAL COMPOSITION (%WT)

Iron (III) Oxide-Hydroxide

FeO(OH)

TYPICAL PROPERTIES

TYPICAL PROPERTIES	
Particle Size Diameter (mm)	2-4
Particle Size Length (mm)	2-8
Particle Type	Pellet
Bulk Density (lb/ft ³) [(kg/m ³)]	37 +/- 3 [590 +/- 50]
Solid Content	> 85%
Particle Size Distribution (diameter):	
< 2mm	< 10%
> 4mm	< 20%

PACKAGING

FerroSorp® SLH is packaged in 2000 lb super sacks.

HANDLING & STORAGE RECOMMENDATIONS

For prolonged storage (> 2 months), protect FerroSorp® SLH super sacks from the sun. We recommend that you rotate stock so oldest material is used first.

HEALTH & SAFETY INFORMATION

Health and safety information is available on our product SDS, which can be downloaded from our website interraglobal.com or by contacting Interra Global at 847.292.8600.



MASTER AGREEMENT

PIMA COUNTY, ARIZONA

THIS IS NOT AN ORDER - TRANSMISSION CONSTITUTES
CONTRACT EXECUTION

Master Agreement No: 2400000000000000174

MA Version: 1

Page: 3 of 4

Description: Activated Carbon and Turnkey Change Out Services

I S S U E R	<p>Pima County Procurement Department 150 W. Congress St. 5th Fl Tucson AZ 85701</p> <p>Issued By: MARK KOSKINIEMI Phone: 5207243760 Email: mark.koskiniemi@pima.gov</p>	T E R M S	<p>Initiation Date: 05-21-2024 Expiration Date: 05-20-2025</p> <div><p>NTE Amount:</p><p>Used Amount: \$0.00</p></div>
----------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------	----------------------------------------------------------------------------------------------------------------------------

V E N D O R	<p>Carbon Activated Corp 2250 S Central Ave Compton CA 90220</p>	<p>Contact: Dale Kerr Phone: 310-885-4555 Email: dalek@activatedcarbon.com Terms: 0.00 % Days: 30</p>
----------------------------------------	--------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------

Shipping Method: Vendor Method

Delivery Type:

FOB: FOB Dest, Freight Prepaid

Modification Reason

Award: Master Agreement No. MA-PO-24-174 Activated Carbon and Turnkey Change Out Services. This Master Agreement is for an initial term of one (1) year in the shared annual award amount of \$1,060,000.00 (including sales tax) and includes four (4) one-year renewal options. Administering Department: Regional Wastewater Reclamation Department.

Attachment: Offer Agreement

This Master Agreement incorporates the attached documents, and by reference all instructions, Standard Terms and Conditions, Special Terms and Conditions, and requirements that are included in or referenced by the solicitation documents used to establish this agreement. All transactions and conduct are required to conform to these documents.



MASTER AGREEMENT DETAILS

Master Agreement No: 24000000000000000174

MA Version: 1

Page: 4 of 4

Line	Description					
1	Extruded Activated Carbon (D-Dusted) =<20,000#, delivered					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$3.15			
2	Extruded Activated Carbon (D-Dusted) >20,000#, delivered					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.70			
3	Siloxane pref Extruded Activated Carbon =<20,000# delivered					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$5.46			
4	Pelletized Low Humidity Iron Oxide H2S Removal Media					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.30			
6	12' Diameter Filter Screen					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$900.00			
7	14' Diameter Filter Screen					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$900.00			
8	Turnkey Change-out Service for Granular - see extended desc					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$0.44			
9	Turnkey Change-out Service for Iron Ox - see extended desc					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$0.55			
10	Turnkey Change-out Service for Extruded Activated Carbon					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$0.44			
11	Turnkey Change-out Service for Siloxane pref - see ext des					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	LB	\$1.55			
12	Carbon bed maintenance (no carbon purchase)					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	HOUR	\$35.00			

Attachment 1**OFFER AGREEMENT, Amendment No. 01****1. PURPOSE**

This contract establishes a system-generated form Master Agreement ("MA") for Contractor to provide Pima County ("County") with activated carbon and related odor control products as well as turnkey change out services on an "as required basis" by issue of Delivery Order ("DO") or Delivery Order Maximo ("DOM").

The established MA will be issued to a Primary and Secondary Contractor awarded on this contract. County will order Good/Services from the Contractor on the contract offering best value to County. Should that Contractor be unable to provide the Good/Service at the time requested, County will then order the Good/Service from another Contractor available on the contract.

2. CONTRACT TERM, RENEWALS, EXTENSIONS and REVISIONS

The MA will document the commencement date of the contract, and will be for a one (1) year period with four (4) one-year renewal options that the parties may exercise as follows: County will issue contract extensions, renewals, or revisions to Contractor with a revised MA document. Contractor must object in writing to the proposed revisions, terms, conditions, scope modifications and/or specifications within ten (10) calendar days of issuance by County. If Contractor does not notify county of any objections within that timeframe, the revision(s) will be binding on the parties.

3. CONTRACTOR MINIMUM QUALIFICATIONS

The Contractor certifies that it is competent, willing, and responsible for performing the services or providing the products in accordance with the requirements of this contract.

Contractor will check appropriate response below and provide requested documents. Failure to check appropriate response and provide copies of requested documents may cause the offer to be rejected and deemed non-responsive:

1	Contractor has been in the business of providing activated carbon and related turnkey change out services for a minimum of three (3) consecutive years. Include one (1) copy of licenses with the Offer Agreement, including current year.	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
---	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------

4. PRODUCT OR SERVICE SPECIFICATIONS & SCOPE OF WORK

This contract establishes the requirements under which the Contractor will provide Activated Carbon and Turnkey Change Out Services, in accordance herein.

4.1. General Specifications

On-time delivery of goods and services is an essential part of the consideration that COUNTY will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, COUNTY at its sole option and at no cost to COUNTY may cancel the order or extend delivery times. Such extension of delivery times will not be valid unless an authorized representative of COUNTY extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, COUNTY may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. COUNTY reserves the right to cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries, all at no cost to COUNTY. COUNTY reserves the right to cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides COUNTY immediate notice of delay. Item Specifications

4.2. Item Specifications

See Attachment A - Product and Service Specifications, IFB-PO-2400066 - Activated Carbon and Turnkey Change Out Services (4 pages).

Contractor shall supply, deliver, and provide Turnkey Change-Out service of granular (GAC), extruded (pelletize) activated carbon, and other odor control products specified, and dispose of spent media used as odor filtration media in odor control vessels at various County Wastewater Treatment Facilities (WTF).

4.3. Typical Business Process Flow

Contractor will make delivery in accordance with the Instructions to Offerors, Standard Terms and Conditions and to the following addresses as requested:

Tres Rios WTF
7101 N. Casa Grande Highway
Tucson, Arizona 85743
Monday through Friday 7:00am to 3:00pm
(520)724-6133

Conveyance Division (See Attachment A for vessel locations)
3355 N Dodge Blvd
Tucson, Arizona 85716
Monday through Friday 7:00am to 1:00pm
(520)724-3407

4.4. Safety And Security While On Regional Water Reclamation Department (RWRD) Facilities

Contractor will adhere to the Safety and Security requirements listed in **Attachment B - Safety & Security While On Regional Water Reclamation Department (RWRD) Facilities (1 page)**.

5. SUSTAINABILITY

In accordance with Board of Supervisors Resolution 2007-84, Pima County values and highly encourages contractors to utilize sustainable practices. Please **CHECK** any of the following that your business incorporates:

- ☒ Waste prevention/reduction or material recycling/reuse.
- ☐ Alternative energy/fuels (such as solar/wind energy; bio-diesel; alternative fuels; hybrid vehicles) in your program's preparation, transportation, and demonstration.
- ☒ Environmentally preferable materials (such as recycled materials; locally produced/manufactured products).
- ☒ Sustainable practices that lessen impact on non-renewable resources and global climate change (such as reduction in water/energy/paper use; minimization of hazardous materials; use of compressed/flexible work schedules).
- ☐ Other practices which coincide with County's definition of sustainable practices (such as alternative modes of transportation; transportation minimization; life-cycle costs; product/packaging "take back" practices; preference to firms located with Pima County).

