



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

# Request for Quotation

Stewartown  
 RFQ NUMBER  
 DEP13575

PAGE  
 1

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

\*709045227 304-925-0253  
 GREEN MOUNTAIN COMPANY  
 511 50TH STREET  
 CHARLESTON WV 25304

ENVIRONMENTAL PROTECTION  
 DEPT. OF  
 OFFICE OF SPECIAL RECLAMATION  
 105 S. RAILROAD STREET  
 PHILIPPI, WV 26416-9998  
 APR 30 2006  
 304-457-3219

DATE PRINTED 04/25/2007	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
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BID OPENING DATE: 05/24/2007 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		962-73		
<p>RECLAMATION: RESTORATION OF WATER</p> <p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S OFFICE OF SPECIAL RECLAMATION, IS SOLICITING BIDS FOR THE RECLAMATION PROJECT SPECIFIED BELOW.</p> <p>THE PURPOSE OF THE CONTRACT IS TO PERFORM WATER RECLAMATION ON THE MINING OPERATION OF STEWARTOWN COAL CORPORATION, NOW UNDER REVOKED PERMIT NUMBER(S) 67-78.</p> <p>THE RECLAMATION SHALL BE PERFORMED UNDER THE GUIDANCE AND GENERAL SUPERVISION OF THE AGENT ASSIGNED TO THE PROJECT FOR THE STATE OF WEST VIRGINIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION.</p> <p>A MANDATORY ON SITE PREBID CONFERENCE SHALL BE HELD ON 05/08/07 @ 10:00 AM. FAILURE TO ATTEND THE PREBID CONFERENCE WILL RESULT IN BID DISQUALIFICATION.</p> <p>THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND OTHER NECESSARY SERVICES SO AS TO ACCOMPLISH THE ITEMS AS SPECIFIED IN THIS CONTRACT. PROJECT IS LOCATED NEAR STEWARTSTOWN, WV, MONONGALIA COUNTY AND CONSISTS OF APPROXIMATELY 4 ACRES.</p> <p>ALL WORK MUST BE COMPLETED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PREPARED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND PURCHASE ORDER ISSUED BY</p>						

RECEIVED  
 2007 MAY 24 P 12:48

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: *Jammy J. Clay* TELEPHONE: 304-925-0253 DATE: 5/24/07  
 TITLE: Corp. Secretary FEIN: 55-0580174 ADDRESS CHANGES TO BE NOTED ABOVE

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



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AUDITOR

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**CHARLESTON WV 25304**

SHIP TO

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<p>THE DEPARTMENT OF ADMINISTRATION, PURCHASING DIVISION.</p> <p>EXHIBIT 5</p> <p>NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN 365 CALENDAR DAYS AFTER THE NOTICE TO PROCEED IS RECEIVED. UNLESS OTHERWISE SPECIFIED, THE FULLY EXECUTED PURCHASE ORDER WILL BE CONSIDERED NOTICE TO PROCEED.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE MATERIALS OR WORKMANSHIP SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE THE BID AND CONTRACT HEREIN.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAGE RATES AS ESTABLISHED FOR MONONGALIA COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ.</p> <p>ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.</p> <p>WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL.</p> <p>ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT OF THIS CONTRACT:</p> <p>(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF</p>						

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				OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$250,000.		
				( ) BUILDERS RISK INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF BUILDERS RISK - ALL RISK INSURANCE IN AN AMOUNT EQUAL TO 100% OF THE AMOUNT OF THE CONTRACT.		
				(XX) BONDS: FIVE PERCENT (5%) OF THE TOTAL AMOUNT OF THE BID PAYABLE TO THE STATE OF WEST VIRGINIA, SHALL BE SUBMITTED WITH EACH BID AS A BID BOND. THE SUCCESSFUL BIDDER SHALL ALSO FURNISH A PERFORMANCE BOND AND LABOR/MATERIAL BOND FOR 100% OF THE AMOUNT OF THE CONTRACT. BONDS MAY BE PROVIDED IN THE FORM OF A CERTIFIED CHECK, IRREVOCABLE LETTER OF CREDIT, OR BOND FURNISHED BY A SOLVENT SURETY COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF WEST VIRGINIA. A LETTER OF CREDIT SUBMITTED IN LIEU OF A PERFORMANCE AND LABOR & MATERIAL BOND WILL ONLY BE ALLOWED FOR PROJECTS UNDER \$100,000. PERSONAL OR BUSINESS CHECKS ARE NOT ACCEPTABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR/MATERIAL BOND.		
				( ) MAINTENANCE BOND: A TWO (2) YEAR MAINTENANCE BOND COVERING THE ROOFING SYSTEM WILL BE A REQUIREMENT OF THE SUCCESSFUL VENDOR.		
				REV. 11/00		
				CONTRACTORS LICENSE		
				WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS		

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<p>LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.</p> <p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p> <p>BIDDER TO COMPLETE:</p> <p>CONTRACTORS NAME - Green Mountain Company</p> <p>CONTRACTORS LICENSE NO. - WV002057</p> <p>THE SUCCESSFUL BIDDER WILL REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT.</p> <p>APPLICABLE LAW</p> <p>THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULE AND REGULATIONS, AND THE INFORMATION PROVIDED IN THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.</p> <p>ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER</p>						

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<p>ORDER.</p> <p>EXHIBIT 7</p> <p>DOMESTIC ALUMINUM, GLASS &amp; STEEL IN PUBLIC WORKS PROJECTS</p> <p>IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., SEQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND, IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINUM GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES. IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS.</p> <p>FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND TO BE UNREASONABLE. SUCH COST IS UNREASONABLE IF IT IS 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE PRODUCTS. IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS.</p> <p>IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER</p>						

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<p>THAN THE LOWEST BID FOR DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS. ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE SUPPLYING FOREIGN ALUMINUM, GLASS OR STEEL.</p> <p>REV. 3/88</p> <p>EXHIBIT 9</p> <p>NOTICE FOR ISSUANCE &amp; ACKNOWLEDGEMENT OF CONSTRUCTION PROJECT ADDENDA</p> <p>THE ARCHITECT/ENGINEER AND/OR AGENCY SHALL BE REQUIRED TO ABIDE BY THE FOLLOWING SCHEDULE IN ISSUING CONSTRUCTION PROJECT ADDENDA FOR STATE AGENCIES:</p> <p>(1) THE ARCHITECT/ENGINEER SHALL PREPARE THE ADDENDUM AND A LIST OF ALL PARTIES THAT HAVE PROCURED DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. THE ADDENDUM AND LIST SHALL BE FORWARDED TO THE BUYER IN THE STATE PURCHASING DIVISION. THE ARCHITECT/ENGINEER SHALL ALSO SEND A COPY OF THE ADDENDUM TO THE STATE AGENCY FOR WHICH THE CONTRACT IS ISSUED.</p> <p>(2) THE BUYER SHALL SEND THE ADDENDUM TO ALL INTERESTED PARTIES AND, IF NECESSARY, EXTEND THE BID OPENING DATE. ANY ADDENDUM SHOULD BE RECEIVED BY THE BUYER WITHIN FOURTEEN (14) DAYS PRIOR TO THE BID OPENING DATE.</p> <p>(3) ALL ADDENDA SHOULD BE FORMALLY ACKNOWLEDGED BY ALL BIDDERS AND SUBMITTED TO THE STATE PURCHASING DIVISION AND THE STATE AUDITOR'S OFFICE. THE SAME RULES AND REGULATIONS THAT APPLY TO THE ORIGINAL BIDDING DOCUMEN</p>						

