



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

# Request for Quotation

RFQ NUMBER
DEP13565

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
CHUCK BOWMAN 304-558-2157

RFQ COPY  
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

ENVIRONMENTAL PROTECTION  
 DEPT. OF  
 OFFICE OF SPECIAL RECLAMATION  
 105 S. RAILROAD STREET  
 PHILIPPI, WV  
 26416-9998 304-457-3219

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/03/2006				

BID OPENING DATE: **04/18/2006** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>***** ADDENDUM NO. 2 *****</p> <p>ADDENDUM ISSUED TO DISTRIBUTE PRE-BID SIGN-IN SHEETS FOR THE GLADY FORK MINING PROJECT MEETING HELD 03/28 AND TO ADD THE REVISED SPECIFICATION SECTION 12.26 GEOTEXTILE TUBES, PAGES 12.26-1R THROUGH 12.26-9R AND TO REFERENCE REVISED DRAWINGS #48R, 51R, 52R, 55R, 63R, 65AR, 70R, 71R, &amp; 72R AS DISTRIBUTED TO ALL IN ATTENDANCE AT THE PRE-BID MEETING. TO OBTAIN COPIES OF THESE REVISED DRAWINGS, PLEASE CONTACT GEORGE MITCHELL OF WV DEP AT 304.926.0499 X 1469. COPIES ARE AVAILABLE AT NO CHARGE.</p> <p>BID DATE AND OPENING TIME REMAIN 04/18/06 @ 1:30 PM.</p> <p>***** NO OTHER CHANGES *****</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS  
(REQUEST FOR QUOTATION) RFQ AND (REQUEST FOR PROPOSAL) RFP**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$45 fee.
5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from Federal and State taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this contract is automatically null and void, and is terminated without further order.
14. **HIPAA Business Associate Addendum** - The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

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**INSTRUCTIONS TO BIDDERS**

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in cases of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **DUPLICATE BIDS:** All quotations must be delivered by the bidder to the respective offices listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications.

**ORIGINAL SIGNED BID TO:**

Department of Administration  
Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130

**DUPLICATE BID TO:**

State Auditor's Office  
Bid Observer  
Building 1 Room W114  
1900 Kanawha Boulevard, East  
Charleston, WV 25305-0230

## 12.26 GEOTEXTILE TUBES

### PART 1 - GENERAL

#### 1.1 SCOPE OF WORK

- A. The work covered by this section consists of furnishing twelve (12) and installing two (2) 22' 6" diameter by 10' long geotextile tubes on the Geotube Concrete Slab for dewatering of water treatment sludges. Two (2) Geotubes shall be installed in accordance with manufacturers recommendations in garbage roll-off trailers and ten (10) Geotubes stored on-site for future use. Geotubes shall be Geotubes® MDS as manufactured by Miratech Division of Ten Cate Nicolon, 3680 Mount Olive Road, Commerce, GA, 30529 (706) 693-1897, or Engineer approved equal. The Contractor will also be required to purchase and supply two (2) new garbage roll-off trailers for this Project.

#### 1.2 REFERENCES

- A. The publications listed below, form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designations only.

American Society for Testing and Materials (ASTM) Publications.

D2487-93	Classification of Soils for Engineering Purposes (Unified Soil Classification System)
D3786-87	Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics - Diaphragm Bursting Strength Test Method
D3884-92	Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)
D4354-96	Sampling of Geosynthetics for Testing
D4355-92	Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
D4491-96	Water Permeability of Geotextiles by Permittivity
D4533-91 (R1996)	Trapezoid Tearing Strength of Geotextiles

D4595-86 (R1996)	Tensile Properties of Geotextiles by the Wide-Width Strip Method
D4632-91 (R1996)	Grab Breaking Load and Elongation of Geotextiles
D4751-95	Determining Apparent Opening Size of a Geotextile
D4759-88 (R1996)	Determining the Specification Performance of Geosynthetics
D4833-88 (R1996) (E1-1996)	Index Puncture Resistance of Geotextiles, Geomembrances and Related Products
D4873-95	Identification, Storage, and Handling of Geotextiles
D4884-96	Strength of Sewn or Thermally Bonded Seams of Geotextiles

### 1.3 SUBMITTALS

A. Submittals shall include the following information:

B.

1. Geotextile:

1) Manufacturers data for geotube. Submit manufacturer's product literature and specifications for material(s) utilized to construct Geotube, including the filling port and connection details, site layout, piping, manifold, and related components.

a) Plan of Construction.

2. Certification

a) Geotextile

1. A written certificate of compliance from the vendors shall be submitted upon delivery of the geotextiles. The certificate shall state that geotextiles shipped to the site meet or exceed the minimum average roll values listed in the table below.

