

**Westmoreland Sanitary Landfill, LLC
Minor Permit Modification Application**

Attachment 14.6: Narrative

WSLF is proposing to use spray-on slurries or foam as an alternate daily cover at the facility. Spray-on slurry/foam materials may include Posi-Shell, ProGuard SB2 (formerly ConCover180), Rusmar OC (AC-645), Profile's TOPCOAT, or Atmos. The use of spray-on slurries/foam as ADC has been previously approved for use by the PaDEP at the Greentree, at minimum. **[Rev. 6/25]**

25 PA Code §273.232 (b) outlines the performance standards for Daily Cover. The spray-on slurries/foam will only be used so long as they meet the performance standards of 25 PA Code §273.232 (b). These standards are repeated below followed by a discussion of the drilling residuals characteristics and how the performance standard is achieved.

25 PA Code §273.232 (b)

(b) The composition of the daily cover material shall meet the following performance standards. The daily cover shall:

(1) Prevent vectors, odors, blowing litter and other nuisances.

Slurries (i.e. Posi-Shell, TOPCOAT, and ProGuard SB-2) will be applied over waste in a layer approximately ¼" to ½" thick. Application is completed using a hydroseeder or similar piece of equipment. Foams (i.e. ATMOS and Rusmar OC) are applied in a 2"-3" layer using a pneumatic foam unit or similar equipment, typically provided by the manufacturer. At minimum, enough ADC will be applied to create a uniform barrier between the waste and the environment, in a manner similar to the use of soil fully cover the waste. The ADC will be re-applied to any areas of waste that remain exposed after initial application. Use of slurries/foams at other landfills has shown that the material has the ability to suppress odors and to control vectors, blowing litter and other nuisances at the working face. **[Rev. 6/25]**

The ADC will not be used on exterior slopes of the landfill, or in other areas where there is a potential for contact water to migrate outside the disposal area. Furthermore, the ADC will only be placed in areas where waste is expected to be placed the following work day.

(2) Cover solid waste after it is placed without change in its properties and without regard to weather.

When properly applied, the slurries/foams will cover waste fully and have the ability to withstand rain, wind, snow and other weather events. If heavy precipitation is anticipated, a more durable daily cover will be used.

(3) Be capable of allowing loaded vehicles to successfully maneuver over it after placement.

Spray-on slurries/foams will not support vehicles. Therefore, the ADC will only be used in non-traffic areas.

(4) Be capable of controlling fires.

The ADC materials are made of non-flammable materials itself. In addition, they forms a highly impermeable layer which inhibits oxygen from the atmosphere from fueling a fire within the waste.

(5) Be consistent with the waste acceptance plan for the facility.

Slurries/foams are consistent with its waste acceptance plan. These materials are not wastes; rather a product specifically designed to cover municipal waste. The slurries/foams are compatible with wastes accepted at the facility. The material has also been approved for use at other MSW/RW landfills.

Profile's TopCoat



Specifications

Product Name: TOPCOAT® Alternative Daily Landfill Cover
Revision Date: August 2013

1. Product Identification

TOPCOAT is an approved alternative daily landfill cover manufactured from virgin wood fiber and/or recycled paper, along with a proprietary binding agent and other performance-enhancing proprietary ingredients. It is non-toxic, biodegradable and contaminant-free.

2. Mixing

Mix TOPCOAT Alternative Daily Landfill Cover with approximately 100 gallons of water per 50 pound bag.

3. Application

TOPCOATs convenient one-bag system makes mixing a snap. With TOPCOAT there's no mixing time and no waiting to spray. It takes only about 20 minutes from start of mix to final cover for the working face of an average-sized landfill. TOPCOAT is fully effective as soon as it's applied.

Minimum Application Rate: 8 sq ft / Gallon of water. **Maximum Application Rate:** 10 sq ft / Gallon of water.

4. Equipment

TOPCOAT is mixed and applied with a standard hydro seeding machine. A mechanically-agitated hydro seeding machine is recommended. Follow equipment manufacturer's installation instructions and recommendations.

