

ENVIROSOIL'S CEMENT BASED STABILIZATION/SOLIDIFICATION PROCESS

PROVEN COST-EFFECTIVE SOLUTION

Envirosoil's Solidification/Stabilization (S/S) process is a proven, cost-effective method for the treatment of contaminated materials. S/S, which involves mixing Portland cement and various reagents (i.e. ash, lime, bentonite, activated carbon, etc.) into contaminated material, protects human health and the environment by immobilizing the contaminants within the treated material.

S/S treatment using cement is a common method for the safe treatment, management and reuse of contaminated materials. The cement reacts chemically with water in the material being treated, creating changes in the physical and chemical properties of the treated materials that prevent the escape of the contaminants into the environment.

The U.S. EPA has identified S/S as a *Best Demonstrated Available Technology* for more than 50 types of contaminants. S/S is increasingly being chosen for use on key sites in Canada, contributing to the sustainable redevelopment of urban and industrial properties

ADVANTAGES OF STABILIZATION/SOLIDIFICATION

Environmentally & Socially Sound: The S/S treated material will be reused by Envirosoil as quarry restoration material. Reusing treated material, rather than bringing in new material, conserves valuable resources and preserving landfill capacity by reducing the landfilling of waste materials.

Versatile: The popularity of S/S for the treatment of contaminated materials stems from the fact that the technology can treat a wide variety of contaminants in a broad spectrum of contaminated materials. Soil, sediment, dredge spoils and sludge contaminated with a diverse range of organics, inorganics and salts have been successfully treated using this versatile technology. In addition, the S/S process is applicable to both wet and dry materials, thereby reducing the need for significant dewatering of sludge or dredge spoil materials.

ENVIROSOIL'S S/S PROCESS

Envirosoil's S/S process utilizes state of the art equipment with proven reliability and success. The process incorporates a high degree of sophistication such as automatic reagent proportioning, soil feeding and metering systems. These systems will automatically measure and blend the proper ratios of ingredients (i.e. reagents, water, soil, etc.) prior to enter the pugmill mixing unit. Once a mix "recipe" is entered into the control system, the PLC automation system will maintain the correct proportion of the various ingredients as the operator increases or decreases the overall blending rate.



The unit also employs real-time monitors of on-plant process parameters and conditions, blending rate and feed rates of all materials and reagents. Production and ingredient amounts are available by the job or day. Time-stamped reports of batch size and ingredient amounts can also be generated.

Envirosoil's S/S process is currently established at its fixed facility located in Bedford, Nova Scotia. All activities associated with its operations are performed in strict accordance with its Approval issued by Nova Scotia Environment and in accordance with its established ISO-Certified Procedures.

For remote and/or onsite projects, Envirosoil's S/S system can be mobilized to site. The S/S system is completely portable and was designed to be transported by road. Once the system arrives onsite it can be setup, commissioned and ready to treat material in less than 48 hours. Performing treatment onsite can significantly reduce the costs associated with the transport of impacted materials to our fixed treatment facility.