6. OFFER ACCEPTANCE & ORDER RELEASES

County will accept an offer and execute this contract by issuing an MA (recurring requirements) to be effective on the document's date of issue without further action by either party. The MA will include the term of the contract.

Pursuant to the executed MA, County departments requiring the goods or services described herein will issue a DO or DOM to the Contractor. County will furnish the DO or DOM to Contractor via facsimile, e-mail or telephone. **If County gives the order verbally, the County Department issuing the order will transmit a confirming order document to Contractor within five (5) workdays of the date it gives the verbal order.**

Contractor must not supply materials or services that are not specified on the MA and are not documented or authorized by a DO or DOM at the time of provision. County accepts no responsibility for control of or payment for materials or services not documented by a County DO or DOM.

Contractor will establish, monitor, and manage an effective contract administration process that assures compliance with all requirements of this contract. In particular, Contractor will not provide goods or services in excess of the executed contract items, item quantity, item amount, or contract amount without prior written authorization by contract amendment that County has properly executed and issued. Any items Contractor provides in excess of those stated in

the contract are at Contractor's own risk. Contractor will decline verbal requests to deliver items in excess of the contract and will report all such requests in writing to County's Procurement Department within one (1) workday of the request. The report must include the name of the requesting individual and the nature of the request.

7. ACCEPTANCE OF GOODS & SERVICES

The County Department designated on the issued order (DO or DOM) will accept goods and services only in accordance with this contract. Such acceptance is a prerequisite to the commencement of payment terms.

8. COMPENSATION & PAYMENT

The MA will establish the contractual Not-to-Exceed Amount ("NTE Amount"). The NTE Amount represents the funding appropriated by County for this contract and cannot be altered without amendment. Contractor will not accept orders, or provide services or products that cumulatively exceed the contract amount.

8.1. Unit Prices

Contractor's unit prices must include all incidentals and associated costs required to comply with and satisfy all requirements of this contract, which includes the Offer Agreement and the Standard Terms and Conditions. County will make no payments for items not in the contract and Contractor will not invoice them.

Quantities in this solicitation are estimates only. County may increase or decrease quantities and amounts. County makes no guarantee regarding actual orders for items or quantities during the term of the contract. County is not responsible for Contractor inventory or order commitment.

UNIT PRICES (Net 30-day Payment Terms)

ITEM #	ITEM NAME Items to include and satisfy all Solicitation & Offer Agreement requirements, General & Item Specifications	ESTIMATED ANNUAL USAGE QUANTITY	UOM	UNIT PRICE \$	EXTENDED AMOUNT \$
1	Extruded Activated Carbon (D-Dusted) (20,000 lbs. or less delivered)	6,000	LB	\$3.15	\$18,900
2	Extruded Activated Carbon (20,001 lbs. or more delivered)	300,000	LB	\$1.70	\$510,000
3	Siloxane preferential Extruded Activated Carbon (20,000 lbs. or less delivered)	30,000	LB	\$5.46	\$163,800
4	Pelletized Low Humidity Iron Oxide H2S Removal Media	40,000	LB	\$1.30	\$52,000
5	12' Diameter Filter Screen	8	EA	\$900	\$7,200
6	14' Diameter Filter Screen	8	EA	\$900	\$7,200
7	Turnkey Change-out Service for Granular Activated Carbon when converting to Extruded Activated Carbon	45,000	LB	\$0.44	\$19,800
8	Turnkey Change-out Service for Pelletized Low Humidity Iron Oxide H2S Removal Media with Nitrogen Purge (2 - 12 pack skids per vessel)	40,000	LB	\$0.55	\$22,000
9	Turnkey Change-out Service for Extruded Activated Carbon	260,000	LB	\$0.44	\$114,400
10	Turnkey Change-out Service for Siloxane preferential Extruded Activated Carbon with Nitrogen Purge (1 - 12 pack skid per vessel)	30,000	LB	\$1.55	\$46,500
11	Carbon bed maintenance (no carbon purchase)	30	HR	\$35	\$1,050
FOB Destination/Unloaded; include cost of freight in unit price.				TOTAL BID	\$962,850
Although County will pay taxes IF applicable, do NOT include sales tax in unit price.					

Unless the parties otherwise agree in writing, all pricing will be F.O.B. Destination & Freight Prepaid Not Billed ("F.O.B. Destination"). Contractor will deliver and unload products or services at the destination(s) that the delivery article of this contract or accepted Order indicates. The offered Unit Price must include all freight costs.

8.7. Optional Early Payment Discount Term

Pima County Administrative Procedure No. 22-35 Section 2.2.4 describes County's practice regarding discounts for early payment. Contractor offers the following discounts to those prices to be used for all orders issued pursuant to this contract. County will utilize the existing payment code that best matches that offered and does not exceed the offered discount percentage. Payment days cannot be less than ten (10) calendar days. Contractor will submit valid invoice document consistent with the associated DO or DOM to County's Finance Department at least seven (7) calendar days prior to the date on which the discounted payment is due. If desired, for any order issued pursuant with this contract, Contractor may offer early payment discounts that exceed this Early Payment Discount.

Optional Early Payment Discount: 0 % if payment tendered within 30 Days as indicated above.

8.8. Invoicing

Contractor will submit Request(s) for Payment or Invoices to the location and entity identified by County's DO or DOM document.

All Invoice documents will reference County's DO or DOM number under which the services or products were ordered. Contractor must utilize the item description, precise unit price, **AND** unit of measure included in County's order document for **ALL** Invoice line items. County may return invoices that include line items or unit prices that do not match those documented by County's order to Contractor unprocessed for correction.

Contractor will provide detailed documentation in support of payment requests, which should be consistent with and not exceed County's DO or DOM document. Contractor will bill County within one (1) month after the date on which Contractor's right to payment accrues ("Payment Accrual Date"), which, unless this contract specifically provides otherwise, is the date Contractor delivers goods, performs services or incurs costs. Invoices must assign each billed amount to an appropriate line item of County's order and document each Payment Accrual Date. County may refuse to pay any amount that Contractor bills in which does not conform to County's DO or DOM document. County will refuse to pay any amount that Contractor bills more than six (6) months after the Payment Accrual Date, pursuant to A.R.S. § 11-622(C).

9. VENDOR RECORD MAINTENANCE

Contractor must establish and maintain a complete Pima County Vendor record, which includes the provision of a properly completed and executed "Request for Taxpayer Identification Number and Certification" document (Form W-9). The record must be registered with a valid and monitored email address for Contractor. In the event of any change that renders the information on that record inaccurate Contractor must update the record within ten (10) calendar days of the change and prior to the submission of any invoice or request for payment. Contractor must register through <https://www.pima.gov/208/Vendor-Self-Service-System-VSS>.

10. DELIVERY

"On-Time" delivery is an essential part of the consideration that Contractor is to provide to County under the contract. Contractor will make delivery in accordance with the Standard Terms and Conditions and to the location(s) on the DO or DOM document.

Delivery Address:

Tres Rios WTF

7101 N. Casa Grande Highway

Tucson, Arizona 85743

Monday through Friday 7:00am to 3:00pm

(520)724-6133

Conveyance Division (See Attachment A for vessel locations)

3355 N Dodge Blvd

Tucson, Arizona 85716

Monday through Friday 7:00am to 1:00pm

(520)724-3407

11. TAXES, FEES, EXPENSES

Pursuant to IRS Publication 510, County is exempt from federal excise taxes for goods. County is subject to State and City sales tax. County will pay no separate charges for delivery, drayage, express, parcel post, packing, insurance,

certificate or endorsement, County's failure to object to a non-complying insurance certificate or endorsement, or County's receipt of any other information from the Contractor, its insurance broker(s) and/or insurer(s), do not constitute a waiver of any of the Insurance Requirements.

14. PERFORMANCE BOND

Not applicable to this contract.

15. ACKNOWLEDGEMENT OF SOLICITATION AMENDMENTS

Contractor must acknowledge in the table below to have read all published solicitation amendments and must ensure they are submitting all amended pages of the solicitation (if any) with their response:

Amendment #	Date	Amendment #	Date	Amendment #	Date
1	3/27/2024				
2	4/02/2024				

16. SMALL BUSINESS ENTERPRISE (SBE) CERTIFICATION

Not applicable to this contract.