5. Product Composition / Property Values

Cellulose Fiber (<i>minimum</i>)	65% (±10%)
Proprietary Ingredients (<i>minimum</i>)	13% (±3%)
Moisture Content	13% (±3%)
Toxicity	non-toxic
Applied Color	Brown

6. Packaging and Shipping

Bag Dimensions, Net Weight	17"x 9"x 26", 50lbs
Pallet Dimensions, Quantity	75"H x 44"W x 53"D, 40 Bags
Full Truckload	22 pallets, 880 bags
Half Truckload	11 pallets, 440 bags

7. Technical Assistance

For additional technical information contact our Technical Department: (800) 508-8681



TOPCOAT®
DAILY LANDFILL COVER



Upon application TOPCOAT forms a consistent and effective layer between waste and the surrounding environment



Before TOPCOAT



After TOPCOAT

Save 20% or More of Your Landfill Space

Sprayed as a slurry, just a thin layer of TOPCOAT® meets government regulations. It forms a cover to control disease vectors, fires, odors, blowing litter, scavenging and erosion. It has been proven effective in independent laboratory testing.

TOPCOAT is an alternative daily landfill cover manufactured from post-consumer cellulose, chemicals and other proprietary ingredients. All ingredients are non-toxic and biodegradable.

TOPCOAT meets all federal regulations. It's the easiest way to control disease vectors, fires, odors, blowing litter and scavenging.

TOPCOAT is:

- Cheaper and easier than dirt
- Easier and more effective than tarps
- Easier and safer than other spray-on covers
- The best daily cover available today!

USING TOPCOAT IS SO SIMPLE

TOPCOAT's convenient one-bag system makes mixing a snap. It's applied with regular hydroseeding equipment. With TOPCOAT there's minimal mixing time—and no waiting to spray. It takes only about 20 minutes from start of mix to final cover for the working face of an average-sized landfill—and TOPCOAT is fully effective as soon as it's applied!



Why Use TOPCOAT®

The ASTM International's standard guide for evaluation and selection of Alternative Daily Covers (ADC) for sanitary landfills (ASTM D 6523), assists in the understanding of performance features to determine the extent and degree to which different ADC's are able to "control disease vectors, fires, odors, blowing litter, and scavenging, without presenting a threat to human health and the environment" as intended by United States Environmental Protection Agency regulations.

DISEASE VECTOR AND SCAVENGING CONTROL

TOPCOAT® is proven to discourage insects and birds from landing on, and animals from digging through the applied cover.

FIRE CONTROL

TOPCOAT is not a fire potential as tested in accordance with ASTM D 4982.

ODOR AND AIR EMISSION CONTROL

TOPCOAT creates an effective barrier against odors and other emissions as tested using ASTM E 96, which correlates the movement of water vapors to the movement of odor through the ADC layers.

DUST AND BLOWING LITTER CONTROL

TOPCOAT suppresses dust and readily adheres to blowing litter.

HUMAN HEALTH AND THE ENVIRONMENT

TOPCOAT is non-toxic and biodegradable.

COVERAGE AND ECONOMIC CONSIDERATIONS

There are a number of factors that influence the actual coverage requirements for any ADC, and the resulting application cost per square foot for any particular landfill location. These include the type of waste materials, compaction, moisture content, weather conditions, local regulatory requirements and environmental issues of local concern. TOPCOAT is one of the least expensive and most effective means of meeting the stringent government landfill daily regulations set forth by the Environmental Protection Agency, other state or county regulations or specific landfill requirements.



Green Design Engineering™ is a holistic approach that combines agronomic and engineering expertise with advanced technologies to provide cost-effective and earth-friendly solutions. Profile strives to deliver Green Design Engineering across our team of consulting professionals, innovative products and educational resources.



PS³ is a free, comprehensive 24/7 online resource you can use to design a project and select the right products that address both the physical and agronomic needs of your site. It will help you develop holistic, sustainable solutions for cost-effective erosion control, vegetation establishment and subsequent reductions in sediment and other pollutants from leaving disturbed sites. Because good plans start with the soil, PS³ offers free soil testing to ensure this critical step is considered. To access the site, design your project and take advantage of a free soil analysis, visit www.profileps3.com.



For technical information or distribution, please call 800-508-8681.
For customer service, call 800-366-1180.