## 1.4 DELIVERY, STORAGE AND HANDLING

- A. Geotextile for tubes shall be delivered only after the required submittals have been received and approved. Geotextiles shall be labeled, shipped, stored, and handled in accordance with ASTM D4873 and as specified herein. Each roll shall be wrapped in an opaque and waterproof layer of plastic during shipment and storage. The plastic wrapping shall be placed around the geotextile roll in the manufacturing facility and shall not be removed until installation. Each roll shall be labeled with the manufacturer's name, geotextile type, lot number, roll number, and roll dimensions, including length, width, or gross weight. Geotextile or plastic wrapping damaged as a result of delivery, storage, or handling shall be repaired or replaced, as directed, at no additional cost to the Owner.
- B. No hooks, tongs, or other sharp instruments shall be used for handling the geotextiles. Geotextiles shall not be dragged along the ground. Two (2) geotextile tubes shall be installed in garbage roll-off trailers, one (1) in each of two (2) roll-offs. The surface upon which Geotubes may be installed shall be smooth and free of burrs or protrusions that can snag and tear the fabric.
- C. Geotextiles shall be stored in areas where water cannot accumulate, elevated off the ground, and protected from conditions that will affect the properties or performances of the geotextile. Geotextile shall not be exposed to temperatures in excess of 140°F or less if recommended by the manufacturer. Outdoor storage shall not be for periods which exceed the manufacturer's recommendation or 6 month whichever is less. Prior to installation geotextile shall not be exposed to direct sunlight for more than 14 days. The four (4) spare geotextile tubes shall be stored in the Chemical Feed Building.

## PART 2 - PRODUCTS

### 2.1 MATERIALS AND MANUFACTURING REQUIREMENTS

- A. Geotube Material: The Geotube material shall be fabricated from a 15' wide panel of GT500 engineered textile forming the bottom and 22.5' circumference of GT500 engineered textile forming the top. A 15' Capillary Mat is attached to the 15' wide bottom panel of the GT500. The GT500 engineered textile is manufactured from high tenacity polypropylene fibrillated and monofilament yarns, which are woven into a stable network such that the yarns retain their relative position. The Capillary Mat is manufactured from UV stable staple fiber formed into a stable non-woven mat by the needlepunching process. The GT500 and the Capillary Mat both shall be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.
- B. The Geotube shall be fabricated by sewing together the panels of the GT 500 woven engineered textile and Capillary Mat to form a tubular shape. The seams shall be parallel

stitch lines with 1/4" spacing. The sewing thread shall be multiply polyester filament high tenacity yarn.

- C. Each Geotube shall be fabricated with one 4" PVC fill port located along the top center line of the Geotube.
- D. Fill Ports are for the attachment of the pump discharge line from the Geotube Pump Station to the Geotube. The 4" fill ports shall be ridged 150 PSI rated Schedule 80 PVC flanges with an inner port body and outer port body each comprise one or more cellular surfaces capable of distributing a force caused by the clamping of the inner port body and outer port body together with 8 each 5/8" plated steel bolts and heavy hex head nuts. Included with the fill port shall be a 4" PVC riser, a 4" PVC treaded male adapter with a matching screw cap.
- E. GT500 engineered textile material and factory-sewn seams utilized in the construction of the Geotube shall meet or exceed the values shown in Table 1 below and the Capillary Mat shall meet or exceed the values shown in Table 2 below:

Table 1 - Specifications for the engineered textile for the Geotube:

Property	Test Method	Unit	Value	
<b>Physical:</b>				
Composition			Polypropylene	
Weight	ASTM D5261	oz/yd <sup>2</sup>	15.0	
<b>Mechanical:</b>				
Wide Width Tensile Strength (@ Ultimate)	ASTM D4595	lbs/in	Warp	400
			Fill	550
Wide Width Tensile Elongation (@ Ultimate)	ASTM D4595	%	Warp	10
			Fill	6
Factory Seam Strength	ASTM D4884	lbs/in	300	
<b>Hydraulic:</b>				
Water Flow Rate	ASTM D4491	gal/min/sf	20	
Apparent Opening Size (AOS)	ASTM D4751	U.S. sieve no.	40	

Table 2 - Specifications for the Capillary Mat for the Geotube® MDS:

Property	Test Method	Unit	Value	
<b>Physical:</b>				
<b>Composition</b>			Polypropylene	
<b>Weight</b>	ASTM D5261	oz/yd <sup>2</sup>	16.0	
<b>Mechanical:</b>				
<b>Grab Tensile Strength (@ Ultimate)</b>	ASTM D4632	lbs	Warp	425
<b>Grab Tensile Strength (@ Ultimate)</b>	ASTM D4632		Fill	425
<b>Grab Tensile Elongation</b>	ASTM D4632	%	Warp	50
<b>Grab Tensile Elongation</b>	ASTM D4632	%	Fill	50
<b>Hydraulic:</b>				
<b>Water Flow Rate</b>	ASTM D4491	gal/min/sf	50	
<b>Apparent Opening Size (AOS)</b>	ASTM D4751	U.S. sieve no.	100	