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17. BID/OFFER CERTIFICATION

CONTRACTOR LEGAL NAME: Carbon Activated Corporation

BUSINESS ALSO KNOWN AS: Carbon Activated Corporation

MAILING ADDRESS: 6611 W. Hess Street

CITY/STATE/ZIP: Phoenix, AZ 85043

REMIT TO ADDRESS: 2250 S. Central Avenue

CITY/STATE/ZIP: Compton CA, 90220

CONTACT PERSON NAME/TITLE: Orlando Ruelas / Branch Manager

PHONE: 623-606-5712 **FAX:** _____

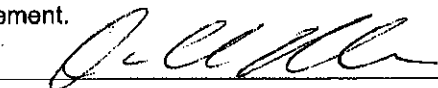
CONTACT PERSON EMAIL ADDRESS: Orlando Ruelas / Branch Manager

EMAIL ADDRESS FOR ORDERS & CONTRACTS: orlandor@activatedcarbon.com

CORPORATE HEADQUARTERS ADDRESS: 2250 S. Central Avenue , Compton, CA 90220

WEBSITE: www.activatedcarbon.com

By signing and submitting the Offer Agreement, the undersigned certifies that they are legally authorized to represent and bind Contractor to legal agreements, that all information submitted is accurate and complete, that Contractor has reviewed the County's Procurement website for solicitation amendments and has incorporated all such amendments to its offer, that Contractor is qualified and willing to provide the items requested, and that Contractor will comply with all requirements of the contract. The Unit Pricing includes all costs incidental to the provision of the items in compliance with the contract; no additional payment will be made. County may deem conditional offers that modify the solicitation requirements not 'responsive' and County may not evaluate them. Contractor's submission of a signed Offer Agreement will constitute a firm offer and upon the issuance of a MA or PO document issued by County's Procurement Director or authorized designee will form a binding contract that will require Contractor to provide the goods or services and materials described in this contract. The undersigned hereby offers to furnish the goods or services in compliance with all terms, conditions, and specifications in this Offer Agreement.

SIGNATURE: _____**DATE:** _____April 6th 2024Orlando Ruelas / Branch Manager**PRINTED NAME & TITLE OF AUTHORIZED CONTRACTOR REPRESENTATIVE EXECUTING OFFER****PHONE AND EMAIL:** 623-606-5712 / orlandor@activatedcarbon.com**County Attorney Contract Approval "As to Form".**

PIMA COUNTY STANDARD TERMS AND CONDITIONS**1. WARRANTY**

Contractor warrants goods or services to be satisfactory and free from defects. Contractor also warrants that all products and services provided under this contract are non-infringing.

2. PACKING

Contractor will make no extra charges for packaging or packing material. Contractor is responsible for safe packaging conforming to carrier's requirements.

3. DELIVERY

On-time delivery of goods and services is an essential part of the consideration that County will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, County may cancel the order or extend delivery times at no cost to County. Any extension of delivery times will not be valid unless an authorized representative of County extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, County may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. County may cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries at no cost to County. County may cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delivery delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides County immediate notice of delay.

4. SPECIFICATION CHANGES

County may make changes in the specifications, services, or terms and conditions of an order. If such changes cause an increase or decrease in the amount due under an order or in time required for performance, County will make an acceptable adjustment and will modify the order in writing. No verbal agreement for adjustment is acceptable.

Nothing in this clause reduces Contractor's responsibility to proceed without delay in the delivery or performance of an order.

5. INSPECTION

County may inspect or test all goods and services at place of manufacture, destination, or both. Contractor will hold goods failing to meet specifications of the order or contract at Contractor's risk and County may return such goods to Contractor and Contractor will be responsible for costs for transportation, unpacking, inspection, repacking, reshipping, restocking or other like expenses. In lieu of return of nonconforming supplies, County may waive any nonconformity, receive the delivery, and treat the defect(s) as a warranty item, but any waiver of any condition will not apply to subsequent shipments or deliveries.

6. ACCEPTANCE OF MATERIALS AND SERVICES

County will not execute an acceptance or authorize payment for any service, equipment or component prior to delivery and verification that the delivery meets all specification requirements.

7. RIGHTS AND REMEDIES OF COUNTY FOR DEFAULT

If Contractor furnishes items that do not conform to the contract requirements, or to the sample that Contractor submitted, County may reject the items. Contractor must then reclaim and remove the items, without expense to County. Contractor must also immediately replace all rejected items with conforming items. Should Contractor fail, neglect, or refuse immediately to do so, County may purchase in the open market a corresponding quantity of any such items and deduct from any monies due or that may become due to Contractor the difference between the price named in the MA or Purchase Order ("PO") and the actual cost to County.

If Contractor fails to make prompt delivery of any item, County may purchase the item in the open market and invoke the reimbursement condition above apply, except when delivery is delayed by fire, strike, freight embargo, or acts of god or of the government. If County cancels a MA, PO or associated order, either in whole or in part, by reason of the default or breach by Contractor, Contractor will pay for any loss or damage sustained by County in procuring any items

which Contractor was obligated to supply. These remedies are not exclusive and are in addition to any other rights and remedies provided by law or under the contract.

8. FRAUD AND COLLUSION

Contractor certifies that no officer or employee of County or of any subdivision thereof has aided or assisted Contractor in securing or attempting to secure a contract to furnish labor, materials or supplies at a higher price than that proposed by any other Contractor. Contractor also certifies that it is not aware of any County employee 1) favoring one Contractor over another by giving or withholding information or by willfully misleading a Proposer in regard to the character of the material or supplies called for or the conditions under which the proposed work is to be done; 2) knowingly accepting materials or supplies of a quality inferior to those called for by any contract; or 4) directly or indirectly having a financial interest in the proposal or resulting contract. Additionally, during the conduct of business with County, Contractor will not knowingly certify, or induce others to certify, to a greater amount of labor performed than has been actually performed, or to the receipt of a greater amount or different kind of material or supplies that has been actually received. If County finds at any time that Contractor has in presenting any proposal(s) colluded with any other party or parties for the purpose of preventing any other proposal being made, then County will terminate any contract so awarded and that person or entity will be liable for all damages that County sustains.

9. COOPERATIVE USE OF RESULTING CONTRACT

As allowed by law, County has entered into cooperative procurement agreements that enable other public agencies to utilize County's contracts. Those public agencies may contact Contractor with requests to provide services and products pursuant to the pricing, terms and conditions in the MA, or PO. A public agency and Contractor may make minor adjustments by written agreement to the contract to accommodate additional cost or other factors not present in the contract and required to satisfy particular public agency code or functional requirements and within the intended scope of the solicitation and resulting contract. The parties to the cooperative procurement will negotiate and transact any such usage in accordance with procurement rules, regulations and requirements. Contractor will hold harmless County, its officers, employees, and agents from and against all liability, including without limitation payment and performance associated with any cooperative agreement with another public agency. Contractor may view a list of agencies that are authorized to use County contracts at the Procurement Department Internet home page: <http://www.pima.gov/procure>, under the Vendor Information tab, by selecting the link titled County Cooperative Agreements – Authorized Agencies.

10. INTELLECTUAL PROPERTY INDEMNITY

Contractor will indemnify, defend and hold County, its officers, agents, and employees harmless from liability of any kind, including costs and expenses, for infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the contract and any MA, PO, and associated orders. County may require Contractor to furnish a bond or other indemnification to County against any and all loss, damage, costs, expenses, claims and liability for patent or copyright infringement.

11. INDEMNIFICATION

Contractor will indemnify, defend, and hold harmless County, its officers, employees, and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs, including attorney's fees arising out of any act, omission, fault or negligence by Contractor, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of the contract and any MA, PO or associated orders. Contractor will indemnify, defend and hold County harmless from any claim of infringement arising from services provided under this contract or from the provision, license, transfer or use for their intended purpose of any products provided under this Contract.

12. UNFAIR COMPETITION AND OTHER LAWS

Responses must comply with Arizona trade and commerce laws (Title 44 A.R.S.) and all other applicable County, State, and Federal laws and regulations.