For warranty information, visit profileproducts.com.

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Atmos

Atmos Cover ADC

The Alternative Daily Cover

Atmos Cover ADC foam concentrate is a patented formulation that produces a thick, long lasting foam barrier for immediate control of blowing litter, disease vectors, and scavengers when applied to landfills as a daily cover. Atmos Cover ADC is specifically designed for use with Atmos' Bulk Storage and Dilution Center (BSD) and Morooka-based Pneumatic Foam Unit (PFU). The system provides a Daily Cover capable of lasting 72 hours.



Features

- Zero PFOS / PFAS
- Biodegradable
- Non-Hazardous
- Non-Combustible
- Use at any ambient temperature

Benefits

- Consumes zero airspace
- Repels scavengers
- Withstands moderate rainfall
- No clean-up
- No leachate interference

Applications

The primary application for Atmos Cover ADC is for use as a Daily Cover for Solid Waste Landfills replacing soil, tarps and other ineffective and labor-intensive materials. Atmos Cover ADC provides an immediate and effective barrier between the waste and the atmosphere to minimize working face odors. The product adheres to near-vertical surfaces such as balefills or liquid surfaces such as lagoons and retention ponds.



PRODUCT DATA SHEET

SOIL EQUIVALENT FOAM AC-667SE

GENERAL DESCRIPTION

AC-667SE Soil Equivalent Foam is a patented product which produces a thick, long-lasting, viscous foam barrier for immediate control of foul odors, blowing litter, disease vectors and scavengers for landfills. Once applied, the foam meets all sub-title D criteria. The bi-directional spray bars allow an application free from shadowing and providing a more effective barrier, better control of odors than soil and other spray-on ADC's. At recommended application rates (2-3"), the foam is equivalent to 6" of soil and maintains its integrity for up to 72+ hours depending dilution ratio, withstands moderate+ rainfall, and provides a soil-equivalent barrier between the waste and the atmosphere providing immediate odor control.

FEATURES

- Biodegradable
- Will not add to treatment costs
- No ambient temperature limitations
- Easy to use
- More effective than tarps
- Can withstand moderate rainfall
- Non-hazardous
- Safe for workers and the environment
- Requires only water dilution
- No clean up necessary
- Non-combustible
- Maintains integrity for up to 72 hours

APPLICATIONS

The primary application for AC-667SE is to replace soil for the daily cover of landfills. However it also effectively controls odors, VOCs and dust during active excavation and provides multi-day coverage of contaminated soils at hazardous waste sites. AC-667SE will adhere to vertical surfaces such as bale-fill landfills and can also be applied on top of liquid surfaces.

SPECIAL ODOR CONTROL PROBLEMS

The remediation of hazardous waste sites often includes excavation of soil contaminated with odorous compounds. AC-667SE forms a barrier between contaminants and the atmosphere and can be applied during active excavation to provide a continuous and effective barrier to minimize odors. It is completely biodegradable and poses no threat to workers, neighboring residents or ground water. AC-667SE will not add to soil treatment costs.

ENVIRONMENT IS EVERYTHING



PRODUCT DATA SHEET

SOIL EQUIVALENT FOAM AC-667SE

AC-667SE can also be applied on top of trucks for emission control during transport of materials such as contaminated soils or sewage sludge.

- Minimizes worker exposure
- Maintains fence-line odor and VOC emission limits
- Works on lagoon and pond closures
- Can be applied to liquid surfaces

FUGITIVE DUST

At hazardous waste sites, fugitive dust can present a health hazard. AC-667SE can be applied on top of the dusty material to prevent any wind-borne emissions. There is no need to mobilize equipment to immediately cover with soil or tarps. The Pneumatic Foam Unit can be filled and placed at the site to be used at a moment's notice.

EMERGENCY SPILL CLEAN UP

In emergency spills, odor and VOC control is often difficult because of the terrain and accident conditions. AC-667SE foam can be applied to any shaped object, as well as vertical slopes, water, mud, snow and ice. It is non-flammable and non-reactive so difficult spill problems can be accommodated.

