

Appendix L

Geomembrane Third Party Conformance Test Results

Appendix L.1 - Secondary (100-mil LLDPE SSMS) Geomembrane Conformance Test Results

Appendix L.2 - Primary (100-mil LLDPE Smooth) Geomembrane Conformance Test Results

Appendix L.1

Secondary (100-mil LLDPE SSMS)

Geomembrane Conformance Test Results



TABLE 1.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 2/3/2014

Date Reported: 2/5/2014

Client Sample ID: R#F14B053034 L#CDN810200

Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: Maria Espitia

TRI Job No.: G140068

TRI Control No.: 96167

	1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils)														
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)														
	Loading Time: 5 sec Specimen Size: 4" x 4"														
	103	102	102	102	100	100	101	100	100	101	101	1	100	103	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9379	0.9386	0.9377								0.9381	0.0005	0.9377	0.9386	0.939 max.
ASTM D6693	Tensile Properties:														
Type IV	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	412	397	415	382	331					387	34	331	415	180 min.
	TD	421	400	446	361	397					405	31	361	446	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
	MD	569	533	538	517	435					518	50	435	569	300 min.
	TD	620	594	650	531	600					599	44	531	650	
ASTM D1603	Carbon Black Content (percent, %)														
	2.21	2.19									2.20	0.01	2.19	2.21	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TD- TRANSVERSE DIRECTION

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TABLE 1.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: **2/6/2014**
 Date Reported: **2/12/2014**
 Client Sample ID: **R#F14B055054 L#CDN810200**
 Material Description: **100mil LLDPE Single-Sided Microspike Geomembrane**

QC'd By: *Maria Espitia*
 TRI Job No.: **G140082**
 TRI Control No.: **96197**

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
	1	2	3	4	5	6	7	8	9	10					
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils) <i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>														
	101	101	101	97	107	107	103	102	106	108	103	4	97	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9377 0.9379 0.9381										0.9379	0.0002	0.9377	0.9381	0.939 max.
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i> Tensile Strength at Break (lbs/ in.- width) <i>MD 397 403 388 400 397</i> <i>TD 412 443 382 390 472</i> Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i> <i>MD 500 507 532 509 498</i> <i>TD 586 609 561 544 644</i>														
											397	6	388	403	180 min.
											420	38	382	472	
											509	14	498	532	300 min.
											589	40	544	644	
ASTM D1603	Carbon Black Content (percent, %) 2.21 2.21										2.21	0.00	2.21	2.21	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 2.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/6/2014
Date Reported: 2/12/2014
Client Sample ID: R#F14B056074 L#CDN810200
Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: *Maria Espitia*
TRI Job No.: G140082
TRI Control No.: 96198

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
1	2	3	4	5	6	7	8	9	10						
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils)														
	<i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i>														
	<i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>														
	107	107	106	101	97	101	104	103	108	108	104	4	97	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9381	0.9379	0.9380								0.9380	0.0001	0.9379	0.9381	0.939 max.
ASTM D6693	<u>Tensile Properties:</u>														
Type IV	<i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	403	371	370	413	400					391	20	370	413	180 min.
	TD	430	436	418	351	419					411	34	351	436	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>														
	MD	518	455	483	547	606					522	59	455	606	300 min.
	TD	591	611	601	531	606					588	33	531	611	
ASTM D1603	Carbon Black Content (percent, %)														
	2.07	2.07									2.07	0.00	2.07	2.07	2 - 3

(End of Table 2)

(Sheet 1 of 1)

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LEGENDS:

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TABLE 3.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: **2/6/2014**
 Date Reported: **2/12/2014**
 Client Sample ID: **R#F14B061007 L#CDN810200**
 Material Description: **100mil LLDPE Single-Sided Microspike Geomembrane**

QC'd By: *Maria Espitia*
 TRI Job No.: **G140082**
 TRI Control No.: **96199**

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
	1	2	3	4	5	6	7	8	9	10					
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils)														
	<i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i>														
	<i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>														
	107	103	103	100	99	103	110	112	109	106	105	4	99	112	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9385	0.9374	0.9369								0.9376	0.0008	0.9369	0.9385	0.939 max.
ASTM D6693	<u>Tensile Properties:</u>														
Type IV	<i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	355	380	406	439	407					397	32	355	439	180 min.
	TD	382	380	415	416	419					402	20	380	419	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>														
	MD	488	552	547	603	525					543	42	488	603	300 min.
	TD	567	555	608	604	626					592	30	555	626	
ASTM D1603	Carbon Black Content (percent, %)														
	2.11	2.16									2.14	0.04	2.11	2.16	2 - 3