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<i>Jammy J. Clay</i>	304-925-0253	5/24/07
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Corp. Secretary	55-0580174	

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<p>SHALL ALSO APPLY TO AN ADDENDUM DOCUMENT. THE ONLY EXCEPTION MAY BE FOR AN ADDENDUM THAT IS ISSUED FOR THE SOLE PURPOSE OF CHANGING A BID OPENING TIME AND/OR DATE.</p> <p>REV. 11/96</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.: DEP13574</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> <p>NO. 1 .....</p> <p>NO. 2 .....</p> <p>NO. 3 .....</p> <p>NO. 4 .....</p> <p>NO. 5 .....</p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p style="text-align: right;"><i>Jimmy J. Clay</i> ..... SIGNATURE</p>						

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				Green Mountain Company ..... COMPANY ..... 5/24/07 ..... DATE		
				REV. 11/96		
				NOTICE		
				A SIGNED BID MUST BE SUBMITTED TO:		
				DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130		
				THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:		
				SEALED BID		
				BUYER: CB-23		
				RFQ. NO.: DEP13575		
				BID OPENING DATE: 05/24/2007		
				BID OPENING TIME: 1:30 PM		
				PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY		

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<p>TO CONTACT YOU REGARDING YOUR BID:            -----            304-925-9230            -----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY): Jody Clay</p>						
<p>***** THIS IS THE END OF RFQ DEP13575 ***** TOTAL:</p>						<p><u>\$396,000.00</u></p>

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BUYER CB-23	PAGE <b>011</b>	REQ. OR PO NO. DEP 13575
SPENDING UNIT WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION/SPECIAL RECLAMATION		

WV-36a STATE OF WEST VIRGINIA  
Rev. 1/29/02 PURCHASING CONTINUATION SHEET  
VENDOR:

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
<b>BID SCHEDULE</b>				
<b>PERMIT NAME: <u>STEWARTOWN COAL CORP.</u></b>				
<b>PERMIT NUMBER(S): <u>67-78</u></b>				
1.0	LUMP SUM	<b><u>MOBILIZATION/DEMOBILIZATION/PROJECT SIGN</u></b> (5% Total Bid Maximum for this permit)	LUMP SUM	\$ <u>9,933.00</u>
2.0	LUMP SUM	<b><u>SPILL CONTAINMENT AREA (S.C.A.)</u></b> (\$1,000.00 Maximum Bid for this permit)	LUMP SUM	\$ <u>100.00</u>
<b><u>ROAD CONSTRUCTION</u></b>				
3.0	<u>2500</u> LF	<b><u>NEW HAULROAD/ACCESS ROAD</u></b>	\$ <u>15.40</u> PER LF	\$ <u>38,500.00</u>
4.0	<u>4225</u> LF	<b><u>HAULROAD/ACCESS ROAD UPGRADE</u></b>	\$ <u>4.40</u> PER LF	\$ <u>18,590.00</u>
5.0	<u>1500</u> LF	<b><u>FILTER FABRIC FOR ROAD UPGRADE</u></b>	\$ <u>.10</u> PER LF	\$ <u>150.00</u>
6.0	<u>450</u> TON	<b><u>INCIDENTAL #1 STONE FOR ROAD UPGRADE</u></b>	\$ <u>10.00</u> PER TON	\$ <u>4,500.00</u>
7.0	<u>100</u> LF	<b><u>HDPE CULVERT 48" DIAMETER</u></b>	\$ <u>131.00</u> PER LF	\$ <u>13,100.00</u>
8.0	<u>140</u> LF	<b><u>HDPE CULVERT 24" DIAMETER</u></b>	\$ <u>34.00</u> PER LF	\$ <u>4,760.00</u>
9.0	<u>100</u> LF	<b><u>HDPE CULVERT 15" DIAMETER</u></b>	\$ <u>21.00</u> PER LF	\$ <u>2,100.00</u>
10.0	LUMP SUM	<b><u>CLEAR AND GRUB</u></b>	LUMP SUM	\$ <u>8,580.00</u>
11.0	<u>400</u> LF	<b><u>HAYBALE DIKE</u></b> (Max. Bid \$5.00 Per LF)	\$ <u>4.00</u> PER LF	\$ <u>1,600.00</u>

Green Mountain Company  
511 50th Street  
Charleston, WV 25304

BUYER CB-23	PAGE <b>012</b>	REQ OR PO NO DEP 13575
SPENDING UNIT		
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION/SPECIAL RECLAMATION		

WV-36a STATE OF WEST VIRGINIA  
Rev. 1/29/02 PURCHASING CONTINUATION SHEET  
VENDOR:

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
<b><u>WATER QUALITY ABATEMENT</u></b>				
12.0	<u>820</u> LF	<u>RIPRAP V - DITCH</u>	\$ <u>13.00</u> PER LF	\$ <u>10,660.00</u>
13.0	LUMP SUM	<u>FRESH WATER POND</u>	LUMP SUM	\$ <u>22,290.00</u>
14.0	LUMP SUM	<u>HDPE 60 MIL. POND LINER</u>	LUMP SUM	\$ <u>29,410.00</u>
15.0	<u>325</u> LF	<u>RIPRAP TRAPEZOIDAL DITCH</u>	\$ <u>33.00</u> PER LF	\$ <u>10,725.00</u>
16.0	<u>120</u> LF	<u>SEEP COLLECTOR</u>	\$ <u>81.00</u> PER LF	\$ <u>9,720.00</u>
17.0	<u>52</u> LF	<u>SDR 35 PVC PIPE 12" DIAMETER</u>	\$ <u>24.00</u> PER LF	\$ <u>1,248.00</u>
18.0	LUMP SUM	<u>SETTLING POND</u>	LUMP SUM	\$ <u>30,954.00</u>
19.0	LUMP SUM	<u>BAFFLE CURTAIN</u>	LUMP SUM	\$ <u>1,875.00</u>
20.0	<u>10</u> LF (Depth)	<u>SUB-FOUNDATION PREPARATION</u>	\$ <u>10.00</u> PER LF	\$ <u>100.00</u>
21.0	LUMP SUM	<u>FOUNDATION</u>	LUMP SUM	\$ <u>70,635.00</u>
22.0	LUMP SUM	<u>CRANE</u>	LUMP SUM	\$ <u>1,080.00</u>
23.0	LUMP SUM	<u>DOSING UNIT AND SILO</u>	LUMP SUM	\$ <u>70,635.00</u>
24.0	<u>180</u> LF	<u>4-INCH HDPE PIPE</u>	\$ <u>4.00</u> PER LF	\$ <u>720.00</u>
25.0	LUMP SUM	<u>WATER CONNECTION AT DISPENSING UNIT</u>	LUMP SUM	\$ <u>3,240.00</u>
26.0	<u>540</u> LF	<u>6-INCH HDPE PIPE</u>	\$ <u>10.50</u> PER LF	\$ <u>5,670.00</u>