METHOD OF APPLICATION

AC-667SE is supplied in either 2,250-pound (275 gal.) totes or by bulk load (approximately 45,000 pounds). Bulk shipments can be stored outside in a Atmos Bulk Storage-Dilution System. The Bulk Storage and Dilution system is comprised of a 7000 gallon heated and mixed chemical storage tank and a microprocessor controlled dispensing system to accurately dilute and transfer the chemical.

AC-667SE is designed to be applied with an Atmos Pneumatic Foam Unit. The Pneumatic Foam Units are available in a variety of sizes to accommodate a range of site conditions and application needs.

ENVIRONMENT IS EVERYTHING

Page 2 of 2

ProGuard SB2
(Formerly ConCover180)

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ProGuard SB2

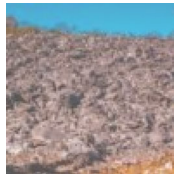
Call For Price!

ProGuard SB2 is the latest in a line of covers developed to provide landfills with a high-quality daily waste cover. Designed with versatility in mind ProGuard SB2 is compatible with any hydroseeder on the market today. Formulated to produce an adhering even surface, ProGuard SB2 gives its users the most consistent results all at a cost of less than \$0.01 per square foot

SKU: PGSB2

Category: Cover Materials

Tags: Daily Waste Cover, Short-Term Cover

[Description](#)[Product Specifications](#)[Product Literature](#)[Product Videos](#)[Product Enquiry](#)

Product Specifications

Weight	50 lbs
Dimensions	24 × 20 × 36 in
Available Colors	Green, Blue-Green, Light-Brown
Mix Ratio (Unit)	385 to 400 lbs (8 to 11 Bags) Mulch per ProGuard SB2 Bag ** Quantity is dependant on the size of mulch bags either 35lb or 50lb bags
Water Ratio (Unit)	750 gal.(US)/624 gal (Imperial)/2839 liters
Coverage Per Sq. Ft/Meter	18,000-19,500 ft ² / 1,672-1,811m ²
Cost Per Sq. Ft/Meter	\$0.006 per ft ² / \$0.064 per m ²
Life Expectancy (Durability)	Overnight to 7 Days

Related products



Posi-Shell



The most effective, versatile, and cost-efficient cover system for landfills.

- Extends landfill life
- Reduces operational costs
- Addresses multiple challenges





Use Posi-Shell® to effectively address multiple landfill challenges:

- Daily Waste Cover
- Intermediate Cover
- Erosion Control
- Odor Suppression
- Coal Ash
- Landfill Emergencies
- Fire Supression
- Waste Latex Recycling
- Waste Transport Cover
- Leachate Prevention and Recycling

Brief Specifications

- Non-flammable
- Adheres to any surface
- Up to 95% water shed (run off)
- Durability from overnight to years with minimal maintenance

Use Posi-Shell® to reduce your operational costs, extend your landfill life, and address many of your site's daily challenges.

Using Posi-Shell® instead of natural soil for daily cover is your ticket to achieving maximum airspace utilization. Posi-Shell® is the one system that gives you easy access to every cubic yard of airspace formerly consumed by thick soil covers.

Posi-Shell® is affordable in your existing landfill budget as it allows you to reduce equipment usage and manpower hours.

Mixing and application

Mixing is accomplished using LSC Equipment or standard hydroseeding units. Mixing and application can be completed with one operator, and typically takes 45-60 minutes. Clean up takes about 10 minutes.

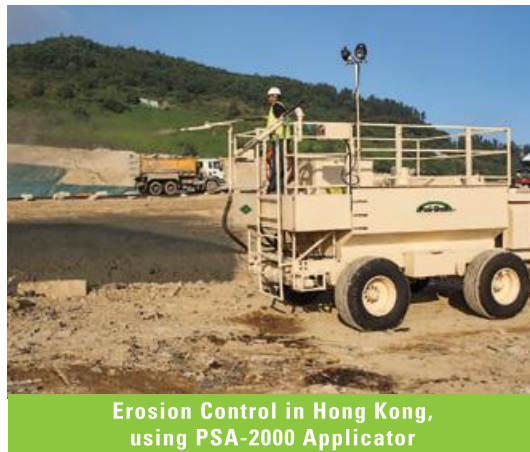
Packaging

Bags: 50 lb. (22.7 kg.)

