



Shell Appalachia Mansfield, PA



Site Prior to Application November 2011



EarthGuard Applied November 2011



May 2012

Challenge:

During the Winter of 2011, Shell Appalachia elected to use EarthGuard Fiber Matrix to stabilize their recently constructed well pad. Due to the time of season where winter temperatures impede germination, Shell needed a product that could stabilize their site through the winter snows and spring thaw, while preventing seed and amendments from being washed off the slopes.



May 2012

Traditionally Shell had battled with the use of erosion control blankets during the winter season. Frozen soils made it difficult to install staples necessary to achieve proper erosion matting installation. Looking for an alternative, they chose EarthGuard.

For site winterization, an application rate of 10 gal/ac of EarthGuard and 3000 lb./ac of fiber mulch was used. According to Pennsylvania 25 Pa. Code Chapter 102 anyone conducting earth disturbance activities is prohibited from discharging any pollutants to waters of the commonwealth. Under the Chapter 102 regulations, anyone conducting earth disturbance activities must use Best Management Practices to minimize the amount of sediment leaving the disturbed area. Pennsylvania's Oil and Gas Regulations, Pa Code Chapter 78.53, incorporate the Chapter 102 regulations by reference. The PA DEP is responsible for the administration and enforcement of Chapters 102 and 78 regulations and the Clean Streams Law.

EarthGuard Fiber Matrix is recognized by the PA DEP in the Final 2010 Erosion and Sediment Pollution Control Program Manual as a Polymer Stabilized Fiber Matrix (PSFM). The manual states that erosion control blankets (either rolled or sprayed) should be used on all slopes that are 3H:1V or steeper and where potential exists for sediment pollution to receiving surface waters.

Results:

Due to a warm winter, these sites experienced more rain than snow. EarthGuard was able to winterize the site eliminating erosion, satisfying DEP regulators, and creating a situation where the seeds germinated in the spring.

The ability to apply a product in temperatures 20 F° or greater allows exploration companies to stabilize sites throughout the winter while at the same time of having the ability to treat large areas in a short amount of time. The cost savings over erosion control blankets is substantial.



Highly **Effective.** Cost **Efficient.**

Terra Novo Manufactures

Erosion Control:

- EarthGuard®
- EarthGuard Fiber Matrix
- EarthGuard **EDGE™**

Reclamation:

- EarthGuard **FUSION™**
- EarthGuard **ORGANIX™**
- EarthGuard **ELIXIR™**

Agricultural Soil Stabilization and Conditioning

- SoilMAX
- Agriflo

Dust Suppression

- DustCap
- DustGuard

Water Clarification

- AquaGuard

How EarthGuard Works:

EarthGuard Fiber Matrix is a patented technology, which combines EarthGuard and fiber to form a matrix that provides extended erosion control protection in severe situations. This effective and cost-efficient hydraulically applied formulation has set a new standard for sprayed-on erosion control BMP's.



EarthGuard utilizes an extremely high molecular weight blend of chemistry, which results in its superior charge density and soil stabilizing ability. It is designed to work directly with soil to maintain its stability by both preserving existing soil structure and flocculating fine sediment being dislodged by stormwater or wind. EarthGuard is ideal for site-winterization (seed not required), where bare soil, slopes and stockpiles must be protected during the raining season. In re-



vegetation and dormant applications, the superior soil stabilizing ability of EarthGuard holds, seeds, soil, fiber and amendments in place until sufficient long-term growth/erosion control protection has occurred.

EarthGuard is available in two forms. In a bale form, EarthGuard is packaged in combination with 100% wood fiber or, in liquid form, EarthGuard is packaged in a 5 gallon container whereby it can be applied by itself with water or added to standard hydromulch prior to installation.

Terra Novo is dedicated to helping the storm water and erosion control industries comply with strict Federal Clean Water Regulations. Our engineers and chemists maintain a hands-on approach to solving site-specific problems by providing cost-effective best management practice solutions. All of our products are easy to use, highly effective, extremely affordable and environmentally friendly.



For technical services or to locate your nearest EarthGuard® dealer:

call 1-888-843-1029.

Visit Terra Novo online at:

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Terra Novo is located at:

2930 Patton Way, Bakersfield, CA 93308



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