Stabilized Soil Structures Bare Earth Erosion Control

S Q U A R E D[®] Advanced Stabilization Technology

Airport Runway Infield Areas Big Box Store Construction Site HazWaste Landfill Cap Solar Array Site



El Paso International Airport, Texas

El Paso International Airport, Texas

Application of EMC SQUARED® Stabilizer Solution

Mixing Stabilizer Solution into Soil





El Paso International Airport, Texas

El Paso International Airport, Texas

Compaction of Treated Soil

Finished Stabilized Runway Infield





Mountain Vista Marketplace

Stabilized Big Box Store Construction Site

Westmorland Landfill

Stabilized Hazardous Waste Landfill Cap

Over 20 Years in Service





Northern California Power Agency

Northern California Power Agency

Stabilized Solar Array Site - Under Construction

Stabilized Solar Array Site - Completed



Stabilized Soil Structures

Pictured in this publication are four projects where EMC SQUARED System treatments were applied as engineered applications. The stabilized airport runway infield areas are maintaining erosion-resistant surfaces and keeping the adjacent stormwater retention reservoirs free of sediment accumulation. The stabilized big box store construction site met state and local requirements for both dust control and Storm Water Pollution Prevention Plan (SWPPP) for a period that could stretch into years, until the building construction project is rescheduled once project financing becomes available. The stabilized soil caps for the final closure of the hazardous waste landfill cells meet state EPA requirements for long term closure and the first of the series of stabilized soil caps has now been in service for 20 years. The stabilized solar array site provides improved all weather access for maintenance crews and improved erosion resistance for the large area of compacted soil under the solar array.



There are many specialized applications where large expanses of native soil materials can be economically stabilized with advanced stabilization technology at far lower cost than any other alternative. These are situations where additional measures would otherwise be required, such as repeated maintenance applications of spray applied erosion control emulsion products, coverage with aggregate layers and/ or pavement materials, or development and maintenance of irrigated landscape planting. Soil Stabilization Products Company makes this possible with the EMC SOUARED[®] System, a unique stabilization technology with a far broader range of capabilities than conventional chemical soil stabilization that is based upon cement and lime treatments. In addition to their high cost and environmental concerns, both cement and lime treatments have shrinkage problems that occur during their curing process, which lead to cracking of the treated soil layer. While these cracking problems may be tolerable when the treated soil layer is covered by aggregate base course and surface course pavement materials, as in road construction projects, the cracking problems severely limit the usefulness of cement and lime for applications where the treated soil layer must remain directly exposed to the environment. While cement and lime treatment generate additional cracking beyond that which may occur as a native soil experiences drying and desiccation, EMC SQUARED System treatments reduce the susceptibility of a native soil material to cracking by increasing strength and reducing susceptibility to fluctuations in soil moisture content.

The use of the EMC SQUARED System products for these stabilized soil structures are engineered applications. Determining the suitability of the stabilizer product for long term stabilization of a native soil material at a particular project site under specific service conditions is the job of a local civil or geotechnical engineering firm, who will then be involved in developing construction specifications and providing the engineering quality control testing and monitoring services during the actual construction of the stabilized soil structure. With similar engineering controls, EMC SQUARED System treatments are also being utilized for stabilization of soils for industrial applications where the stabilized soil layer will service trucks, construction equipment and vehicles for a period of years with little or no additional cover. Pictured below left is a stabilized clay pad for a large portable concrete batch plant and the stockpiles of concrete aggregate used during the production of concrete mix for three highway paving projects over the period of a year. Pictured below right is the stabilized clay access road that serviced all the truck and equipment traffic for the construction of a large federal penitentiary project over a period of two years, with nothing more than two inches of aggregate broadcast on the surface as a traction course for wet weather conditions.

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SSPCo's EMC SQUARED System products are used in combination with natural earth materials such as aggregates and soils and mixtures of reclaimed asphalt and concrete pavements. The products are components in the construction of a final product. Engineering and construction controls are vital to the selection of all the ingredients and construction processes which will deliver the final product, and the excellence of that end result is, in large measure, dependent upon engineering judgements and construction quality control measures. This publication is solely for use by professional personnel who are competent to evaluate the significance and limitations of the information provided. It was reviewed carefully prior to publication. Stabilization Products LLC and Milieu Road Technologies, Ltd., assume no liability for its accuracy or completeness. Final determination of the suitability of any information or material for the use contemplated, or for its manner of use, is the sole responsibility of the user.

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