(End of Table 3)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES
 CLIENT: AMEC
 PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/12/2014
 Date Reported: 2/17/2014
 Client Sample ID: R#F14B067096 L#CDN810200
 Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: *Maria Espitia*
 TRI Job No.: G140101
 TRI Control No.: 96243

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils)														
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)														
	Loading Time: 5 sec Specimen Size: 4" x 4"														
	100	103	108	99	99	102	99	101	104	107	102	3	99	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9362	0.9363	0.9361								0.9362	0.0001	0.9361	0.9363	0.939 max.
ASTM D6693 Type IV	Tensile Properties:														
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	406	446	461	439	427					436	21	406	461	180 min.
	TD	415	371	452	397	433					414	31	371	452	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
	MD	569	552	615	600	572					582	25	552	615	300 min.
	TD	614	517	649	578	622					596	51	517	649	
ASTM D1603	Carbon Black Content (percent, %)														
	2.47	2.40									2.44	0.05	2.40	2.47	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 2.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: **2/14/2014**

Date Reported: **2/19/2014**

Client Sample ID: **R#F14B071011 L#CDH812030**

Material Description: **100mil LLDPE Single-Sided Microspike Geomembrane**

QC'd By: *Maria Espitia*

TRI Job No.: **G140108**

TRI Control No.: **96269**

	1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils) <i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>														
	100	111	108	110	103	103	101	103	105	102	105	4	100	111	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9381 0.9374 0.9382										0.9379	0.0004	0.9374	0.9382	0.939 max.
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i> Tensile Strength at Break (lbs/ in.- width) <i>MD 391 361 446 403 385</i> <i>TD 449 385 420 370 390</i> Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i> <i>MD 490 445 609 493 476</i> <i>TD 632 541 569 529 545</i>														
											397	31	361	446	180 min.
											403	32	370	449	
											503	62	445	609	300 min.
											563	41	529	632	
ASTM D1603	Carbon Black Content (percent, %) 2.27 2.28										2.27	0.00	2.27	2.28	2 - 3

(End of Table 2)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES
 CLIENT: AMEC
 PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/14/2014
 Date Reported: 2/19/2014
 Client Sample ID: R#F14B073032 L#CDH812030
 Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: Maria Espitia
 TRI Job No.: G140108
 TRI Control No.: 96268

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils)														
	<i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>														
	102	100	101	100	100	108	105	102	100	104	102	3	100	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)										0.9371	0.0003	0.9368	0.9374	0.939 max.
	0.9372	0.9368	0.9374												
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i> Tensile Strength at Break (lbs/ in.- width)														
	MD	406	413	364	393	374					390	21	364	413	180 min.
	TD	433	427	459	400	446					433	22	400	459	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>														
	MD	500	503	460	497	518					496	21	460	518	300 min.
	TD	619	593	631	574	605					604	22	574	631	
ASTM D1603	Carbon Black Content (percent, %)														
	2.34	2.32									2.33	0.01	2.32	2.34	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES
 CLIENT: AMEC
 PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/18/2014
 Date Reported: 2/24/2014
 Client Sample ID: R#F14B074052 L#CDH810210
 Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: *Maria Espitia*
 TRI Job No.: G140117
 TRI Control No.: 96324

		1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION															
ASTM D5994	Thickness (mils) <i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>	100	101	100	100	101	102	101	103	101	105	101	1	100	105	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9367 0.9372 0.9367											0.9369	0.0003	0.9367	0.9372	0.939 max.
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>															
	Tensile Strength at Break (lbs/ in.- width)															
	MD 454 491 387 373 423											426	48	373	491	180 min.
	TD 427 387 385 465 469											427	41	385	469	
	Elongation at Break (percent, %)															
	MD 563 634 490 479 589											551	66	479	634	300 min.
	TD 597 529 564 633 654											595	51	529	654	
ASTM D1603	Carbon Black Content (percent, %) 2.32 2.35											2.34	0.02	2.32	2.35	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: **2/19/2014**
 Date Reported: **2/26/2014**
 Client Sample ID: **F14B077092 L#CDH810210**
 Material Description: **100mil LLDPE Single-Sided Microspike Geomembrane**