13. COMPLIANCE WITH LAWS

Contractor will comply with all federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation. In the event any services that Contractor provides under this contract require a license issued by the Arizona Registrar of Contractors ("ROC"), Contractor certifies that a Contractor licensed by ROC to perform those services in Arizona will provide such services. The laws and regulations of the State of Arizona govern the interpretation and construction of this contract, and the rights, performance and disputes of and between the parties. Any action relating to this Contract must be filed and maintained in a court of the State of Arizona in Pima County.

14. ASSIGNMENT

Contractor may not assign its rights to the contract, in whole or in part, without prior written approval of County. County may withhold approval at its sole discretion, provided that County will not unreasonably withhold such approval.

15. CANCELLATION FOR CONFLICT OF INTEREST

This contract is subject to cancellation pursuant to A.R.S. §§38-506 and 38-511, the pertinent provisions of which are incorporated into this Contract by reference.

16. NON-DISCRIMINATION

Contractor agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 which is hereby incorporated into this contract as if set forth in full herein including flow down of all provisions and requirements to any subcontractors. During the performance of this contract, Contractor must not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

17. NON-APPROPRIATION OF FUNDS

County may cancel this contract if for any reason County's Board of Supervisors does not appropriate funds for the stated purpose of maintaining the contract. In the event of such cancellation, County has no further obligation, other than payment for services or goods that County has already received.

18. PUBLIC RECORDS

Disclosure. Pursuant to A.R.S. § 39-121 et seq., and A.R.S. § 34-603(H) in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all documents submitted in response to the solicitation resulting in award of this Contract, including, but not limited to, pricing schedules, product specifications, work plans, and any supporting documents, are public records. As such, those documents are subject to release and/or review by the general public upon request, including competitors.

Records Marked Confidential; Notice and Protective Order. If Contractor reasonably believes that some of those records contain proprietary, trade-secret or otherwise-confidential information, Contractor must prominently mark those records "CONFIDENTIAL." In the event a public-records request is submitted to County for records marked CONFIDENTIAL, County will notify Contractor of the request as soon as reasonably possible. County will release the records 10 business days after the date of that notice, unless Contractor has, within that period, secured an appropriate order from a court of competent jurisdiction, enjoining the release of the records. County will not, under any circumstances, be responsible for securing such an order, nor will County be in any way financially responsible for any costs associated with securing such an order.

Contractor agrees to waive confidentiality of any price terms.

19. CUSTOM TOOLING, DOCUMENTATION AND TRANSITIONAL SUPPORT

Costs to develop all tooling and documentation, such as and not limited to dies, molds, jigs, fixtures, artwork, film, patterns, digital files, work instructions, drawings, etc. necessary to provide the contracted services or products and unique to the services or products supplied to County are included in the agreed upon Unit Price unless the contract specifically states otherwise. Such tools and documentation are the property of County and will be marked, as is practical, as the "Property of Pima County" and County so requests, Contractor will deliver a copy of the tooling and documentation to County within twenty (20) days of acceptance by County of the first article sample, or not later than ten (10) days of termination of the contract associated with their development, without additional cost to County. Contractor also agrees to act in good faith to facilitate the transition of work to a subsequent Contractor if and as reasonably requested by County at no additional cost. Should exceptional circumstances be present that may justify an additional charge, Contractor may submit said justification and proposed cost and negotiate an agreement acceptable to both Contractor and County, but Contractor may not withhold any requested tooling, document or support as described above that would delay the orderly, efficient and prompt transition of work. Should conduct by Contractor result in additional costs to County, Contractor will reimburse County for said actual and incremental costs provided that County has given Contractor reasonable time to respond to County's requests for support.

20. AMERICANS WITH DISABILITIES ACT

Contractor will comply with all applicable provisions of the Americans with Disabilities Act (public law 101-336, 42 USC 12101-12213) and all applicable federal regulations under the act, including 28 CFR parts 35 and 36.

21. NON-EXCLUSIVE AGREEMENT

Contractor understands that this Contract is nonexclusive and is for the sole convenience of County. County may obtain like services from other sources for any reason.

22. TERMINATION

County may terminate any contract and any MA, PO, Delivery Order, DOM or issued NORFA, in whole or in part, at any time for any reason or no reason, without penalty or recourse, when in the best interests of County. Upon receipt of written notice, Contractor will immediately cease all work as directed by the notice, notify all subcontractors of the effective date of termination, and take appropriate actions to minimize further costs to County. In the event of termination under this paragraph, all documents, data, and reports prepared by Contractor under the contract become the property of County and Contractor must promptly deliver them to County. Contractor is entitled to receive just and equitable compensation for work in progress, work completed, and materials accepted by County before the effective date of the termination.

23. ORDER OF PRECEDENCE – CONFLICTING DOCUMENTS

In the event of inconsistencies between contract documents, the following is the order of precedence, superior to subordinate, that will apply to resolve the inconsistency: MA or PO; DO or DOM; Offer Agreement; these standard terms and conditions; any Contractor terms (Terms of Sale; End User Licenses Agreement; Service Agreement; etc.) attached to an MA, PO, DO or DOM, if applicable; any other solicitation documents.

24. INDEPENDENT CONTRACTOR

Contractor is an independent Contractor. Contractor and Contractor officer's agents or employees are not considered employees of County and are not entitled to receive any employment-related fringe benefits under County's Merit System. Contractor is responsible for paying all federal, state and local taxes associated with the compensation received pursuant to this Contract and will indemnify and hold County harmless from any and all liability which County may incur because of Contractor's failure to pay such taxes.

25. BOOK AND RECORDS

Contractor will keep and maintain proper and complete books, records and accounts, which will be open at all reasonable times for inspection and audit by duly authorized representatives of County. In addition, Contractor will retain all records relating to this contract at least five (5) years after its termination or cancellation or, if later, until any related pending proceeding or litigation has been closed.

26. COUNTERPARTS

The parties may execute the MA or PO that County awards pursuant to this solicitation in any number of counterparts, and each counterpart is considered an original, and together such counterparts constitute one and the same instrument. For the purposes of the MA and PO, the signed proposal of Contractor and the signed acceptance of County are each an original and together constitute a binding MA, if all other requirements for execution are present.

27. AUTHORITY TO CONTRACT

Contractor warrants its right and power to enter into the MA or PO. If any court or administrative agency determines that County does not have authority to enter into the MA or PO, County is not liable to Contractor or any third party by reason of such determination or by reason of the MA or PO.

28. FULL AND COMPLETE PERFORMANCE

The failure of either party to insist on one or more instances upon the full and complete performance with any of the terms or conditions of the contract and any MA, PO, DO or DOM to be performed on the part of the other, or to take any action permitted as a result thereof, is not a waiver or relinquishment of the right to insist upon full and complete performance of the same, or any other covenant or condition, either in the past or in the future. The acceptance by either party of sums less than may be due and owing it at any time is not an accord and satisfaction.

29. SUBCONTRACTORS

Contractor is fully responsible for all acts and omissions of any subcontractor and of persons directly or indirectly employed by any subcontractor, and of persons for whose acts Contractor may be liable to the same extent that Contractor is responsible for the acts and omissions of persons that it directly employs. Nothing in this contract creates any obligation on the part of County to pay or see to the payment of any money due any subcontractor, except as may be required by law.

30. SEVERABILITY

Each provision of this contract stands alone, and any provision of this contract that a court finds to be prohibited by law is ineffective to the extent of such prohibition without invalidating the remainder of this contract.

31. LEGAL ARIZONA WORKERS ACT COMPLIANCE

For the procurement of services in the State of Arizona, Contractor hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to Contractor's employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). Contractor will further ensure that each subcontractor who performs any work for Contractor under this contract likewise complies with the State and Federal Immigration Laws.

County has the right at any time to inspect the books and records of Contractor and any subcontractor in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of Contractor's or any subcontractor's warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, is a material breach of this Contract subjecting Contractor to penalties up to and including suspension or termination of this Contract. If the breach is by a subcontractor, and the subcontract is suspended or terminated as a result, Contractor will take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subcontractor as soon as possible so as not to delay project completion.

