

ADDENDUM NO. 1

BID DOCUMENTS

to purchase and install the

GEOSYNTHETICS

for the

FINAL COVER

13.6-ACRE CLASS III OLD LANDFILL AREA

UNION MINE DISPOSAL SITE
EL DORADO COUNTY, CALIFORNIA

County of El Dorado
Environmental Management Department
2850 Fairlane Court, Building C
Placerville, CA 95667

ADDENDUM DATE: April 10, 2007

BID DOCUMENTS DATE: January 2007

ISSUED BY: Nick Farros, Design Engineer

This Addendum No. 1 shall be made part of the *Bid Documents to purchase and install the Geosynthetics for the Final Cover, 13.6-Acre Class III Old Landfill Area, Union Mine Disposal Site, El Dorado County, California (Bid Documents)* and dated January 2007. The Contractor acknowledges receipt of this Addendum by acceptance by Mail or Fax. Each Contractor shall include a copy of this Addendum as part of their Sealed Bids when filed with the Purchasing Department on April 26, 2007 at 3:00 PM, as outlined in the Notice to Bidders.

Item No. 1 - Cushion Geotextile

The Contractor shall include a cost to purchase and install a 10 ounce per square yard non-woven geotextile on the Bid Schedule as Bid Item No. 4. This line item is included in the event the completed subgrade does not meet the requirements of the CQA Officer or the Technical Specifications (see the attached Technical Specification). The quantity could be 592,500 square feet or zero. For bidding purposes, please use 100,000 square-feet as shown on the revised Bid Schedule:

ADDENDUM NO. 1

GEOSYNTHETICS

Final Cover, 13.6-Acre Class III Old Landfill Area

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BID SCHEDULE					
GEOSYNTHETICS for the FINAL COVER 13.6-ACRE CLASS III OLD LANDFILL AREA UNION MINE DISPOSAL SITE					
BID NO.	BID ITEM	QUANTITY	UNITS	UNIT COST	SUBTOTAL COST
FINAL COVER					
1	LLDPE Liner, 60-mil textured	592,500	S.F.		
2	LLDPE Pipe Boots	5	EA.		
3	Geocomposite, double-sided	592,500	S.F.		
4	Non-Woven Geotextile, 10 oz./sq.yd.	100,000	S.F.		
	TOTAL COST				

Unit Abbreviation

S.F. = Square Feet

EA. = Each

Item No. 2 - AutoCAD File

The AutoCAD File for the most recent topography at the Union Mine Disposal Site is on the CD attached to this Addendum.

Item No. 3 - Hours for Construction

The Contractor's hours for installing the linear low density polyethylene (LLDPE), geocomposite drainage layer and cushion geotextile materials for the Final Cover, 13.6-Acre Class III Old Landfill Area are as follows:

Monday - Friday: 6:00 AM to 7:00 PM

Saturday - Sunday: 8:00 AM to 7:00 PM

SECTION 02771
GEOTEXTILE

PART 1 GENERAL

1.1 WORK INCLUDED

- A. This section covers the work necessary to furnish and install non-woven geotextile fabric for protection of the linear low density polyethylene (LLDPE) geomembrane.
- B. The work includes furnishing all labor, supervision, tools, construction equipment, and materials necessary to install the fabrics described by these Specifications and Contract Drawings.
- C. Payment for Geotextile shall be considered as included in the contract unit prices per square foot for the Cushion geotextile in the Bid Schedule and no additional compensation will be allowed therefor.

1.2 REFERENCES

- A. Reference Standards: The following standards, including documents referenced therein, are referenced within this section and form part of this section to the extent designated herein. Unless otherwise specified, the most recent version of the reference standards, at the time of bidding shall apply.
- B. American Society of Testing and Materials (ASTM):
 - 1. ASTM D5261, Test Methods for Mass Per Unit Area (Weight) of Woven Fabric.
 - 2. ASTM D3786, Test Method for Hydraulic Bursting Strength of Fabrics.
 - 3. ASTM D4533, Test Method for Trapezoid Tearing Strength of Geotextiles.
 - 4. ASTM D4632, Test Method for Breaking Load and Elongation of Geotextiles (Grab Method).
 - 5. ASTM D4833, Standard Test Method for Index Puncture Resistance of Geotextiles.
 - 6. ASTM D4491, Standard Test Method for Water Permeability of Geotextiles by Permittivity.
 - 7. ASTM D4355, Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light.
 - 8. ASTM D5199, Test Method for Measuring Thickness of Geotextiles.