60 bags per pallet

Bulk Sacks: 500 lb (227 kg.)

4 sacks per pallet



Erosion Control in Hong Kong, using PSA-2000 Applicator

For technical services or to locate your nearest Posi-Shell® dealer:



Call: **1-800-800-7671** • Email: **Sales@LSCenv.com**

Visit LSC online at: **www.LSCenv.com**

LSC Environmental Products, LLC

2183 Pennsylvania Ave., Apalachin, NY 13732

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Rusmar OC
(AC-645)



Recognized Globally
For Superior Odor And Emissions Control



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OC (AC645)

RUSMAR INCORPORATED
HEADQUARTERS

216 Garfield Avenue
West Chester, PA 19380
1-800-733-3626



RusFoam® OC (AC645)

The Odor-Control Foam

RusFoam® OC long duration foam produces a thick, long-lasting, viscous foam barrier for immediate control of dust, odors and volatile organic compounds (VOCs).

RusFoam® OC is recognized by the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, state agencies and major corporations as providing superior emission control for a period up to 17 hours. It has been specified for use at Superfund and other hazardous waste sites across the United States and Canada, and elsewhere in the world.

RusFoam® OC is designed for use with all Rusmar Pneumatic Foam Units.

FEATURES

- Biodegradable
- Non-hazardous
- Non-combustible
- Non-reactive
- No ambient temperature limits
- Requires only water dilution

- Covers any contamination source
- Duration can be varied by dilution

BENEFITS

- Easy to use
- Safe for workers and environment
- Will not add to soil volume
- Will not add to treatment costs
- More effective than the competition

APPLICATIONS

The primary application for RusFoam® OC is control of odors, VOCs and dust during active excavation and for overnight coverage of contaminated soils at hazardous waste sites.

RusFoam® OC can also be applied on liquid surfaces, such as lagoons and retention ponds.

ODOR CONTROL FOR CHALLENGING PROBLEMS

The remediation of hazardous waste sites often includes excavation of soil contaminated with odorous compounds.

RusFoam® OC has no odor itself, although a pleasant wintergreen or vanilla scent can be added. It forms a barrier between contaminants and the atmosphere and can be applied during active excavation to provide an immediate and effective barrier to minimize odors. It is completely biodegradable and poses no threat to workers, neighboring residents or ground water.

SOLVES TRANSPORTATION PROBLEMS

RusFoam® OC can also be applied on top of trucks, railcars and barges for odor and emission control during transport of materials such as contaminated soils or sewage sludge. Ammonia tests performed on trucks containing sewage sludge resulted in a drop of concentration levels from 170 ppm prior to foaming down to 6 ppm after coverage with RusFoam® OC.

- Minimizes worker exposure
- Maintains fence-line odor and VOC emission limits
- Effective on lagoon and pond closures
- Can be applied to near vertical or liquid surfaces

CONTROLS FUGITIVE DUST

At hazardous waste sites, fugitive dust can present a health hazard. RusFoam® OC can be applied on top of the dusty material to prevent any wind-borne emissions. There is no need to mobilize equipment to immediately cover with soil or tarps. The Pneumatic Foam Unit can be filled and placed at the site to be used at a moment's notice.

CLEANS UP EMERGENCY SPILLS

In emergency spills, odor and VOC control is often difficult because of the terrain and accident conditions. RusFoam® OC can be applied to any shaped object, as well as steep slopes, water, mud, snow and ice. It is non-flammable and non-reactive. Difficult spill problems can be accommodated.

METHOD OF APPLICATION

RusFoam® OC is supplied in either 450 pound (200L) drums or in bulk. Bulk shipments can be stored outside in a Rusmar Bulk Storage-Dilution System. The Bulk Storage and Dilution system is comprised of a 7000 gallon (26,500L) heated and stirred chemical storage tank with a microprocessor to accurately dilute and transfer the chemical.

RusFoam® OC is designed to be applied with a Rusmar Pneumatic Foam Unit. The Pneumatic Foam Units are available in a variety of sizes to accommodate a range of site conditions and application needs.

Leave a comment

Write a comment...