Contractor will advise each subcontractor of County's rights, and the subcontractor's obligations, under this Section by including a provision in each subcontract substantially in the following form:

"Subcontractor hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to Subcontractor's employees, and with the requirements of A.R.S. § 23-214 (A). Subcontractor further agrees that County may inspect the Subcontractor's books and records to ensure that Subcontractor is in compliance with these requirements. Any breach of this paragraph by Subcontractor is a material breach of this contract subjecting Subcontractor to penalties up to and including suspension or termination of this contract."

Any additional costs attributable directly or indirectly to remedial action under this Section is the responsibility of Contractor. In the event that remedial action under this Section results in delay to one or more tasks on the critical path of Contractor's approved construction or critical milestones schedule, such period of delay will be excusable delay for which Contractor is entitled to an extension of time, but not costs.

32. CONTROL OF DATA PROVIDED BY COUNTY

For those projects and contracts where County has provided data to enable the Contractor to provide contracted services or products, unless County otherwise specifies and agrees in writing, Contractor will treat, control and limit access to said information as confidential and will under no circumstances release any data provided by County during the term of this contract and thereafter, including but not limited to personal identifying information as defined by A.R.S. § 44-1373, and Contractor is further prohibited from selling such data directly or through a third party. Upon termination or completion of the contract, Contractor will either return all such data to County or will destroy such data and confirm destruction in writing in a timely manner not to exceed sixty (60) calendar days.

33. ISRAEL BOYCOTT CERTIFICATION

Pursuant to A.R.S. § 35-393.01, if Contractor engages in for-profit activity and has ten (10) or more employees, and if this Contract has a value of \$100,000.00 or more, Contractor certifies it is not currently engaged in, and agrees for the duration of this Contract to not engage in, a boycott of goods or services from Israel. This certification does not apply to a boycott prohibited by 50 U.S.C. § 4842 or a regulation issued pursuant to 50 U.S.C. § 4842.

34. FORCED LABOR OF ETHNIC UYGHURS

Pursuant to A.R.S. § 35-394 if Contractor engages in for-profit activity and has 10 or more employees, Contractor certifies it is not currently using, and agrees for the duration of this Contract to not use (1) the forced labor of ethnic Uyghurs in the People's Republic of China; (2) any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; and (3) any contractors, subcontractors or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China. If Contractor becomes aware during the term of the Contract that the Company is not in compliance with A.R.S. § 35-394, Contractor must notify the County within five business days and provide a written certification to County regarding compliance within one hundred eighty days.

35. ENTIRE AGREEMENT

This document constitutes the entire agreement between the parties pertaining to the subject matter it addresses, and this Contract supersedes all prior or contemporaneous agreements and understandings, oral or written.

END OF PIMA COUNTY STANDARD TERMS AND CONDITIONS

Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey Change Out Services (4 pages)

1. ACTIVATED CARBON (☒ Check box to acknowledge requirement)

☒ Contractor will submit product brochure(s) or specification sheets to include warranty information with offer. Carbons impregnated with Sodium Hydroxide, Potassium Hydroxide or Calcium Hydroxide will not be accepted.

☒ The activated carbon supplies will be suitable for continuous removal of odor causing H₂S and other compounds found in wastewater or similar vapors generated by liquid or solid treatment processes, such as mercaptans, indoles, skatoles, and volatile organic compounds.

☒ The activated carbon will be virgin and derived from acceptable raw materials including, but not limited to, coconut, bituminous coal, and lignite coal.

☒ Prior to activation, the carbon may have had magnesium oxide added. If alternative metal oxide additives are used (pre-activation), then the Contractor must submit product specifications with offer.

a) Extruded (Pelletized) Activated Carbon Specifications:

Acceptable extruded activated carbon dimensions are:

Pellet diameter range	mm, range	3 – 5 mm
-----------------------	-----------	----------

Acceptable extruded activated carbon properties are:

Sulfur Capacity	gram sulfur /cm ³ carbon, range	0.18-0.32
% Moisture	% mass, range	5 – 8
Apparent Density	# carbon / cubic foot, range	20 - 40

b) Granular Activated Carbon (GAC) Specifications:

Acceptable granular activated carbon dimensions are:

Grain diameter range	Sieve range	4x6 to 4x8
Mean grain diameter	mm, minimum	≥ 2.4

Acceptable granular activated carbon properties are:

Sulfur Capacity	gram sulfur/cm ³ carbon, range	0.18 – 0.32
% Moisture	% mass, range	5 – 18
Apparent Density	# carbon / cubic foot, range	20 - 40

☒ The granular activated carbon may contain up to a 30% (by mass) blend granular carbon activated with a magnesium oxide additive. **NOTE:** Sodium, Potassium or Calcium Hydroxide additives will not be accepted.

☒ The contractor must completely mix the granular carbon blend prior to delivery.

**ATTACH -
MENT**

2. Odor removal media currently being used by County -

- a. COL H2S-60
- b. WOD SHL-60 D-Dusted
- c. COL PA-60 D-Dusted
- d. Ferrosorp SHL
- e. Norit Silpure

Attachment A – Product and Service Specifications, IFB-PO-2400066 – Activated Carbon and Turnkey Change Out Services (4 pages)

3. TURNKEY CHANGE-OUT SERVICE (☐ Check box to acknowledge requirement)

- a) Upon receipt of DO/DOM document, Contractor will schedule and notify County of the following requirements:
- ☒ Carbon Delivery
 - ☒ Forklift Delivery
 - ☒ Vactor System Delivery
 - ☒ Work Crew Delivery
 - ☒ Spent Carbon Removal
- b) Contractor must provide the following materials and equipment to safely complete carbon change-out:
- ☒ PPE including, but not limited to portable gas meter, tyvek suit, facemask, safety glasses, hearing protection, gloves, steel toe boots, fall protection harness (Tres Rios WRF will provide a portable fall arrest system), LOTO equipment (Devices, locks, tags, zip ties).
 - ☒ Confined Space paperwork
 - ☒ Hand Tools
 - ☒ Ladders
 - ☒ Traffic Cones (if required)
 - ☒ Drinking Water
- c) Contractor/Driver must provide the following items prior to performing Turnkey change-out service:
- ☒ Carbon Bill of Lading to include Carbon Type, Delivery Quantity, and Carbon origination point/location.
 - ☒ Carbon Packing List to include Carbon Lot Number(s)
 - ☒ Carbon Certificate of Analysis (COA) which must, at a minimum, provide the capacity of the carbon for sulfur in [grams sulfur/cc carbon] for each Lot# delivered to 2 significant digits.
 - ☒ Pima County will collect samples from each lot with a Contractor's representative present and maintain a chain of custody for each sample.
 - ☒ Samples will be tested if product quality issues arise.
- d) Contractor must complete the following actions prior to performing Turnkey change-out service:
- ☒ Contact Plant Operations staff prior to first carbon change-out each day.
 - ☒ Notify Plant Operations Control Center upon arrival at the vessel being serviced.
 - ☒ Confirm required PPE is on-hand to perform change-out service.
 - ☒ Notify Plant Operations staff of any discrepancies or issues prior to beginning work.
- e) Contractor must complete the following actions while performing Turnkey change-out service:
- ☒ Notify Plant Operations Control Center when entering and exiting a confined space.
 - ☒ Assure that screens are not displaced during the filling process.
 - ☒ Notify Plant Operations staff after each carbon vessel bed is emptied and after each bed is filled and leveled.
 - ☒ Dispose of spent carbon in an Arizona Dept of Environmental Quality-permitted solid waste facility.
- f) Contractor must provide the following items upon completion of Turnkey change-out service:
- ☒ Electronic detailed completion report to include:
 - _ Carbon change-out dates per vessel, per bed.
 - _ Quantity of carbon added per vessel, per bed.
 - _ Carbon lot numbers per vessel, per bed.
 - _ Pictures from each carbon bed before Contractor removes carbon, after Contractor removes carbon, and after Contractor has added/leveled carbon, per vessel, per bed.

- _ Inspection findings (Condition of: removed carbon, vessel, outlet stacks, sample ports and valves, bed support grating and screens, access doors and gaskets) per vessel, per bed.
 - _ Copies of waste disposal receipts showing weight of the carbon disposed.
- g) Inspect and correct carbon bed issues (labor only) without carbon removal or fill (minimum eight (8) hours).