F. Fabrication

- 1) The geotextile shall be manufactured to the largest loom width possible. The geotextile tubes shall be fabricated by sewing together sheets of high strength woven geotextile material to form a tubular shape. Geotube lengths are shown on the drawings. The geotextile tubes shall be delivered with tube filling ports at their midpoint or other approved location, along the crest of the tube. Each fill port shall consist of a 4" threaded flange and pvc stubs with a quick disconnect to adapt to the 4" flexible hose coming from the Geotube Sludge Pump Station. In addition, a pressure relief port, consisting of a 5-foot long geotextile sleeve, shall be located not more than 5 feet from each end of each tube. The port sleeves shall be fabricated of the same geotextile as the tubes and have a "drawstring" closure system to assure a secure closure after the completion of filing. Loops shall be attached to the seams as recommended by the manufacturer. The loops or straps shall have the same tensile strength as the tube geotextile. Seams shall be overlapped and folded. Geotextile tube seams shall be factory sewn.

- G. The Contractor will be required to purchase two (2) new garbage roll-offs (open top containers) such as that available from WasteQuip, 1031 Hickstowm Road, Erial, NJ, 08081, 800-220-2228.

- 1) The open top container roll-offs shall be similar to that used in the garbage industry. The roll-offs shall be custom made to inside dimensions of 138" long by 88" wide by 90" high.
- 2) The floor shall be 7 gauge steel (one piece) with a bathtub or round bottom. 3" structural channel shall be welded on 18" spacing and rails shall be one piece 2" by 6" by 3/16" structural tube steel with solid steel bullnose at rail front for easy loading. 7 gauge gussets shall be welded on every other cross member. Four (4) wheels shall be attached 8" in diameter by 10" long for heavy duty construction. Rollers shall be 4" diameter by 4" long. Loading hook shall be 1 1/4" hi-tensile steel inserted through 1" hook plate, locked in and welded on both sides.
- 3) The sides shall be constructed of 12 gauge steel with structural side tubes of 12 gauge steel, 4-way bend 3" deep by 5" wide. Tubes shall be installed on 24" centers with drain holes cut in the bottom of each tube. Welds shall be 3" high at the floor and space every 15" with a 3" long continuous weld. The bottom of the side plate and formed tubes shall be full welded to floor plate on the outside. A top horizontal tube 3" by 4" (11 gauge steel) shall be attached along the full length of the top and bottom of the roll-off.
- 4) A door shall be attached to the backside of the roll-off. The door shall be constructed of 12 gauge steel with 4 horizontal and 2 vertical structural tubes sized as described above. The door shall be attached by 3 mechanical hinges with grease fittings. The door shall have a semi-automatic cam locking mechanism with a vertical lift handle fabricated from 1 1/4" steel bar. The mechanism shall have posi-lock cams and 1/2" posi-lock keepers. All areas of stress shall be reinforced and double locked.
- 5) The front of the roll-off shall be a bulkhead with two (2) vertical and one (1) horizontal structural tubes of 12 gauge steel sized as described above. The "dog box" shall be constructed of 10 gauge plate steel. Four (4) "J" hooks shall be welded to the bulkhead to facilitate tarping.

### 2.3 TEST, INSPECTIONS AND VERIFICATIONS

- A. Geotextiles and factory seams shall meet the requirements specified in Table 1 above. Conformance testing shall be performed on random samples by the manufacturer in accordance with approved Quality Control practices.
- B. Manufacturer Qualifications. All Geotube containers and ancillary products shall be the standard product of a manufacturer who has been regularly engaged in the integral design, manufacture, and fabrication of the products, and whose product has proven reliable in similar service for 5 years.



## PART 3 - EXECUTION

### 3.1 SURFACE PREPARATION

- A. The Geotube shall be placed atop wooden pallets placed continuously along the bottom of the garbage roll-off trailer to allow better draining of the tube. Prior to installation of the geotube into the garbage roll-off trailer, it shall be inspected by the Contractor in the presence of the engineer. All burrs or protruding sharp metal edges/objects shall be removed or filed blunt to the satisfaction of the engineer. The back door of the roll-off shall be chained slightly open to facilitate drainage.