QC'd By: Maria Espitia
 TRI Job No.: **G140128**
 TRI Control No.: **96353**

	1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5994	Thickness (mils) <i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>														
	100	101	101	100	102	100	101	101	100	100	100	0	100	102	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9349 0.9341 0.9347										0.9346	0.0004	0.9341	0.9349	0.939 max.
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i> Tensile Strength at Break (lbs/ in.- width) <i>MD</i> 379 423 385 406 397 <i>TD</i> 436 344 409 393 380 Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i> <i>MD</i> 486 537 503 512 499 <i>TD</i> 618 489 584 571 545														
											398 392	17 34	379 344	423 436	180 min.
											507 561	19 48	486 489	537 618	300 min.
ASTM D1603	Carbon Black Content (percent, %) 2.36 2.38										2.37	0.02	2.36	2.38	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 2.
MATERIAL PROPERTIES
 CLIENT: AMEC
 PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/19/2014
 Date Reported: 2/26/2014
 Client Sample ID: F14B076072 L#CDH810210
 Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: *Maria Espitia*
 TRI Job No.: G140128
 TRI Control No.: 96354

		1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION															
ASTM D5994	Thickness (mils) <i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>	100	100	101	100	101	101	100	100	101	101	100	0	100	101	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9369 0.9360 0.9366											0.9365	0.0004	0.9360	0.9369	0.939 max.
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i> Tensile Strength at Break (lbs/ in.- width) <i>MD 382 453 430 410 423</i> <i>TD 376 420 370 429 397</i> Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i> <i>MD 478 565 590 508 533</i> <i>TD 548 585 541 606 578</i>											420 398	26 26	382 370	453 429	180 min. 300 min.
ASTM D1603	Carbon Black Content (percent, %) 2.74 2.78											2.76	0.03	2.74	2.78	2 - 3

(End of Table 2)

(Sheet 1 of 1)

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 TD- TRANSVERSE DIRECTION

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TABLE 1.
MATERIAL PROPERTIES
 CLIENT: AMEC
 PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/20/2014
 Date Reported: 2/27/2014
 Client Sample ID: F14B082017 L#CDH810210
 Material Description: 100mil LLDPE Single-Sided Microspike Geomembrane

QC'd By: *Maria Espitia*
 TRI Job No.: G140130
 TRI Control No.: 96366

		1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION															
ASTM D5994	Thickness (mils) <i>Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)</i> <i>Loading Time: 5 sec Specimen Size: 4" x 4"</i>															
		101	102	104	103	101	101	100	104	100	100	102	2	100	104	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9365 0.9365 0.9356											0.9362	0.0005	0.9356	0.9365	0.939 max.
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>															
	Tensile Strength at Break (lbs/ in.- width)															
	MD 376 453 446 400 445											424	34	376	453	180 min.
	TD 457 436 421 429 452											439	15	421	457	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>															
	MD 463 580 575 492 574											537	55	463	580	300 min.
	TD 631 583 580 590 634											604	27	580	634	
ASTM D1603	Carbon Black Content (percent, %)															
	2.36 2.31											2.33	0.04	2.31	2.36	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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Appendix L.2

Primary (100-mil LLDPE Smooth)

Geomembrane Conformance Test Results



TABLE 1.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/24/2014

Date Reported: 1/30/2014

Client Sample ID: R#F14C042031 L#CDH811430

Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*

TRI Job No.: G140043

TRI Control No.: 96071

		SPECIMENS														Proj. Specs.		
		1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max			
METHOD	DESCRIPTION																	
ASTM D5199	Thickness (mils)																	
Procedure B	Apparatus:Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPA (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.																90 min.	
		107	108	117	105	118	114	115	107	105	107	110	5	105	118	100 MARV		
ASTM D1505	Density (grams/ cm. ³)																	
		0.9344	0.9332	0.9347								0.9341	0.0008	0.9332	0.9347	0.939 max		
ASTM D6693	Tensile Properties:																	
Type IV	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2 ^o C (73.4+/-3.6 ^o F), and 50+/-5% relative humidity. Rate of Separation: 2"/min																	
	Tensile Strength at Break (lbs/ in.- width)																	
MD		486	494	521	385	476					472	52	385	521	380 min.			
TD		495	488	472	472	497					485	12	472	497				
	Elongation at Break (percent, %)	Gauge Length = 2.5 in. (NSF Modified)																
MD		662	796	701	701	701					712	50	662	796	480 min.			
TD		729	722	725	702	708					717	12	702	729				
ASTM D1603	Carbon Black Content (percent, %)																	
		2.34	2.31								2.32	0.02	2.31	2.34	2 - 3			