4. **WARRANTY** - Manufacturer's warranty terms apply, except in case of a claims concerning product quality and efficacy, Pima County will test samples obtained during delivery:

- a. **Carbon:** If product does not meet County specifications, Contractor agrees that payment of the original order will be adjusted by the certified percentage of the product's inability to remove H2S:
 - ☒ Payment reduction will include the cost of analysis and associated expenses to County.
 - ☒ Product will be tested at an independent laboratory selected by Pima County.
- b. **Turnkey Change-Out Service:** Workmanship must meet the following Pima County standards:
 - ☒ Contractor will ensure that vessels screens are not displaced at any time during service.
 - ☒ Contractor guarantees no more than three (3) inch variation between high- and low-level points in the fill bed.
 - ☒ Contractor will correct service deficiencies at no additional cost to Pima County.

5. **CARBON VESSEL LOCATION AND INFORMATION**

County maintains forty (44) granular and extruded activated carbon vessels at six (6) locations within twenty-five (25) miles of the metropolitan Tucson area. The following list provides vessel location and specifications. County reserves the right add, change or remove information on this list.



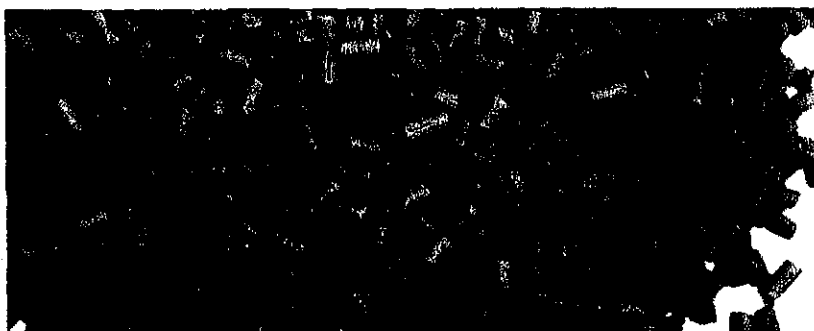
ACTIVATED CARBON
& SERVICES

DATASHEET

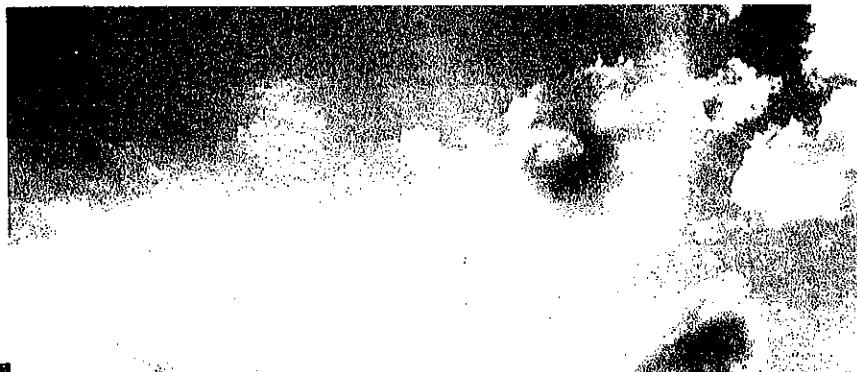
COL H₂S-60 (4.00 mm)

HIGH H₂S ADSORPTION ACTIVATED CARBON

COL H₂S-60 is produced with a proprietary activation process which involves no impregnates for H₂S removal for a variety of air purification and vapor phase applications. This product is a 4mm pelletized carbon specifically designed to remove VOCs, HCl, SO₂, H₂S, and chlorine-related gases in wastewater plants, pulp mills, and chemical plant vapor applications.

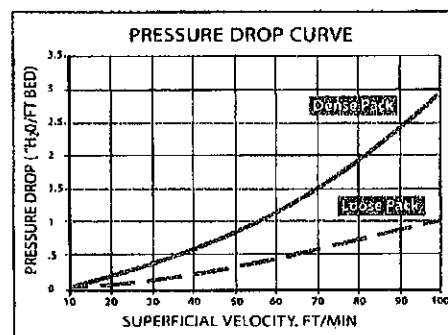


SPECIFICATIONS	COL H ₂ S-60	ASTM METHOD
CCl ₄ Activity, Min.	60	D-3467-04
Total Surface Area, m ² /g	1000 - 1100	(BET)
Iodine Number, min.	1000 - 1100	D-4607
Butane Activity, min.	31-32	D-5742
Apparent Density, gm/cc	0.48 - 0.50	D-2854
lbs./ft ³	30 - 32	
Hardness, Min.	95-97	D-3802
Particle Size	4mm Pelletized (4X6)	
H ₂ S Adsorption Capacity, min.	0.20 gm/cc	D-6646
Moisture, max.	1-3%	D-2867



APPLICATIONS

H₂S removal for a variety of air purification and vapor phase applications such as wastewater, pulp mills, and chemical plants



STANDARD PACKAGING

- 55 lb or 27.5 lb polylined polypropylene bags
- 200 to 220 lb fiber drums
- 1100 lb supersacks

This information is offered solely for your consideration and verification. It has been gathered from reference materials and/or test procedures and is believed to be true and accurate. None of this information shall be constituting a warranty or representation, expressed or implied, for which we assume legal responsibility or that the information or goods described is fit for any particular use either alone or in combination with other goods or processes.





ACTIVATED CARBON
& SERVICES

DATASHEET

REF: W.SHL-60-001

WOD SHL-60

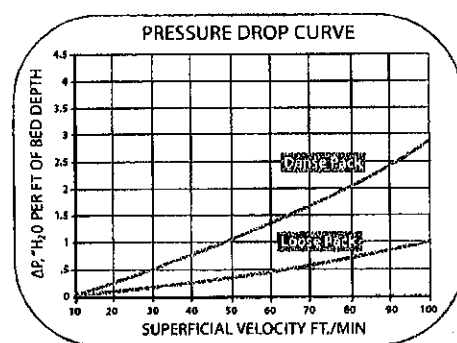
HIGH H₂S ADSORPTION PELLETIZED ACTIVATED CARBON

WOD SHL-60 is manufactured for vapor phase odor control. It is produced with a proprietary activation process which does not involve impregnates of any kind. WOD SHL-60 is a 4.00mm pelletized carbon especially designed for use in vapor phase odor control applications involving the removal of hydrogen sulfide (H₂S), chlorine-related gases, methyl mercaptans, general acid gases and other type of odors typical in treating sewage waste, pulp and paper mills, and chemical plants.



APPLICATIONS

Used to remove sulfide-rich odors typical of municipal sewage treatment, pulp and paper mills, and chemical plants.



SPECIFICATIONS

Particle Size

4mm

H₂S Adsorption Capacity

0.25 g/cc

Hardness

95 min.

Apparent Density

0.50 - 0.56

Moisture, max.

10%

TEST METHOD

VENIER CALIPER

(ASTM D6646)

(ASTM D-3802)

(ASTM D-2854)

(ASTM D2867)

STANDARD PACKAGING

- 55 lb or 27.5 lb polylined polypropylene bags
- 200 lb fiber drums
- 1100 lb super-sacks

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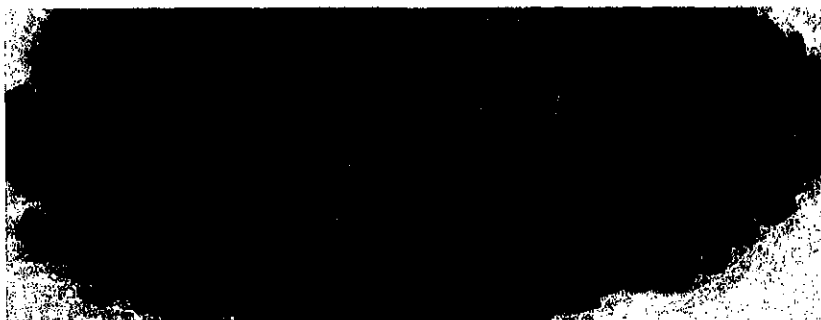
ACTIVATED CARBON
& SERVICES

DATASHEET

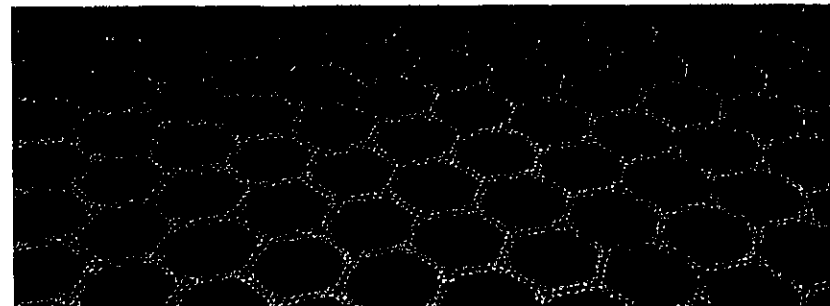
COL-PA 60 (4mm)

VAPOR PHASE COAL BASE PELLETIZED CARBON

COL-PA 60 is a highly-active, pelletized carbon manufactured from selected grades of bituminous coal to provide high density and superior hardness. COL-PA 60 is designed for use in a wide variety of air purification and vapor phase applications. Available in industry standard 4mm size, pelletized COL-PA 60 provides reduced pressure drop. In addition, the extraordinary surface area and fine pore structure of COL-PA 60 offers excellent adsorption capacity, making it a popular choice for industrial air cleaning systems, room air purifiers, paint spray booths, odor control systems, etc.

