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RECEIVED

By OCD; Dr. Oberding at 4:24 pm, Aug 24, 2015

August 24, 2015

APPROVED

By OCD; Dr. Oberding at 4:24 pm, Aug 24, 2015

Tomas Oberding, PhD
New Mexico EMNRD
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Transmitted via email: tomas.oberding@state.nm.us

RE: Rule 34 Variance Request - North Gaucho Impoundment

Dr. Oberding:

Based on a variance previously granted to the Rattlesnake impoundment (1RF-004) on August 19, 2015, Devon is requesting a variance to rule 34 part 12(A)(4) requiring secondary liners to be 30-mil string reinforced LLDPE. As with the previously approved variance, Devon is requesting to use 40-mil LLDPE in place of the specified material. Based on advice from our liner companies and internal experience, we feel that the requested material will allow us to provide greater environmental protection in our impoundments.

Due to the construction of the 30-mil reinforced LLDPE material, nondestructive QA/QC testing cannot be performed. The proposed 40-mil LLDPE will be seamed in a manner that will allow nondestructive pressure testing of the seams to ensure proper sealing.

The proposed LLDPE is appropriate material for the proposed use in the impoundment, and is compatible with the materials that will be stored. This material will provide equal or better environmental protection as the specified 30-mil reinforced LLDPE. Attached with this request is a sample specification sheet for the LLDPE with the proposed material highlighted.

The proposed new liner system cross-section is as follows: prepare subgrade, 10oz geotextile, 40-mil LLDPE, 200-mil geonet, 60-mil HDPE (smooth on bottom, textured on slopes). This will replace the cross-section originally proposed in the C-147 submitted on August 11, 2015.

If you have any questions, please do not hesitate to contact me at 405-228-3066 or by email at jeff.sawyer@dvn.com.

Sincerely,

Jeffrey T. Sawyer, P.E.
Water Management Engineer

Enclosure

GSE UltraFlex Smooth Geomembrane

GSE UltraFlex is a smooth linear low density polyethylene (LLDPE) geomembrane manufactured with the highest quality resin specifically formulated for flexible geomembranes. This product is used in applications that require increased flexibility and elongation properties where differential or localized subgrade settlements may occur such as in a landfill closure application.



AT THE CORE:

An LLDPE geomembrane that is used in applications requiring increased flexibility and elongation properties, such as landfill closures and mining applications.

Product Specifications

These product specifications meet GRI GM17

Tested Property	Test Method	Frequency	Minimum Average Value			
			40 mil	60 mil	80 mil	100 mil
Thickness, mil Lowest individual reading	ASTM D 5199	every roll	40 36	60 54	80 72	100 90
Density, g/cm ³ (max.)	ASTM D 1505	200,000 lb	0.939	0.939	0.939	0.939
Tensile Properties (each direction) Strength at Break, lb/in-width Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 2 ipm G.L. 2.0 in	20,000 lb	152 800	228 800	304 800	380 800
Tear Resistance, lb	ASTM D 1004	45,000 lb	22	33	44	55
Puncture Resistance, lb	ASTM D 4833	45,000 lb	56	84	112	140
Carbon Black Content, % (Range)	ASTM D 1603*/4218	20,000 lb	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾
Oxidative Induction Time, mins	ASTM D 3895, 200°C; O ₂ , 1 atm	200,000 lb	>100	>100	>100	>100
TYPICAL ROLL DIMENSIONS						
Roll Length ⁽²⁾ , ft			870	560	430	340
Roll Width ⁽²⁾ , ft			22.5	22.5	22.5	22.5
Roll Area, ft ²			19,575	12,600	9,675	7,650

NOTES:

- ⁽¹⁾Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
- ⁽²⁾Roll lengths and widths have a tolerance of ±1 %.
- GSE UltraFlex is available in rolls weighing approximately 3,900 lb.
- All GSE geomembranes have dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77°C when tested according to ASTM D 746.
- *Modified.

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

[DURABILITY RUNS DEEP] For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.