### 3.2 INSTALLATION

- A. The Contractor shall submit the Plan of Construction specified in the submittals paragraph above. The plan shall incorporate the requirements specified herein with respect to tube and associated components including geometry, orientation, fabrics, fabrication, installation, anchoring, and filling procedures. Fabrication details or installation techniques that differ from those specified herein may be documented in the Plan of Construction and submitted for consideration by the Owner. However, rejection of alternative methods suggested by the vendor shall not constitute a basis for claim against the Owner. The Owner shall visually inspect the geotextiles, prior to installation, for damage and imperfections. Defective geotextiles shall be marked and repaired. Trimming shall be performed using only an upward cutting hook blade. The geotextile shall be placed at the locations shown on the drawings.

#### B. Geotextile Tube Placement

- 1) The unrolled Geotube should be placed on top of the drainage media (wooden pallets) inside the Roll-Off box and unrolled down the length direction and unfolded. Fill ports should be on the top and center of the Roll-Off box container. The Contractor shall connect the Geotube Pump Station line to the Geotube fill port in accordance with manufacturers recommendations.
- 2) Following the MDS placement, filling with materials from the source shall be accomplished in accordance with the approved Plan of Construction. The discharge line of pump shall be fitted with a valve or manifold system to allow for control of the rate of filling or which Geotube will be filled. The MDS filling rate should not exceed 100 GPM per unit being filled. The manifold system shall be fitted with an internal mechanism such as a pinch valve to allow the contractor to regulate the filling rate and pressure into the Geotube. The manifold must also be fitted with a sampling port installed close to the first point of connection to the first Geotube to enable the contractor to sample the material being pumped to insure the proper flocculation if conditioner and or polymer are being used. Any excess discharge shall be directed away from the Geotube into recovery formed concrete trench drain as shown on the Plans.

- 3) The pump discharge line shall be free of protrusions that could tear the Geotube. The pump discharge pipe shall be supported above the fill port in a manner which reduces stress on the fill port. Excessive movement of the pump discharge line during filling could result in damage to the Geotube or the fill port. The fill port connection detail supplied by the manufacturer should be followed for the best method to affix the pump discharge line to the fill port.
- 4) After filling, allow Geotube to dewater then the Geotube can be filled again to the recommended height. This process can be repeated until the Geotube filling and dewatering process is completed.
- 5) Geotube container recommended filling heights shall be supplied by the manufacturer.
- 6) Overall compliance with the manufacturer's installation instructions is required.
- 7) Upon final filling of the Geotube, the fill port should be capped using the PVC parts supplied by the manufacturer to close the fill port to prevent any loss of dewatered material during storage or transportation.
- 8) After the dewatering has been completed, the Geotube can be taken to a landfill where it can be unloaded intact. It is not anticipated that a Geotube will be filled during start-up operations controlled by the contractor. However, the Contractor will be required to supply the Engineer a list of local landfills that will accept this type material as well as names of local services that will pick-up, replace, and transport filled tubes to landfills.

### 3.3 PROTECTION

- A. The geotextile shall be protected during installation from blinding, clogging, penetrations, tears, or other damage. Damaged geotextile shall be repaired or replaced.
- B. A manufacturer's representative shall be present for the installation of the first Geotube unless the contractor can prove adequate, successful experience with this technology.

### 3.4 REPAIRS

- A. Damaged or defective geotextiles shall be replaced or repaired. The tubes shall be monitored for settlement and deterioration for 2 weeks after initial filling is complete. Failed seams or ruptures in the tubes shall be repaired and tubes filled to the required elevation. Repair shall be made by placing a patch of the same type of geotextile which extends a minimum of 18" beyond the edge of the damage or defect. Patches shall be continuously fastened using a sewn or other approved methods

recommended by the manufacturer. The machine direction of the patch shall be aligned with the machine direction of the geotextile being repaired. Geotextiles which cannot be repaired shall be replaced, at no additional cost to the Owner.

#### 4.0 METHOD OF MEASUREMENT

The method of measurement for determining the purchase, storage, installation, and maintenance of Geotextile Tubes and garbage roll-off trailers as described above is to be included in the lump sum bid price for **Item 12.0 Acid Mine Drainage Treatment Facility**, including furnishing all materials and doing all the work prescribed in a workmanlike and acceptable manner, including all Geotubes and associated appurtenances, garbage roll-off trailers, labor, tools, equipment, supplies, and incidentals & appurtenances necessary to complete the work as shown on the Contract Drawings and herein specified.

#### 4.1 BASIS OF PAYMENT

The quantity of Geotextile Tubes and garbage roll-off trailers purchased, stored, installed, and maintained will be paid at the contract lump sum price bid for **Item 12.0 Acid Mine Drainage Treatment Facility**. No deduction will be made nor will any increase be made in the lump sum "Acid Mine Treatment Facility" item amount regardless of decreases or increases in the final total contract amount or for any other cause.

#### 4.2 PAY ITEM

**Item 12.0 "Acid Mine Drainage Treatment Facility"**, per lump sum.

END OF SECTION