Green Mountain Company  
 511 50th Street  
 Charleston, WV 25304

BUYER CB-23	PAGE <b>013</b>	REQ. OR PO NO. DEP 13575
SPENDING UNIT WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION/SPECIAL RECLAMATION		

WV-36a STATE OF WEST VIRGINIA  
 Rev. 1/29/02 PURCHASING CONTINUATION SHEET  
 VENDOR:

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
27.0	<u>1</u> EA	<u>6-INCH GATE VALVE</u>	\$ <u>1,270.00</u> PER EA	\$ <u>1,270.00</u>
28.0	<u>2</u> EA	<u>6-INCH HDPE BLIND FLANGE</u>	\$ <u>240.00</u> PER EA	\$ <u>480.00</u>
29.0	LUMP SUM	<u>SLUDGE DISPOSAL CELL</u>	LUMP SUM	\$ <u>5,120.00</u>
30.0	<u>2</u> EA	<u>6 INCH HDPE PUMP ADAPTORS</u>	\$ <u>285.00</u> PER EA	\$ <u>570.00</u>
31.0	<u>1</u> EA	<u>6 INCH HDPE WYES</u>	\$ <u>160.00</u> PER EA	\$ <u>160.00</u>
32.0	LUMP SUM	<u>POND ELIMINATION</u>	LUMP SUM	\$ <u>6,265.00</u>
33.0	<u>100</u> LF	<u>RIPRAP TRAPEZOIDAL SPILLWAY CHANNEL</u>	\$ <u>40.00</u> PER LF	\$ <u>4,000.00</u>
34.0		<u>REVEGETATION</u>		
34.1	<u>4</u> AC	<u>AGRICULTURAL LIME</u>	\$ <u>405.00</u> PER ACRE	\$ <u>1,620.00</u>
34.2	<u>4</u> AC	<u>FERTILIZER</u>	\$ <u>470.00</u> PER ACRE	\$ <u>1,880.00</u>
34.3	<u>4</u> AC	<u>MULCH</u>	\$ <u>470.00</u> PER ACRE	\$ <u>1,880.00</u>
34.4	<u>4</u> AC	<u>VEGETATIVE SPECIES</u>	\$ <u>470.00</u> PER ACRE	\$ <u>1,880.00</u>
		<u>TOTAL PERMIT #67-78</u>		\$ <u>396,000.00</u>

**BID BOND**

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, Green Mountain Company  
of Charleston, WV, as Principal, and Ohio Farmers Insurance Company  
of Westfield Center, OH, a corporation organized and existing under the laws of the State of  
OH with its principal office in the City of Westfield Center, as Surety, are held and firmly bound unto the State  
of West Virginia, as Obligee, in the penal sum of Five Percent of Amount Bid (\$ 5%) for the payment of which,  
well and truly to be made we jointly and severally bind ourselves, our heirs administrators, executors, successors and assigns

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the  
Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for  
DEP13575 - Stewartown Coal Corp. - According to Plans & Specifications

NOW THEREFORE,

- (a) If said bid shall be rejected, or
- (b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached  
hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the  
agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in full  
force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event,  
exceed the penal amount of this obligation as herein stated

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no  
way impaired or affected by any extension of the time within which the Obligee may accept such bid, and said Surety does hereby  
waive notice of any such extension

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations  
have caused their corporate seals to be affixed hereunto and these presents to be signed by their proper officers, this  
24th day of May, 2007

Principal Corporate Seal

Green Mountain Company  
(Name of Principal)  
By: [Signature]  
(Must be President or  
Vice President)  
President  
(Title)

Surety Corporate Seal

Ohio Farmers Insurance Company  
(Name of Surety)  
By: [Signature]  
Gregory T. Gordon WW Resident Agent / Attorney-in-Fact

General Power of Attorney

Westfield Insurance Co. Westfield National Insurance Co. Ohio Farmers Insurance Co. Westfield Center, Ohio

CERTIFIED COPY

Know All Men by These Presents, That WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, corporations, hereinafter referred to individually as a "Company" and collectively as "Companies," duly organized and existing under the laws of the State of Ohio, and having its principal office in Westfield Center, Medina County, Ohio, do by these presents make, constitute and appoint LARRY D. KERR, GREGORY T. GORDON, H. RANDOLPH NEVILLE, PATRICIA A. FINCKE, STEPHEN B. STODGEN, PATRICIA A. MOYE, ALLAN L. MC VEY, TAMMY M. LLOYD, KIMBERLY J. WILKINSON, JOINTLY OR SEVERALLY

of CHARLESTON and State of WV its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings, or other instruments or contracts of suretyship-

LIMITATION: THIS POWER OF ATTORNEY CANNOT BE USED TO EXECUTE NOTE GUARANTEE, MORTGAGE DEFICIENCY, MORTGAGE GUARANTEE, OR BANK DEPOSITORY BONDS.

and to bind any of the Companies thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the applicable Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney(s)-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolution adopted by the Board of Directors of each of the WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY:

"Be It Resolved, that the President, any Senior Executive, any Secretary or any Fidelity & Surety Operations Executive or other Executive shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

The Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements of indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed by the President and sealed and attested by the Corporate Secretary."

"Be it Further Resolved, that the signature of any such designated person and the seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signatures or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached." (Each adopted at a meeting held on February 8, 2000).

In Witness Whereof, WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY have caused these presents to be signed by their Senior Executive and their corporate seals to be hereto affixed this 08th day of NOVEMBER A.D., 2006.

Corporate Seals Affixed



WESTFIELD INSURANCE COMPANY WESTFIELD NATIONAL INSURANCE COMPANY OHIO FARMERS INSURANCE COMPANY

Richard L. Kinnaird, Jr.

By: Richard L. Kinnaird, Jr., Senior Executive

State of Ohio County of Medina ss:

On this 08th day of NOVEMBER A.D., 2006, before me personally came Richard L. Kinnaird, Jr. to me known, who, being by me duly sworn, did depose and say, that he resides in Medina, Ohio; that he is Senior Executive of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, the companies described in and which executed the above instrument; that he knows the seals of said Companies; that the seals affixed to said instrument are such corporate seals; that they were so affixed by order of the Boards of Directors of said Companies; and that he signed his name thereto by like order.

Notarial Seal Affixed



William J. Kahelin

William J. Kahelin, Attorney at Law, Notary Public My Commission Does Not Expire (Sec 147.03 Ohio Revised Code)

State of Ohio County of Medina ss:

I, Frank A. Carrino, Secretary of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect: and furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Westfield Center, Ohio, this 24th day of May, A.D., 2007.