(End of Table 1)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES

CLIENT: AMEC

PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/27/2014

Date Reported: 1/31/2014

Client Sample ID: R#F14C043053 L#CDH812050

Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: Maria Espitia

TRI Job No.: G140047

TRI Control No.: 96080

SPECIMENS

	1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5199	Thickness (mils)														
Procedure B	Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.														
	96	101	101	108	105	106	100	101	101	100	102	4	96	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9360	0.9362	0.9362								0.9361	0.0001	0.9360	0.9362	0.939 max
ASTM D6693	Tensile Properties:														
Type IV	Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
MD	460	461	482	472	470						469	9	460	482	380 min.
TD	457	464	485	516	488						482	23	457	516	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
MD	683	688	724	738	752						717	30	683	752	480 min.
TD	720	742	725	825	780						758	44	720	825	
ASTM D1603	Carbon Black Content (percent, %)														
	2.27	2.30									2.28	0.02	2.27	2.30	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES

CLIENT: AMEC

PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/28/2014

Date Reported: 1/31/2014

Client Sample ID: R#F14C044072 L#CDH812050

Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*

TRI Job No.: G140051

TRI Control No.: 96120

SPECIMENS

	1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5199	Thickness (mils)														
Procedure B	<i>Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.</i>														
	101	100	103	103	100	106	104	102	108	106	103	3	100	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9362	0.9360	0.9358								0.9360	0.0002	0.9358	0.9362	0.939 max
ASTM D6693	<u>Tensile Properties:</u>														
Type IV	<i>Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>														
	Tensile Strength at Break (lbs/ in.- width)														
MD	442	470	469	481	467						466	14	442	481	380 min.
TD	484	488	485	463	482						480	10	463	488	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>														
MD	678	677	680	702	690						685	11	677	702	480 min.
TD	750	750	735	692	721						730	24	692	750	
ASTM D1603	Carbon Black Content (percent, %)														
	2.21	2.22									2.21	0.01	2.21	2.22	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 1. MATERIAL PROPERTIES

CLIENT: AMEC
PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/29/2014
Date Reported: 2/3/2014
Client Sample ID: R#F14C047113 L#CDH812050
Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*
TRI Job No.: G140052
TRI Control No.: 96121

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5199 Procedure B	Thickness (mils) <i>Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.</i>														90 min. 100 MARV
	106	106	102	105	101	103	103	103	103	102	103	2	101	106	
ASTM D1505	Density (grams/ cm. ³)														
	0.9360	0.9360	0.9355								0.9358	0.0002	0.9355	0.9360	0.939 max
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>														
	Tensile Strength at Break (lbs/ in.- width)														
	MD 484	461	518	531	497						498	28	461	531	380 min.
	TD 492	536	508	528	497						512	19	492	536	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>														
	MD 665	624	679	761	666						679	50	624	761	480 min.
	TD 670	766	730	752	723						728	37	670	766	
ASTM D1603	Carbon Black Content (percent, %)														
	2.32	2.30									2.31	0.01	2.30	2.32	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 2. MATERIAL PROPERTIES CLIENT: AMEC PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/29/2014

Date Reported: 2/3/2014

Client Sample ID: R#F14C046094 L#CDH812050

Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*

TRI Job No.: G140052

TRI Control No.: 96122

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5199 Procedure B	Thickness (mils)														
	Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.														90 min. 100 MARV
	107	107	104	105	105	105	103	104	103	106	105	2	103	107	
ASTM D1505	Density (grams/ cm. ³)														
	0.9364	0.9366	0.9364								0.9364	0.0001	0.9364	0.9366	0.939 max
ASTM D6693 Type IV	Tensile Properties:														
	Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	492	500	528	510	533					513	18	492	533	380 min.
	TD	516	530	528	522	536					526	8	516	536	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
	MD	650	669	719	669	719					685	32	650	719	480 min.
	TD	737	777	775	728	781					760	25	728	781	
ASTM D1603	Carbon Black Content (percent, %)														
	2.28	2.28									2.28	0.00	2.28	2.28	2 - 3

(End of Table 2)

(Sheet 1 of 1)

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TABLE 3. MATERIAL PROPERTIES CLIENT: AMEC PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/29/2014