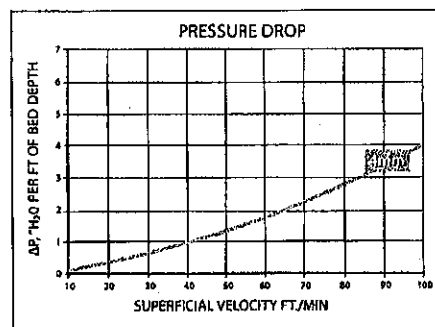


SPECIFICATIONS	COL-PA 60	TEST METHOD
CCl ₄ Activity, min.	60	ASTM D3476-04
Total Surface Area	850 – 950 m ² /g	N ₂ BET Method
Iodine Number, min.	800 – 900 mg/g	ASTM D4607-94
Apparent Density	0.42 – 0.50 g/cc 26 – 31 lbs/ft ³	ASTM 2854-09
Hardness, min.	98 %	ASTM D3802-10
Ash, max.	8 %	ASTM D2866-11
Moisture as packed, max.	3 %	ASTM D2867-09
Particle Size	4.00 mm	ASTM D2862-10



APPLICATIONS

Used in a wide variety of air purification and vapor phase applications.



STANDARD PACKAGING

- 55 lb or 27.5 lb polylined polypropylene bags
- 200 lb fiber drums
- 1100 lb supersacks

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NORIT® SILPURE

Extruded Activated Carbon

WHY NORIT

Since 1918, we have been helping our customers to make pure products, reach environmental compliance, and create catalytic performance. As one of the largest activated carbon manufacturers globally, we provide quality and stability. We offer a very diverse set of NORIT activated carbon products, many of them yielding truly unique performance benefits. Our experienced staff, including dedicated application specialists, can help you find a best fitting solution for your specific situation.

NORIT SILPURE extruded activated carbon: designed for the removal of siloxanes from biogas.

This very high activity mesoporous carbon is especially suitable where:

- High performance of siloxane removal is required
- A range of low to high molecular weight siloxanes must be removed
- Siloxanes are to be preferentially adsorbed over VOC's
- High durability, low pressure drop is required.

NORIT SILPURE extruded activated carbon is produced by a dedicated activation process. This activated carbon type is based on a unique renewable raw material which results in a well-developed pore structure. NORIT SILPURE extruded activated carbon is a 2 mm pellet with high activity, medium density, and good mechanical strength to avoid dust generation.

We operate our production plant for NORIT SILPURE extruded activated carbon consistent with the following certifications:

- ISO 9001 Quality Management System,
- ISO 14001 Environmental Management System.



SPECIFICATIONS

Apparent density	max. 400	kg/m³
	min. 320	kg/m³
Moisture (as packed)	max. 10	mass-%

GENERAL CHARACTERISTICS

Bell-pan hardness	75	-
Particle size > 2 mm	95	mass-%
Norit Siloxane Index (NSI)	100	-

NORIT® SILPURE

Extruded Activated Carbon

NOTES

1. For important product safety, health, environmental and regulatory information, please refer to the Safety Data Sheet (SDS) which is available upon request.
2. General characteristics reflect representative values of product parameters and are not to be used as purchase specifications.
3. All analyses based on standard test methods and specifications are guaranteed values based on lot-to-lot quality control, as covered by Norit Activated Carbon's ISO 9001 certification.
4. For detailed information on NSI (Norit Siloxane Index) please contact a Norit applications specialist.

PACKAGING

This product is available in:

- Flexible Intermediate Bulk Containers (FIBC), 350 kg (772 lb) net weight per pallet.

Product availabilities depend on the type of packaging.



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Application information

FerroSorp® S

Pelletized gas purification compound for the removal of hydrogen sulfide from biogas and landfill gas

FerroSorp® S is a pelletized gas purification compound based on iron hydroxide. It is particularly effective at removing Hydrogen Sulfide (H₂S) from gas-producing installations (i.e. digesters, landfills). It is optimally shaped and highly porous, thus ensuring maximum loading capacity at low costs.

The pelletized gas purification compound FerroSorp® S is a highly effective absorption compound used in both, moving and fixed-bed vessels.

Applications

FerroSorp® S is exceptionally effective at removing H₂S from the following sources:

- Biogas that originates in sewage treatment plants due to anaerobic conditions in sludge
- Agricultural Biogas
- Gases from anaerobic industrial sewage treatment facilities
- Landfill gas
- Industrial combustion and synthetic gases
- Biogas from the anaerobic digestion of wastes and co-fermentation plants.
- Miscellaneous H₂S-containing industrial exhaust gas (i.e. paper industry, oil-mill applications)
- The treatment of H₂S-containing exhaust from industries and wastewater treatment facilities
- Natural gas
- Carbon dioxide gas

Technical Data

Chemical characteristics:

pelletized gas purification compound based on iron hydroxide combined with alkalinizing compounds, binding substances and porosity inducing substances

Chemical formula:

FeO(OH)

Appearance:

light brown, variably-shaped granules

Standard pellet sizes:

For use in moving-bed columns:

5 - 25 mm,

8 - 25 mm

For use preferred in fixed-bed columns:

2 - 4 mm,

2 - 8 mm,

5 - 25 mm (at pressure sensitive sites)

Other sizes:

upon request

Loading Capacity

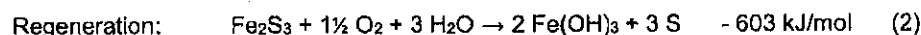
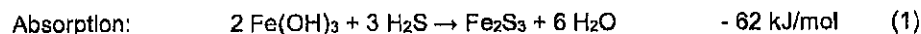
The reachable H₂S loading capacity is dependent upon several parameters such as: the gas moisture, the H₂S concentration in the crude gas stream, the ratio of the dosed oxygen resp. regeneration air, gas pressure levels in the installation, the dwell time in the column and the flow-rate resp. gas velocity. The practical experience in operating columns indicates a loading capacity between 20 - 40 weight-% of sulphur. Based on the solid FerroSorp® S, loading capacities between 265 to 710 g of hydrogen sulfide per kg of FerroSorp® S are realized. With a typical moisture content of 12.5% of the FerroSorp® S, loading capacities between 232 to 621 g of hydrogen sulfide per kg of FerroSorp® S can be reached.

For customers of FerroSorp® S, HeGo Biotec GmbH offers analyses to determine the load of sulphur bound. Based on this results one can evaluate whether the gas purification compound has reached its maximum loading capacity and should be replaced or not.

Mode of operation

• Chemical reactions

The removal of H₂S from various gases through the use of the gas purification compound FerroSorp® S can be described through the following chemical reactions:



The following summary is a presentation of the overall process:



The reactions (1) and (2) are exothermic reactions whereby the regeneration reaction (2) creates a 10 times greater amount of heat than the absorption reaction. This process must be particularly observed when the absorption and the regeneration process occur separately or the supply of oxygen or regeneration air is temporarily interrupted due to technical defects.