Frank A. Carrino Secretary

Frank A. Carrino, Secretary

**A F F I D A V I T**

073

**West Virginia Code §5A-3-10a states:**

No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

**EXCEPTION:**

The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**LICENSING:**

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

**CONFIDENTIALITY:**

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit [www.state.wv.us/admin/purchase/privacy](http://www.state.wv.us/admin/purchase/privacy) for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: Green Mountain CompanyAuthorized Signature: Jammy J. ClayDate: 5/24/07

# SMOOTH HDPE GEOMEMBRANE

## ENGLISH UNITS

**POLY-FLEX**  
POLYETHYLENE GEOMEMBRANES

1.3.1 A(1)

### Minimum Average Values

Property	Test Method	30 mil	40 mil	60 mil	80 mil	100 mil	
Thickness, mils minimum average lowest individual reading	ASTM D 5199	30	40	60	80	100	
		27	36	54	72	90	
Sheet Density, g/cc	ASTM D 1505/D 792	0.940	0.940	0.940	0.940	0.940	
Tensile Properties <sup>1</sup>	ASTM D 6693						
		1. Yield Strength, lb/in	63	84	126	168	210
		2. Break Strength, lb/in	114	152	228	304	380
		3. Yield Elongation, %	12	12	12	12	12
		4. Break Elongation, %	700	700	700	700	700
Tear Resistance, lb	ASTM D 1004	21	28	42	56	70	
Puncture Resistance, lb	ASTM D 4833	54	72	108	144	180	
Stress Crack Resistance <sup>2</sup> , hrs	ASTM D 5397 (App)	300	300	300	300	300	
Carbon Black Content <sup>3</sup> , %	ASTM D 1603	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	
Carbon Black Dispersion	ASTM D 5596	--Note 4--					
Oxidative Induction Time (OIT) Standard OIT, minutes	ASTM D 3895	100	100	100	100	100	
Oven Aging at 85°C Standard OIT - % retained after 90 days	ASTM D 5721 ASTM D 3895	55	55	55	55	55	
UV Resistance <sup>5</sup> High Pressure OIT <sup>6</sup> - % retained after 1600 hrs	GRI GM11 ASTM D 5885	50	50	50	50	50	
Seam Properties	ASTM D 6392 (@ 2 in/min)						
		1. Shear Strength, lb/in	57	80	120	160	200
		2. Peel Strength, lb/in - Hot Wedge	45	60	91	121	151
		- Extrusion Fillet	39	52	78	104	130
Roll Dimensions							
	1. Width (feet):	23	23	23	23	23	
	2. Length (feet)	1000	750	500	375	300	
	3. Area (square feet):	23,000	17,250	11,500	8,625	6,900	
4. Gross weight (pounds, approx.)	3,470	3,470	3,470	3,470	3,470		

- Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction. Yield elongation is calculated using a gauge length of 1.3 inches; Break elongation is calculated using a gauge length of 2.0 inches.
  - The yield stress used to calculate the applied load for the SP-NCTL test should be the mean value via MQC testing.
  - Other methods such as ASTM D 4218 or microwave methods are acceptable if an appropriate correlation can be established.
  - Carbon black dispersion for 10 different views: Nine in Categories 1 and 2 with one allowed in Category 3.
  - The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.
  - UV resistance is based on percent retained value regardless of the original HP-OIT value.
- This data is provided for informational purposes only and is not intended as a warranty or guarantee. Poly-Flex, Inc. assumes no responsibility in connection with the use of this data. These values are subject to change without notice. REV. 6/04



**POLY-FLEX**  
POLYETHYLENE GEOMEMBRANES

# GEOMEMBRANE MANUFACTURING QUALITY CONTROL & QUALITY ASSURANCE

1.3.1 A (2)

## Geosynthetic Research Institute (GRI) Standards

GM 10	Specification for the stress crack resistance of geomembrane sheet
GM 11	Accelerated weathering of geomembranes using a florescent UVA-condensation exposure device
GM 12	Measurement of the asperity height of textured geomembranes using a depth gauge

## Addendum to Test Procedures

The following are modifications or clarifications to test procedures.

1. Specifications are based on the average of Machine Direction (MD) and Cross Direction (XMD) values.
2. Specimens shall be taken uniformly across the width of the sheet as stated in ASTM D 1898.

## 3. MANUFACTURING

### 3.1 Blown Sheet Process

Polyethylene resin is pumped directly from storage silos or from totes on the floor to hoppers above the extruder. Hoppers feed resin into the extruder. The resin is heated to the melting point in the extruder barrel. It is conveyed through the barrel by the rotation of a specially designed screw which, in conjunction with heating elements along the barrel, provides consistency to produce a molten polymer stream.

The molten material is forced through a screen pack, which act as a final filter for impurities or contaminants, and up through a die. It extrudes from the circular die as a film tube ("bubble"), pulled vertically by a set of nip rollers located at the top of a cooling tower. An IBC (Internal Bubble Cooling) unit, part of the extruder, maintains consistent bubble diameter. Material gauge is monitored and maintained by a computer system which controls the operation of the extruder.

At the top of the tower the bubble passes through a collapsing frame and is pulled through the nip rollers. The material is directed back toward the ground, and continues cooling as it approaches a winding machine. Before being taken up by the winder, the tube is split and spread to its deployable width. The winder rolls the finished geomembrane onto a specially made heavy-duty core.

### 3.2 Process Quality Control

Poly-Flex geomembranes are manufactured via the blown sheet process. This is a continuous process. The key elements to successfully producing a high-quality liner is to maintain consistency in both the raw material and the process. As described above, raw material consistency is established in the laboratory when the resin is initially received. Consistency during the processing is assured by an on-line quality control monitor. This representative of the quality department has been specially trained to monitor the process and the liners during the manufacturing process.

The extrusion process starts with the verification of the formulation. This is done at the beginning of each order or blend change by the extrusion manager and then is continuously monitored by the on-line quality control representative.

# GEOMEMBRANE MANUFACTURING

## QUALITY CONTROL & QUALITY ASSURANCE



The process conditions during manufacturing have been optimized for each resin formulation. These conditions are kept in a log book which is available to the line operator. These process conditions must be maintained throughout the production run. Any variation of process parameters from the set point range recorded on the process log book are immediately reported to the production supervisor by the on-line quality control representative. If the variation exceeds the control range, the quality control representative places the material being produced on hold. Materials are placed on hold until the process is brought under control.

The on-line quality monitor can also place material on hold if the material has any visual defect (holes, water spots, or scratches) or dimensional abnormalities (width, length, and thickness).

All materials placed on hold will be further inspected and tested. If the material passes specification and is approved by the quality control manager and/or production manager, the material will then be released into stock. If the material fails to pass specification or does not get approval of either the quality control manager or production manager then the material will be reclassified or scrapped. In either case it cannot be sold as a prime Poly-Flex geomembrane.

Poly-Flex geomembranes are continuously monitored for pinholes during the manufacturing process by spark testing equipment. The spark tester unit is a perpetual monitor of any holes that could surface in the sheet. The spark tester monitors the entire layflat width of the sheet as it is being manufactured. The detector operates from a 120 V AC power supply. The 120 volts are transformed to a higher voltage that ranges from 0-24 kilovolts. The electrode is made up of a long semiconductor blanket that is positioned to lay over the sheet as it passes over a steel roller prior to final winding. A grounding conductor is connected to the roller with a return line to the controller. If a hole passes under the electrically charged blanket, the voltage will arc to the steel roller and the detection system will sense the voltage drop, thus triggering an audible alarm and shutting down the winder. Twice per shift, the quality control technician tests the spark tester by introducing a 1/32" pinhole in the sheet. This hole is at the end of a roll after the scheduled footage has been achieved. The winder continues to run until the hole is detected. Once the hole is detected, the alarm sounds and the winder shuts down. The quality control technician restarts the winder and cuts out the entire layflat area of the pinhole.