Date Reported: 2/3/2014

Client Sample ID: R#F14C051008 L#CDH812020

Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*

TRI Job No.: G140052

TRI Control No.: 96123

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
1	2	3	4	5	6	7	8	9	10						
METHOD	DESCRIPTION														
ASTM D5199 Procedure B	Thickness (mils) <i>Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.</i>														90 min. 100 MARV
	102	106	103	102	100	100	100	101	100	100	101	2	100	106	
ASTM D1505	Density (grams/ cm. ³)										0.9368	0.0004	0.9364	0.9372	0.939 max
	0.9368	0.9364	0.9372												
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>														
	Tensile Strength at Break (lbs/ in.- width)														380 min.
	MD	513	449	482	525	503					494	30	449	525	
	TD	475	491	501	492	455					483	18	455	501	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>														480 min.
	MD	718	635	696	764	711					705	47	635	764	
	TD	715	739	746	730	653					717	37	653	746	
ASTM D1603	Carbon Black Content (percent, %)														2 - 3
	2.30	2.27									2.29	0.02	2.27	2.30	

(End of Table 3)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/31/2014

Date Reported: 2/4/2014

Client Sample ID: **R#F14C053047 L#CDH812020**Material Description: **100mil LLDPE Smooth Geomembrane**QC'd By: *Maria Espitia*TRI Job No.: **G140063**TRI Control No.: **96154**

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
	1	2	3	4	5	6	7	8	9	10					
METHOD	DESCRIPTION														
ASTM D5199	Thickness (mils)														
Procedure B	Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.														90 min.
	104	104	101	100	100	103	100	105	100	102	102	2	100	105	100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9383	0.9376	0.9386								0.9382	0.0005	0.9376	0.9386	0.939 max
ASTM D6693	<u>Tensile Properties:</u>														
Type IV	Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	421	500	495	475	433					465	36	421	500	380 min.
	TD	478	488	485	510	521					496	18	478	521	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
	MD	610	705	717	698	590					664	59	590	717	480 min.
	TD	679	755	752	730	767					737	35	679	767	
ASTM D1603	Carbon Black Content (percent, %)														
	2.32	2.28									2.30	0.03	2.28	2.32	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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TABLE 1.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: **2/3/2014**
 Date Reported: **2/5/2014**
 Client Sample ID: **R#F14C054066 L#CDH812020**
 Material Description: **100mil LLDPE Smooth Geomembrane**

QC'd By: Maria Espitia
 TRI Job No.: **G140067**
 TRI Control No.: **96166**

		SPECIMENS										Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION	1	2	3	4	5	6	7	8	9	10					
ASTM D5199 Procedure B	Thickness (mils) <i>Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.</i>															
		103	100	108	108	110	108	118	109	108	118	109	6	100	118	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9370 0.9361 0.9369											0.9367	0.0005	0.9361	0.9370	0.939 max
ASTM D6693 Type IV	<u>Tensile Properties:</u> <i>Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>															
	Tensile Strength at Break (lbs/ in.- width)															
	MD 504 500 488 516 424											486	36	424	516	380 min.
	TD 560 514 561 533 554											544	20	514	561	
	Elongation at Break (percent, %) <i>Gauge Length = 2.5 in. (NSF Modified)</i>															
	MD 699 689 659 696 618											672	34	618	699	480 min.
	TD 827 756 802 811 807											801	27	756	827	
ASTM D1603	Carbon Black Content (percent, %) 2.06 2.12											2.09	0.05	2.06	2.12	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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LEGENDS:

MD - MACHINE DIRECTION
 TD- TRANSVERSE DIRECTION



TABLE 1.
MATERIAL PROPERTIES

CLIENT: AMEC

PROJECT: Cripple Creek/ Squaw Gulch Valley Leach Facility

Date Received: 1/30/2014

Date Reported: 2/4/2014

Client Sample ID: R#F14C052027 L#CDH812020

Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*

TRI Job No.: G140061

TRI Control No.: 96149

SPECIMENS

	1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION														
ASTM D5199	Thickness (mils)														
Procedure B	Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPA (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.														
	107	108	106	103	102	105	104	104	103	104	105	2	102	108	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9372	0.9368	0.9372								0.9371	0.0002	0.9368	0.9372	0.939 max
ASTM D6693	Tensile Properties:														
Type IV	Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	507	521	510	500	511					510	8	500	521	380 min.
	TD	534	467	564	531	506					520	36	467	564	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
	MD	654	686	686	737	706					694	30	654	737	480 min.
	TD	745	641	850	731	725					738	75	641	850	
ASTM D1603	Carbon Black Content (percent, %)														
	2.33	2.33									2.33	0.00	2.33	2.33	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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LEGENDS:

MD - MACHINE DIRECTION

TD- TRANSVERSE DIRECTION

1160 North Gilbert Street, Anaheim, CA 92801, www.precisionlabs.net

This is Precision Geosynthetic Laboratories International dba of TRI Environmental, Inc.