1.3 DEFINITIONS

- A. Satisfactory Materials: Materials which comply with the requirements of this Section are satisfactory.
- B. Unsatisfactory Materials: Materials which do not comply with the requirements of satisfactory materials are unsatisfactory.

1.4 SUBMITTALS

- A. Prior to delivery submit certificates of compliance with the requirements and testing methods specified.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Geotextile shall be shipped in a closed trailer.
- B. Geotextile shall be protected from precipitation, inundation, ultraviolet exposure, dirt puncture, cutting, and other damaging or deleterious condition.

PART 2 PRODUCTS

2.1 NON-WOVEN CUSHION GEOTEXTILE--10 OUNCES/SQUARE YARD

- A. The cushion geotextile, supplied by the Geosynthetics Contractor, shall be (1) a non-woven, needle-punched, staple fiber or continuous filament, polyester material, or (2) a non-woven, needle-punched, staple fiber or continuous filament polypropylene material.
- B. The geotextile shall be in conformance with the following minimum property values:

Fabric Property	Unit	Test Method	Minimum Average	Frequency of MQC Testing
Fabric Weight	oz./sq.yd.	ASTM D5261	10.0	1 per 100,000 SF
Thickness	mils	ASTM D5199	110	1 per 100,000 SF
Grab Strength	lb	ASTM D4632	270	1 per 100,000 SF
UV Resistance (500 hr.)	%	ASTM D4355	70	per formulation
Puncture Resistance	lbs.	ASTM D4355	165	1 per 100,000 SF
Trapezoidal Tear	lbs.	ASTM D4833	100	1 per 100,000 SF
Mullen Burst	psi	ASTM D3786	525	1 per 200,000 SF
Permittivity	sec ⁻¹	ASTM D4491	0.94	1 per 200,000 SF

- C. The Contractor shall mark on each roll the manufacturer's name, product identification, lot number, roll number and roll dimensions.
- D. The Contractor shall submit all test information and certifications prior to material being received onsite.
- E. Submittals:
 - 1. Contractor shall submit samples and complete description of geotextile 14 days prior to shipment.
 - 2. Contractor shall submit prior to shipping, manufacturers specifications, quality control certifications, and handling and storage instructions.

PART 3 EXECUTION

3.1 DEPLOYMENT

- A. Geotextile is to be deployed following the manufacturer's recommendations, standards, and guidelines.
- B. The geotextile is to be secured against movement caused by wind. Securing mechanism must be left in place on geotextile until replaced with cover material
- C. Geotextile laying and subsequent covering with succeeding courses (riprap for example) shall proceed in such a manner as to limit exposure to light to no more than 30 days.
- D. The surface to receive the geotextile shall be smooth, free from obstructions, depressions, and sharp objects. Notify the CQA Officer prior to placing geotextile so that the CQA Officer may observe the surface to receive the geotextile. Lay geotextile so as to minimize the number of joints and seams. Lay geotextile loosely, but without creases.
- E. Do not operate machinery directly on the geotextile. When placing material over joints, place in the direction from the overlying geotextile to the underling geotextile. Prevent puncture, tear, or displacement of geotextile an protect from damage.

3.2 OVERLAPS AND SEAMING

- A. Seams for the cushion non-woven geotextile shall be overlapped a minimum 2 feet. The Contractor shall not sew or heat bond the seams.

3.3 REPAIRS

- A. Repair holes or tears in the non-woven geotextile by fabric patch seamed in place. Patch should have dimensions at least 6 inches greater than the tear or hole.
- B. Replace roll when tear exceeds 10 percent of roll width.
- C. Remove materials which may have penetrated torn fabric.
- D. Log any defects, holes, and tears which are identified and repaired.

3.4 PROTECTION

- A. Geotextile shall be stored in such a manner to protect it from puncture, dirt, grease, water, mud, or excessive heat.

3.5 CONSTRUCTION QUALITY CONTROL

- A. The authorized Project Representative shall enforce all requirements associated with Geotextile and comply with the Construction Quality Control/Quality Assurance Program.

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