After a roll of material has been produced it is labeled and a retain is cut for laboratory evaluation.

### 3.3 Roll Labeling

Three labels are affixed to each roll, as described below:

1. One label on the outside of the core.
2. One label on the core plug.
3. One label on the roll surface.

An additional label is attached to the laboratory sample.

### 3.4 Storage, Staging and Shipping of Geomembrane Rolls

Finished rolls (verified and labeled) are moved to the storage area using a specially designed cart and remain in storage until a Purchase Order is received. Rolls selected for shipment are moved to a staging area, where they are held for a truck. Before loading the order for shipment, all documentation is checked against the information on the roll labels. Rolls are lifted and moved using a loading arm equipped with rigging and hooks. Fork-lifting machinery are never to be used to lift or move geomembrane rolls.



## GEOMEMBRANE MANUFACTURING QUALITY CONTROL & QUALITY ASSURANCE

### 3.5 Laboratory Quality Control & Quality Assurance

Based on the philosophy that quality cannot be inspected into a product and that a consistent raw material and a consistent process will yield a consistent liner, laboratory testing of Poly-Flex geomembrane is provided primarily for roll certification.

A retain from each roll is provided for the laboratory. Testing is conducted on the retains as indicated below.

Property	Test Method	Testing Frequency (min.)
Thickness (smooth sheet) (textured sheet)	ASTM D 5199 ASTM D 5994	per roll
Asperity Height (textured sheet only) Alternate the measurement side for double-sided textured sheet	GRI GM12	every second roll
Sheet Density	ASTM D 1505/D 792	200,000 lb (90,000 kg)
Tensile Properties 1. Yield Strength (HDPE only) 2. Break Strength 3. Yield Elongation (HDPE only) 4. Break Elongation	ASTM D 6693	20,000 lb (9,000 kg)
2% Modulus (LLDPE only)	ASTM D 5323	per each formulation
Tear Resistance	ASTM D 1004	45,000 lb (20,000 kg)
Puncture Resistance	ASTM D 4833	45,000 lb (20,000 kg)
Axi-Symmetric Break Strain (LLDPE only)	ASTM D 5617	per each formulation
Stress Crack Resistance (HDPE only)	ASTM D 5397 (App)	per GRI GM10
Carbon Black Content	ASTM D 1603	20,000 lb (9,000 kg)
Carbon Black Dispersion	ASTM D 5596	45,000 lb (20,000 kg)
Oxidative Induction Time (OIT) Standard OIT	ASTM D 3895	200,000 lb (90,000 kg)
Oven Aging at 85°C Standard OIT	ASTM D 5721 ASTM D 3895	per each formulation
UV Resistance High Pressure OIT	GRI GM11 ASTM D 5885	per each formulation

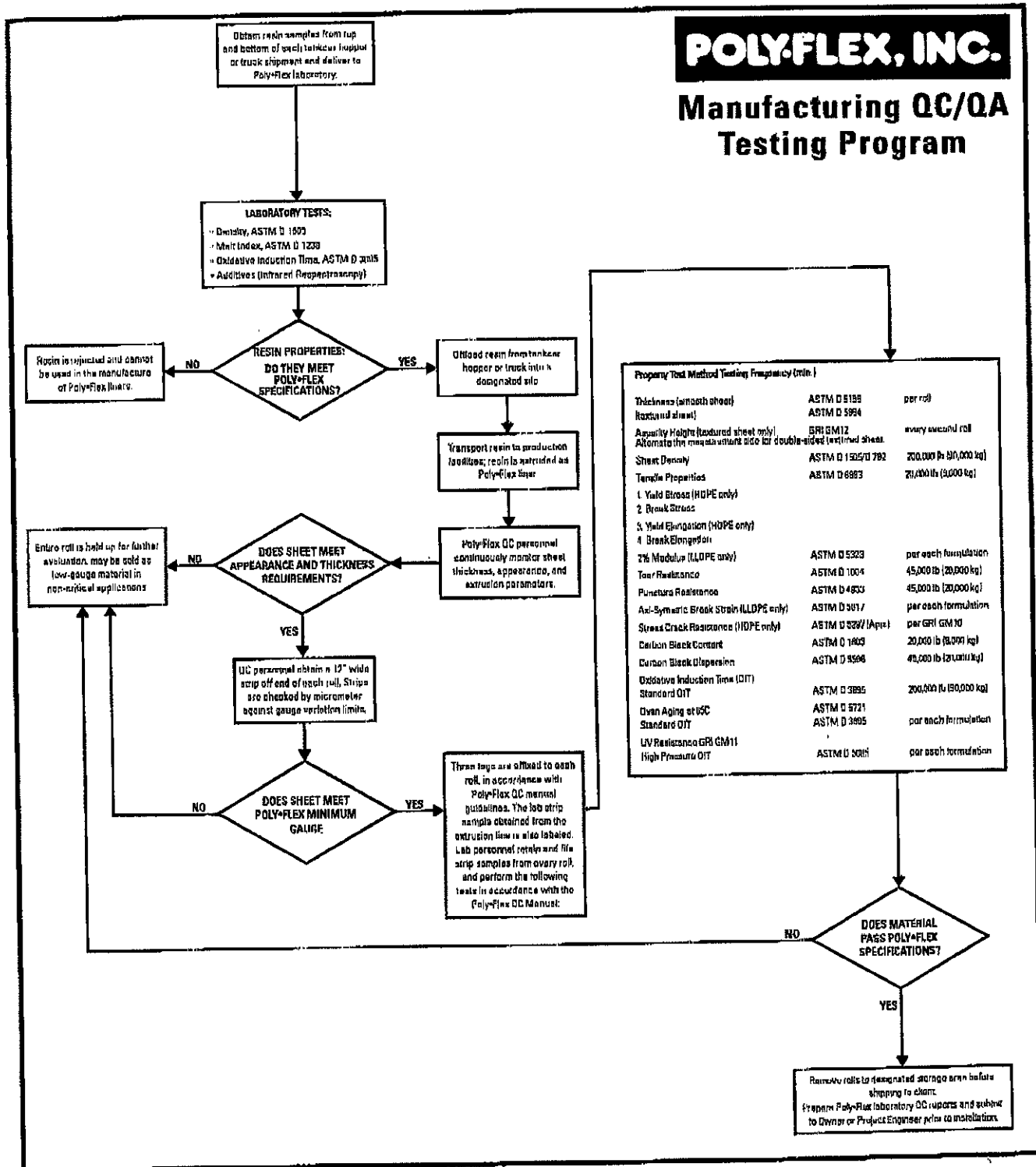
After the testing has been completed, the data is reviewed by the quality control manager. If any rolls do not meet specifications, additional testing is conducted on that roll. If the roll still does not meet specifications the production manager is notified and the roll is placed on hold.

After the data has been reviewed it is entered into a product file which is used for roll certification.

# GEOMEMBRANE MANUFACTURING QUALITY CONTROL & QUALITY ASSURANCE



## 4. MANUFACTURING QUALITY CONTROL PROGRAM FLOW CHART



**POLY-FLEX**  
POLYETHYLENE GEOMEMBRANES

# GEOMEMBRANE MANUFACTURING QUALITY CONTROL & QUALITY ASSURANCE

## 5. PAPER FLOW FORMS

### 5.1 Product Quality Report

This report documents the raw material manufacturer's test results for the physical properties of the incoming resin. Each incoming shipment to Poly-Flex is accompanied by such a report. A copy of this report is sent to the engineer/client with the finished product.