Caution: At contact with oxygen, a partially regenerated mass of pellets containing sulphur, may ignite. References indicate that sulphur ignites on air at temperatures between 190 °C and 260 °C.

• Influence of gas moisture

During detailed research regarding the reaction mechanism of the binding of hydrogen sulfide to the surface of iron hydroxide, it was determined that the hydrogen sulfide first becomes solved in water, which is contained in the mass as moisture. Thereby hydrogen sulfide ions are formed, which then react with the iron hydroxide to form iron sulfide. To enable this process, a minimum moisture of the gas purification pellets needs to be ensured to prevent the pellets from drying out. Therefore, a relative gas moisture of minimum 40 % is required.

An increased gas or pellet moisture is also required for the regeneration due to the fact, that 1 mol iron sulfide consumes 3 mol of water to reform iron hydroxide.

When optimizing the moisture content, it is recommended that the gas is not condensing in the absorber, or at least the condensate should not stay in contact with the compound for extended periods.

• Sulphur precipitation

Following the regeneration reaction (2), elemental sulphur gets bound onto the surface layers as well as in the pores of the gas purification pellets. Thus the surface of the pellets, which contains the iron hydroxide, gets more and more blocked, which leads to a decline of the activity of the purification pellets. In case of a noticeable decline in cleaning effectiveness, the fully loaded of FerroSorp[®] S-media should be replaced by fresh one.

• Siloxane binding (through adsorption)

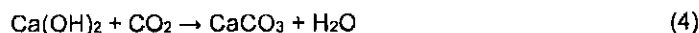
Within the context of numerous studies, it has been determined that the gas purification compound FerroSorp[®] S is capable of removing siloxane. It is assumed that this process occurs through adsorption though the chemical reaction as well as an achievable loading rate has not been investigated yet. Analysis of the gas purification compound used in municipal sewage treatment plants repeatedly shows evident loadings of decamethylcyclopentasiloxane and dodecamethylcyclopentasiloxane. D5 and L5 siloxane loading

In order to reach a specific target, or complete siloxane removal, we recommend a subsequent stage filled with activated carbon. The alleviation of the activated carbon due to a preceding removal of H₂S by using FerroSorp[®] S is economically advantageous.

• Preconditioning (does not apply to FerroSorp[®] Sk)

When changing the gas purification compound in fixed-bed absorbers or when changing a large amount of FerroSorp[®] S in moving bed absorbers, the arising heat and steam should be monitored.

The initial exposure of the gas purification compound to gas containing CO₂, transforms the calcium hydroxide into calcium carbonate creating heat and water (vapor) which can be seen in the following reaction:



This reaction can cause the filter material and the exiting gas to reach temperatures between 70 - 80 °C within a short time.

This reaction, in which the pellets attain their final durability, is finished after a short time and the desulphurization unit is ready to be used.

The use of CO₂-poor and humid gas during the preconditioning stage depends on local conditions and the method used should be determined accordingly.

The HeGo Biotec GmbH is also offering a gas purification compound named "FerroSorp[®] Sk", which is already preconditioned with CO₂ ex-work. This preconditioned material is also available in familiar pellet sizes.

Conditions for the application

The gas purification pellets FerroSorp[®] S can be applied in both, fixed-bed absorbers and tower-shaped absorbers which are often operated on the principle of moving beds. While fixed-bed absorbers, where the mass gets replaced once the effectiveness of the gas purification diminishes, are filled prior to the desulphurization, tower vessels operate through the continuous rotation of the gas purification compound. The loaded material is removed through the discharge valve beneath the gas purifier, while fresh material is added through the loading valve located at the top of the vessel.

The gas streams from the bottom to the top and thereby against the direction in which the gas purification compound is moved. Should the gas purification compound not be fully loaded yet (which is often the case with gas containing low levels of hydrogen sulfide), it can once again be filled into the top of the reactor. Beforehand the material should be sieved to remove any fines and dust caused by the downward movement of the pellets. Almost fully-loaded purification pellets can be identified by their black-grey color that will not



change, even when exposed to oxygen. In order to avoid any blockage or mineralization of the purification compound, the pellets should be moved by taking some material out at regular intervals of about 14 days.

Due to the different types of desulphurization installations and the wide variation of desulphurization equipment available, we are only able to provide the following general information:

- Hydrogen sulfide concentration in raw gas: ca. 20 ppm - ca. 15,000 ppm
- Fill height of gas purification compound: min. 0.5 m (1.64 feet); max. ca. 12 m (39.4 feet)
- Pressure loss in the filter-bed: < 1 to 12 mbar/m (0.004 to 0.054 psi/ft), depending on the filling height, the chosen size of pellets as well as the velocity / flow rate of the gas
- Pressure range: 100 mbar (1.45 psi) underpressure
– ca. 25 bar (362.6 psi) overpressure
- Gas contact time in the empty vessel (EBCT): ca. 20 sec – ca. 3 min
- Gas flow rate in the empty vessel: ca. 2 m/min (6.5 feet/min) – ca. 15 m/min (49 feet/min)
- Relative gas moisture (depending on the product): FerroSorp® Sd: min. 30 %, ideally 40 % - 60 %
FerroSorp® Sk: min. 50 %, ideally 60 % - 95 %, non condensing
- Moisture content in pellets: min. 5 %, optimally 10 % - 15 %
- Necessary amount of oxygen for regeneration: about 2 - 4 x stoichiometric excess relative to the concentration of H₂S in raw gas

Thus for the regeneration reaction at a gas stream where 1,000 ppm H₂S needs to be removed, 0.2 - 0.4 % pure oxygen are necessary for a sufficient regeneration. Instead of oxygen, a rate of approximately 1 - 2 % by volume of air can be used as well. If the gas stream would contain 2,500 ppm H₂S, this would mean 0.5 - 1.0 % oxygen, or around 2.5 - 5 % of air respectively.

In order to assure the complete utilization of the gas purification pellets in fixed-bed vessels, we recommend a multi-stage arrangement of individual tier absorbers in which the compound of each individual tier can be replaced separately and where the sequential arrangement of the absorbers can be changed.

Any condensation within the reactor should be removed regularly. Direct contact with water needs to be avoided, as the pellets can dissolve and/or turn into iron hydroxide sludge.

Be cautious when filling the gas purification pellets into the vessel. Rough handling may cause the pellets to fall apart, thereby decreasing the effectiveness of the product. We recommend attaching an extension hose to the spout of the Big Bag when filling the vessel for the first time, so that the pellets can be placed at the bottom of the tower gently. HeGo Biotec GmbH can provide the necessary equipment.

Transport and Storage

The transport and storage of the FerroSorp® S should happen with a minimal exposure to agitations which can result in a pulverization of the granules due to friction between them. Any opened bags should be closed in order to prevent moisture and debris from getting in.

There are no restrictions concerning the transport and storage of FerroSorp® S. However, do not store the containers in direct sunlight; otherwise, UV rays may cause the plastic packaging to disintegrate. The FerroSorp® S should not get in direct contact with water (e.g. rain). If stored outdoors, cover the big-bags with a canvas.

If stored appropriately, the product itself will last almost indefinitely.



Safety Information

It is important to note that dust may occur when handling FerroSorp® S. A dust-mask in addition to gloves and safety glasses should be worn when filling the reactor with product. All known chemical-safety precautions are also applicable.

Disposal of the loaded Product

For the disposal of used FerroSorp® S, we recommend to follow the guidelines of the European Waste Catalogue EWC and use the waste code number 060603 - "wastes containing sulphides other than those mentioned in 060602".

Numerous landfills containing household trash and building materials will accept the loaded gas purification product, which is totally harmless to the environment, after submitting a declaration of analysis.

The manufacturer also offers to take the loaded material back.

Form of Delivery

woven bags of 25 kg, on pallets (100cm x 120cm) of 825 kg each
Big Bags (BB) with the following sizes:

Pellet size [mm]	Weight [kg]	550	650	710	750	950	900	1000
	Shoulder height BB / Height BB incl. hanger [cm]	130 / 155		155 / 180	180 / 205		200 / 225	
2 – 4		X						X
2 – 8		X				X		X
2 – 10							X	
5 – 25		X	X	X	X			X
8 – 25					X			X

X = available sizes for respective grain size

Date: September 2018

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Environmental protection - State of the art