TABLE 1.
MATERIAL PROPERTIES
 CLIENT: AMEC
 PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: 2/6/2014
 Date Reported: 2/12/2014
 Client Sample ID: R#F14C055089 L#CDH812030
 Material Description: 100mil LLDPE Smooth Geomembrane

QC'd By: *Maria Espitia*
 TRI Job No.: G140081
 TRI Control No.: 96195

SPECIMENS											Avg.	Std. Dev.	Min	Max	Proj. Specs.
	1	2	3	4	5	6	7	8	9	10					
METHOD	DESCRIPTION														
ASTM D5199	Thickness (mils)														
Procedure B	Apparatus: Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPA (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.														90 min.
	109	97	99	105	105	111	109	118	115	119	109	7	97	119	100 MARV
ASTM D1505	Density (grams/ cm. ³)														
	0.9389	0.9388	0.9386								0.9387	0.0001	0.9386	0.9389	0.939 max
ASTM D6693	<u>Tensile Properties:</u>														
Type IV	Test Specimens: Type IV, Width of narrow section: 0.25in, Length of narrow section: 1.3in, Width Overall: 0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min														
	Tensile Strength at Break (lbs/ in.- width)														
	MD	481	459	470	498	485					479	15	459	498	380 min.
	TD	507	531	475	567	531					522	34	475	567	
	Elongation at Break (percent, %) Gauge Length = 2.5 in. (NSF Modified)														
	MD	674	647	682	692	678					675	17	647	692	480 min.
	TD	779	812	737	960	889					835	89	737	960	
ASTM D1603	Carbon Black Content (percent, %)														
	2.30	2.46									2.38	0.12	2.30	2.46	2 - 3

(End of Table 1)

(Sheet 1 of 1)

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LEGENDS:
 MD - MACHINE DIRECTION
 TD- TRANSVERSE DIRECTION

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TABLE 2.
MATERIAL PROPERTIES
CLIENT: AMEC
PROJECT: Cripple Creek/Squaw Gulch Valley Leach Facility

Date Received: **2/6/2014**
 Date Reported: **2/12/2014**
 Client Sample ID: **R#F14C056108 L#CDH812030**
 Material Description: **100mil LLDPE Smooth Geomembrane**

QC'd By: Maria Espitia
 TRI Job No.: **G140081**
 TRI Control No.: **96196**

		SPECIMENS														Proj. Specs.
		1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	
METHOD	DESCRIPTION															
ASTM D5199	Thickness (mils) <i>Apparatus:Dead weight dial Micrometer with 6.35 mm (0.250 in) dia presser foot and a pressure of 43.10 kPa (6.38 psi) provided by a 142 gm dead weight. Loading time: 5 sec Specimen Size: 10pcs.-3in. Diameter.</i>	107	106	105	105	105	106	106	106	113	109	107	2	105	113	90 min. 100 MARV
ASTM D1505	Density (grams/ cm. ³) 0.9387 0.9381 0.9363											0.9377	0.0012	0.9363	0.9387	0.939 max
ASTM D6693	<u>Tensile Properties:</u>															
Type IV	<i>Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2^o C (73.4+/-3.6^o F), and 50+/-5% relative humidity. Rate of Separation: 2"/min</i>															
	Tensile Strength at Break (lbs/ in.- width)															
	MD	492	505	505	492	472						493	14	472	505	380 min.
	TD	537	544	561	467	498						521	38	467	561	
	Elongation at Break (percent, %)	<i>Gauge Length = 2.5 in. (NSF Modified)</i>														
	MD	663	696	677	720	670						685	23	663	720	480 min.
	TD	858	964	941	711	772						849	108	711	964	
ASTM D1603	Carbon Black Content (percent, %)															
		2.19	2.18									2.18	0.01	2.18	2.19	2 - 3

(End of Table 2)

(Sheet 1 of 1)

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LEGENDS:
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 TD- TRANSVERSE DIRECTION

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