CoA Date: 12/02/2003

### Certificate of Analysis

Shipped To: POLY AMERICA  
2000 W. MARSHALL  
GRAND PRAIRIE TX 75052  
USA

Recipient: Dan Averitte  
Fax: 1-972-337-7407

CPC Delivery #: 86514758  
PO #: 163887  
Weight: 180200 LB  
Ship Date: 12/05/2003  
Package: BULK  
Mode: Hopper Car  
Car #: PSPX005774

Product:  
MARLEX POLYETHYLENE K203 BULK

Lot Number: 8131212

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.180	g/10mi
HLMI Flow Rate	ASTM D1238	14.80	g/10mi
Density	ASTM D1505	0.9230	g/cm <sup>3</sup>
Production Date		12/02/03	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP. However, there is no warranty of any kind, either expressed or implied applicable to its use, and the user assumes all risk and liability in connection therewith.

Jackie Edwards  
Certification Systems Specialist

For CoA questions contact Peter Scheliman at 713-269-4799

# GEOMEMBRANE MANUFACTURING QUALITY CONTROL & QUALITY ASSURANCE



## 5.2 Railcar Resin Report

This report is used by Poly-Flex's laboratory to document results of tests performed on incoming raw material. These results are checked against Poly-Flex's raw material specifications and the Product Quality Report issued by the material manufacturer.

RAILCAR RESIN REPORT					
P.O. #: <u>933165</u>	LOCATION Bldg: <u>1</u>	Weight: <u>185,300</u>			
Date Rec'd: <u>03/30/03</u>	POL Y- (A)merica / (F)lex: <u>Flex</u>	Resin Code: _____			
<b>BUY INFORMATION</b>					
Railcar #: <u>PSPX 5798</u>	Melt Index: <u>0.12</u>	Slip: <u>0</u>			
Vendor: <u>ChevronPhill</u>	Density: <u>0.937</u>	Antiblock: <u>0</u>			
Blend: <u>K306</u>	Film Rating: _____	Antioxidant: <u>x</u>			
Lot #: <u>8220383</u>	Comments: _____	Copolymer: _____			
Type: <u>GHDPE</u>		Other: _____			
Description: <u>Prime PolyFlex HDPE</u>					
Pressure: High: _____ Low: _____					
<b>CAR CAPACITY</b>					
(P)ellets or (G)ranular: <u>P</u>	Car Size: _____	Track: _____			
Measurements: N: _____ S: _____	Weight: <u>185,400</u>				
Inches A: _____ CA: _____ CB: _____ B: _____	Discrepancy: <u>100</u>				
<b>Release Information</b>					
Released to Railroad	Date: _____	Initials: _____	Approved By: _____		
Comments: _____					
<b>LABORATORY TESTING REPORT</b>					
Melt Index : A: <u>0.10</u>	CA: <u>0.11</u>	CB: <u>0.10</u>	B: <u>0.13</u>	Avg: <u>0.11</u>	R: <u>100</u>
HLM: A: <u>11</u>	CA: _____	CB: _____	B: _____	Avg: _____	
Density: A: <u>0.937</u>	CA: <u>0.935</u>	CB: <u>0.936</u>	B: <u>0.937</u>	Avg: <u>0.936</u>	<u>0.938</u> (annealed)
<b>Lab Line Parameters</b>					
RPM: _____	Temp: _____	Torque: _____	Pressure: _____		
Film Evaluation Gauge: _____	Range: _____	Average: _____			
	Width: _____	Dart Impact: _____ gm/mil			
	COF: _____	MD Tear: _____ gm/mil			
IR Analysis Slip: _____	AB: _____	Polymer: _____	Other: _____		
	CB: _____	% Ash: _____	OIT: <u>80 @ 220 deg C</u>		
Comments: <u>Prime HDPE Geomembrane</u>					
Film Use: _____	Approved By: <u>J. Nobert 4/1/3</u>				
<b>PUMPING INFORMATION</b>					
Released for Pumping	Where: _____	Date: _____	Approved: _____		
	Time Started	Time Finished			
Compartment A:	_____ / _____	_____ / _____			
Compartment CA:	_____ / _____	_____ / _____			
Compartment CB:	_____ / _____	_____ / _____			
Compartment B:	_____ / _____	_____ / _____			
Comments: _____					



# GEOMEMBRANE MANUFACTURING

## QUALITY CONTROL & QUALITY ASSURANCE

### 5.3 Quality Control Report

This report is sent to the engineer/client as Poly-Flex, Inc's standard quality control report. It documents the property values of the specific rolls shipped to a project.

CERTIFICATION SHEET												DATE: _____	
PROJECT NO: _____						ORDER NO: _____						POLY-FLEX, INC.	
TRIP NO: _____						CERTIFIED BY: _____						2000 W. Marshall Drive Grand Prairie, Texas 75051	
TEST DESCRIPTION	THICKNESS	CARBON BLACK	TEAR	PUNCTURE	TENSILE@ YIELD	ELONG @ YIELD	TENSILE@ BREAK	ELONG @ BREAK	CAR. BLK DISPERSION	DENSITY	NCTL		
ASTM METHOD	D5199	D1603	D1004	D4833	D6693	D6693	D6693	D6693	D5596	D1505	D5397		
(modifications)	min/avg.										Appendix		
UNITS	mils	%	lb	lb	lb/in	%	lb/in	%		g/cc	hours		
SPECIFICATION													
ROLL NUMBER	BLEND												

# GEOMEMBRANE MANUFACTURING QUALITY CONTROL & QUALITY ASSURANCE



## 5.4 Hold Tag

During production, any roll found to be defective is tagged and immediately removed. The roll will not be released for shipment, but it will be studied to determine the cause of the defect.

# HOLD

FOR QUALITY DEPARTMENT EVALUATION.  
DO NOT SEND THIS MATERIAL TO WAREHOUSE.

DATE \_\_\_\_\_ SHIFT \_\_\_\_\_

TIME \_\_\_\_\_ FILM LINE \_\_\_\_\_

QA INSP \_\_\_\_\_ ROLL NO \_\_\_\_\_

PRODUCT CODE \_\_\_\_\_

REASON PRODUCT BEING HELD \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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QUALITY DEPARTMENT ASSESSMENT

DATE \_\_\_\_\_

AUTHORIZATION \_\_\_\_\_

\_\_\_\_\_ RELEASE

\_\_\_\_\_ SCRAP

INSTRUCTIONS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



1.3.2 (A), a, b

ENVIRONMENTAL CONSTRUCTION, RESUME

JOBSITE	COMPANY	PHONE	CONTACT	DATE	FABRIC	GEONET	GCL	LINER
Cherry Run AML	Richard Construction	304-292-3346	Paul Hanko	1997				87000
Sycamore Landfill	Sycamore Landfill	304-562-2611	David Bruce	1997		320000		
Greenbrier Co. Landfill	Brackenrich & Assoc.	304-645-6235	Bernard Holiday	1997			140000	140000
Jefferson Co. Landfill	Marshall Miller Assoc.	703-322-5467	Randy Wyant	1997			1500000	
DSI Landfill	Disposal Services	304-562-3954	Tom Flanigan	1997		90000		
Charleston Landfill	West Virginia Waste	304-925-1192	Dean Lyle	1997		301000		145000
NORM Storage Area	Ashland Inc.	606-624-1149	Bob Alexander	1997		59350		24680
Upper Deckers Creek	Laurita Excavating	304-296-7531	Tom Laurita	1997				28050
WV Tire Disposal	Mountaineer Eng.	304-872-3172	Bob Cline	1997				88000
CSX Railyard	Koester Environmental	423-265-9551	John Dill	1997				68000
NORM Storage Area	Ashland Inc.	606-624-1149	Bob Alexander	1997				
Meadowfill Landfill	USA Waste Services	304-842-2784	Ron Levine	1997		216600		118000
Armour Crk. Landfill	Potesta & Associates	304-357-4990	D. Stottlemeyer	1997	217800			
Northwestern Landfill	USA Waste Services	304-428-0602	Ron Levine	1997			39000	78000
Morgantown Landfill	Marshall Miller Assoc.	703-322-5467	Randy Wyant	1997				
Raleigh Co. Landfill	Aimes & Associates	304-255-0491	James Allen	1997	252000			
Sycamore Landfill	Superior Services	304-562-2611	David Bruce	1997		178000		
Fenton Glass Landfill	Earth Tech Inc.	606-442-2300	Jason Geunther	1997			65000	56500
Midwest Disposal LF	Midwest Disposal	304-466-6167	Steve Ford	1997			72000	74000
Ham Landfill	Ham Landfill	800-610-6266	Ronnie Mann	1997	72000			35300
S&S Landfill	S&S Landfill	304-745-3234	Mike Fiorvante	1997		36500		55650
Sawmill Pond	U.S. Steel Mining	304-732-5245	Jim Blevins	1997			72800	
Meadowfill Landfill	USA Waste Services	304-428-0602	Ron Levine	1997				11980
Morton Sewage Plant	WV Turnpike Authority	304-984-1115	Randy Carpenter	1998				39420
Sediment Pond	Marfork Coal Co.	304-854-1852	Randal Sheets	1998				294800
Sediment Ponds	Dakota Mining	304-255-7458	Tim Myers	1998				61101
Waste Dump Pond	U.S. Steel Mining	304-732-5245	Jim Blevins	1998				51850
Sediment Pond	MIN Incorporated	304-664-3513	Bud Kirk	1998				26100
Heritage Point Pond	Triad Engineering	304-296-8739	Brad Casdorff	1998				38050
Charleston Compost	Hayslett Construction	304-757-9348	Tim Hayslett Jr.	1998				13650
Ames Manufacturing	4 Seasons Environ.	304-489-3884	Jeff Harper	1998			265350	266350
Greenup WWTP	Diamond Co.	606-483-6891	Wade Johnson	1999				64400
NORM Storage Area	Ashland Inc.	606-624-1149	Bob Alexander	1999			156600	
Meadowfill Landfill	USA Waste Services	304-428-0602	Ron Levine	1999				
Eikem Metals Landfill	Potesta & Associates	304-342-1400	James Hemme	1999			78300	
DuPont Inc. Landfill	Potesta & Associates	304-342-1400	Mark Kizer	1999	441000		217500	280696

ENVIRONMENTAL CONSTRUCTION, RESUME

JOBSITE	COMPANY	PHONE	CONTACT	DATE	FABRIC	GEONET	GCL	LINER
Evans WWTP	Boyles & Hildreth Eng	304-927-4574	Jim Hildreth	1999	281500			281500
Northwestern Landfill	USA Waste Services	304-428-0602	Ron Levine	1999		263613		
Armour Crk. Landfill	Potesta & Associates	304-342-1400	D.Stottlemeyer	1999	39600	21000		64434
Barboursville Fish Pond	M&P Industries	800-736-4046	Pete Mastrangelo	1999				51249
Glenmark Holdings	Beaver Excavating	330-478-2151	Stan Ujich	1999				134050
Pond spillway	Performance Coal	304-369-9101	Steve Hatfield	2000				82321
Armour Crk LF	Potesta & Associates	304-342-1400	D. Stottlemeyer	2000		500000		250000
Cooksey Brother LF	Cooksey Brothers LF	606-928-9633	Dan Rooney	2000		140000	140000	140000
NORM Storage Area	Ashland Inc.	606-652-4111	Jeff Roberts	2000				70000
Raleigh Landfill	Kimberly Industries	304-346-3775	Roger Dunlap	2000	270000		270000	540000
Goff Mountain LF	Mike Linville & Co.	304-755-3572	Mike Linville	2000		19500		19500
NORM Storage Area	Ashland Inc.	606-652-4111	Jeff Roberts	2000		25000		25000
Cooksey Brothers LF KY	Cooksey Brothers	606-233-3111	John Poore	2000		76000	76000	76000
Mt. Storm Power Plant	Buffalo Coal	304-259-5283	John Geroski	2001	20000			
Monongalia Landfill	Kimberly Industries	304-346-3775	Roger Dunlap	2001		725000		725000
Davies Co. KY LF	Davies Co. LF	270-229-4484	Rob Hocker	2001		235000		225000
DuPont LF	Almes & Assoc.	304-255-0491	Joe Sulesky	2001		89100		89100
Brooke CO WV LF	J P Mascaro & Sons	304-748-0014	Ken Fields	2001	220000			220000
Central Waste LF, OH	North Point Enviro.	330-494-8888	Ron Zitek	2001		195000		195000
Greenbrier LF, WV	E.T. 2000	304-645-4056	Bernard Holliday	2001			185000	185000
Mingo Logan golf course	Premium Energy	304-664-8066	Dave Fletcher	2001				210000
Nelson CO KY landfill	Waste Authority	502-348-1876	Brab Spalding	2001			435600	435600
Mercer co landfill	Alliance Engineering	3042550491	Joe Sulesky	2001		1710000		855000
West Vaco landfill	Branch Highways	540-982-1678	Will Karback	2001	784000			392000
Cooksey Brothers Landfill	Nesbit Engineering	606-233-3111	John Poore	2001		160000	120000	120000
Hardin CO. KY Landfill	Commonweath tech	859-276-3091	Roger Blair	2001		850000	850000	850000
Goff Mt Landfill	Aventis Cropsience	304-767-6870	George Kennedy	2001		255000		255000
West Daviess Co Ky LF	West Daviess Co Court	270-229-4484	Rob Hooker	2002	260000		260000	260000
Fleming Landfill	Potesta Engineering	304-342-1400	Mark Kiser	2002		1650000		830000
Mingo co. Landfill	J&B Excavating	304-984-0388	Basil Carpenter	2002		747000		373500
Raleigh Co. Landfill	Alliance Consulting	304-255-0491	Joe Sulesky	2002	195000		195000	390000
Grant Co. Landfill	Wasteiron	304-755-8448	Mike Evans	2002		1076400		538200
Bechtel Jacobs Plant	DKM Construction	740-289-3006	Dennis Martin	2002		85000		85000
DuPont, Martinsburg Plant	Alliance Consulting	304-255-0491	Joe Sulesky	2002		43280		43280
Rehe Landfill	Central Contracting	304-722-4939	Tim Aliff	2002		1239000		619560
Mercer Co. Landfill	Carpenter Reclamation	304-984-1115	Randy Carpenter	2002	202000		202000	202000

ENVIRONMENTAL CONSTRUCTION, RESUME

JOBSITE	COMPANY	PHONE	CONTACT	DATE	FABRIC	GEONET	GCL	LINER
Nicholas Co. Landfill	Carpenter Rec.	304-984-1115	Randy Carpenter	2002		150000		76000
McDowell co. landfill	J&B Excavating	304-546-1601	Basil Carpenter	2002		735750		367875
Elkins Landfill	Swecker Engineering	304-636-0343	Bill Swecker	2003		330000	165000	200000
Pocahontas co. Landfill	WTI	304-755-8448	Mike Evans	2003		75000	75000	75000
Campbell co. VA LF	Joyce Engineering	804-355-4520	Richard Brown	2003	315000			315000
Celanese Plant	Branch Highways	540-982-1678	Mark Wash	2003		310000		621000
Jeff Mead Landfill, ky	WTI	304-755-8448	Mike Evans	2003		217800	217800	275000
Hardin Co. LF, KY	Tetratech	859-276-3091	Roger Blair	2003		215000		215000
Tazewell Co. VA	Alliance Consulting	304-255-0491	Joe Sulesky	2003	400000	400000		380000
Midwest LF cap	Alliance Consulting	304-255-0491	Joe Sulesky	2003		2800000		1400000
Berekeley co. landfill	GAI Consultants	304-926-8100	charley Siraley	2004	400000			400000
West Daviess Co Ky LF	West Daviess Co Court	270-229-4484	Rob Hocker	2004	400000		350000	280000
Greenbrier Co. Landfill	ET 2000	304-645-4056	Brenard Holiday	2004		425000	425000	425000
Mason Co. Landfill	Mason Co Court	606-759-7049	Bob DeVoe	2004			275000	175000
White Co. Landfill	CBM Enterprizes	615-459-2640	Keith Sears	2004		174000	174000	174000
Ham Landfill	ET 2000	304-645-4056	Bill Tony	2004		1120000		560000
Hampshire Co. Landfill	J&B Excavating	304-984-0388	Basil Carpenter	2004		610000	610000	1220000
Forty West Landfill	C.W.Hetzerinc.	301-733-7300	Greg Eckard	2005	396000		396000	396000
Nelson CO KY landfill	Waste Authority	502-348-1877	Brad Spalding	2005		350000		350000
Hancock Co. Landfill	Earth Tech Inc.	859-442-2300	Jason Geunther	2005	650000			650000
Hoffman Rd Landfill	Mannik & Smith	419-891-2222	Bryant Cosper	2005		130000		130000
Scotts Landfill	Pro-Terra Environmental	614-443-3737	Brian Boyd	2005		100000	100000	92000
Nicholas Co. Landfill	Harrah Engineering	304-872-4312	Larry Harrah	2005		1742000	870000	1742000
Hardin Co. LF, KY	Tetratech	859-223-8000	Roger Blair	2005				276000
Mingo Logan Coal	Southern Const.	304-239-2213	Alvis Porter	2006	180000			90000
Toyota Plant	Raynes & Sons	304-545-1468	Josh Raynes	2006		182000		653400
Floyd Co. Landfill	Brock Excavating	606-523-0694	Steven Brock	2006	52000			52000
Consol Cap	Anderson Excavating	304-216-2168	Rodney Anderson	2006				82000
Morris Cr. AML	Green Mountain	304-925-0253	Dave Bowman	2006		2178000		1089000
Dons Disposal	Carpenter Reclamation	304-454-1726	Randy Carpenter	2006	522720		522720	1045440
Tucker Co. Landfill	Waste Authority	304-259-4867	Rella Cvetican	2006		1219680		609840
Perry Co. Landfill	The Walker Co.	859-498-4444	Jeff Garrison	2006		522720	522720	522720
NRRA	Central Contracting	304-722-4939	Tim Aliff	2006				
			<b>TOTAL</b>			<b>27717263</b>	<b>9331140</b>	<b>27134946</b>

# SMOOTH HDPE GEOMEMBRANE

## ENGLISH UNITS

1.3.2 A (c)

**POLY-FLEX**  
 POLYETHYLENE GEOMEMBRANES

### Minimum Average Values

Property	Test Method	30 mil	40 mil	60 mil	80 mil	100 mil	
Thickness, mils minimum average lowest individual reading	ASTM D 5199	30	40	60	80	100	
		27	36	54	72	90	
Sheet Density, g/cc	ASTM D 1505/D 792	0.940	0.940	0.940	0.940	0.940	
Tensile Properties <sup>1</sup>	ASTM D 6693						
		1. Yield Strength, lb/in	63	84	126	168	210
		2. Break Strength, lb/in	114	152	228	304	380
		3. Yield Elongation, %	12	12	12	12	12
		4. Break Elongation, %	700	700	700	700	700
Tear Resistance, lb	ASTM D 1004	21	28	42	56	70	
Puncture Resistance, lb	ASTM D 4833	54	72	108	144	180	
Stress Crack Resistance <sup>2</sup> , hrs	ASTM D 5397 (App.)	300	300	300	300	300	
Carbon Black Content <sup>3</sup> , %	ASTM D 1603	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	
Carbon Black Dispersion	ASTM D 5596	--Note 4--					
Oxidative Induction Time (OIT) Standard OIT, minutes	ASTM D 3895	100	100	100	100	100	
Oven Aging at 85°C Standard OIT - % retained after 90 days	ASTM D 5721 ASTM D 3895	55	55	55	55	55	
UV Resistance <sup>5</sup> High Pressure OIT <sup>6</sup> - % retained after 1600 hrs	GRI GM11 ASTM D 5885	50	50	50	50	50	
Seam Properties	ASTM D 6392 (@ 2 in/min)						
		1. Shear Strength, lb/in	57	80	120	160	200
		2. Peel Strength, lb/in - Hot Wedge	45	60	91	121	151
		- Extrusion Fillet	39	52	78	104	130
Roll Dimensions							
	1. Width (feet):	23	23	23	23	23	
	2. Length (feet)	1000	750	500	375	300	
	3. Area (square feet):	23,000	17,250	11,500	8,625	6,900	
4. Gross weight (pounds, approx.)	3,470	3,470	3,470	3,470	3,470		

- 1 Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction. Yield elongation is calculated using a gauge length of 1.3 inches; Break elongation is calculated using a gauge length of 2.0 inches.
- 2 The yield stress used to calculate the applied load for the SP-NCTL test should be the mean value via MQC testing.
- 3 Other methods such as ASTM D 4218 or microwave methods are acceptable if an appropriate correlation can be established.
- 4 Carbon black dispersion for 10 different views: Nine in Categories 1 and 2 with one allowed in Category 3.
- 5 The condition of the test should be 20 hr UV cycle at 75°C followed by 4 hr. condensation at 60°C.
- 6 UV resistance is based on percent retained value regardless of the original HP-OIT value.
- This data is provided for informational purposes only and is not intended as a warranty or guarantee. Poly-Flex, Inc. assumes no responsibility in connection with the use of this data. These values are subject to change without notice. REV 6/04