

Environmental Solutions, Inc.
Synergistic Solutions for the Environment

Are You...

Exploring alternative uses and management solutions for your by-products?

Taking a systematic approach to developing your Environmental Management System (EMS)?

Seeking expertise that employs innovation, technology, and economics to build your solutions?

Striving to Advance Beyond Compliance?

The question then becomes how organizations of today – and tomorrow – accomplish all this and still concentrate on core business strategies. Environmental Solutions, Inc. has the answers...

ESI can...

Educate -> Evaluate -> Execute -> Enterprise

Since 1990, Environmental Solutions, Inc. (ESI) has dedicated itself to environmental technology advancement for the benefit of organizational objectives relating to Environmental Management Systems, or EMS. Our focus is on using technologies and processes to implement innovative environmental solutions. Since our inception, we have successfully managed projects and identified solutions for numerous wastes (by-products) including:



Biosolids
Paper Sludge
Wood Ash
Scrap Metals
Harbor Dredge
Fiber Waste
Tobacco Dust

Styrofoam
Tobacco Sludge
Grit Blast Residues
Brake Shoe Dust
Wood Waste
Remediated Soils
Agricultural Wastes

Coal Ash Biosolids Ash Peanut Shells Concrete Debris Waste Plastics Food Wastes Fiber Waste

By guiding and managing innovative waste stream (by-products) projects, ESI has earned a reputation for its commitment to environmental and organizational excellence, becoming a trusted, long-term advisor for clients, and providing ground-breaking solutions. Depending on where an organization is in the EMS process, ESI can take on the role of Manager / Trainer, Innovative Solutions Provider, or Visionary Consultant.







Social



Innovative Solutions Provider: Not only can ESI train an organization's engineers or manage the EMS process, ESI also provides innovative solutions to an organization's environmental challenges. Some cases warrant consulting with an organization on the solution that should be implemented to obtain the desired results. ESI prides itself on considering, and in some cases, creating alternative solutions that make the most sense for the challenge presented. ESI hallmark ventures have included:

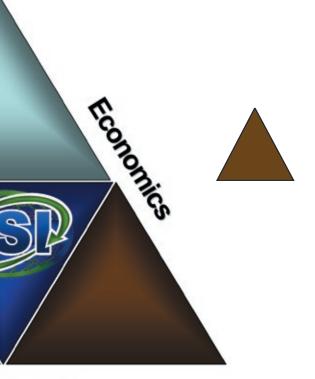
· Securing patents for a revolutionary concrete technology that uses no Portland cement, can be poured at 4 degrees, and will gain high strength within twenty-four hours;



- · Licensed environmental technologies from Australia as well as through a U.S. Department of Energy Federal Laboratory;
- · Managed and operated a large lagoon closure project for a paper manufacturing company;
- · Operated sludge management programs for various waste water treatment plants and large manufacturers;



- · Operated a pilot production manufacturing facility on site at a large utility plant;
- · Completed a Brownfields project remediating hazardous wastes (by-products) on site and recycled various wastes (by-product) generated during the final demolition of old buildings;
- · Established and operates a commercial composting facility, selling green agriculture and garden products.



Visionary Consultant: ESI is truly the brain trust that starts at the beginning of an organization's environmental challenges, walks with an organization every step of the way, and is there bringing visionary solutions for as long as the client needs. ESI is a full service solutions company – turning waste (by-products) from a liability into an opportunity. ESI becomes the dynamic, trusted advisor – because we have been there, environmental management is what we know – and we will continue to be there seeking out alternative and beneficial ways to address environmental challenges faced by organizations today.



Manager / Trainer:

From the Management side, ESI is adept at empowering the user with the know-how to make a valuable impact on the **VIRGINIA MILITARY INSTITUTE** environment. In cooperation with respected institutions such as the Virginia Military Institute, ESI has been called on to conduct training classes in the ABC's of Environmental Management, in effect, bringing a real world understanding to issues that have often been relegated to the corner. ESI wants to bring your organization's environmental processes in from the cold and provide the tools needed to make EMS an integral part of the strategic organization.

In addition, if an organization does not have the human resources or skill set that it takes to provide continuing EMS, we can become that valuable part of the team, as well. ESI's EMS methods and results mirror those of Performance Track, E2 / E3 / E4, and ISO 14001 – depending on where an organization is within the process and the level of environmental compliance the organization seeks to achieve. This allows an organization to have a choice – meeting basic guideline requirements for compliance or truly **Advancing Beyond Compliance**.







Facilitator - The Virginia By-Products Group (VBG):



The **Virginia Manufacturers Association** (VMA) develops constructive policies and activities on behalf of industry by serving as an advocate for legislative, regulatory, taxation, environmental, workplace, business law, insurance, and technology issues, and as an aggregator of business services for its members. The Virginia By-Products Group (VBG) is a program that has been developed by the VMA and partner ESI. The two organizations,

with the support of the Center of Innovative Technology (CIT), explore beneficial uses for business by-products. ESI serves as the VBG technical broker and transaction facilitator.

Any business or organization with a by-product of their operation may list their materials in the database. In keeping the exchange open to all businesses and organizations, we believe there is a potential synergy between manufacturing, non-manufacturing and government facilities. The strength of this program is cost avoidance or savings created by an exchange.

ESI delivers services using...

Environmental Solutions Proprietary Programs (ESP²)

To provide further success for organizations, ESI has created several successful ESP² programs – AIM $^{\text{TM}}$, CAIR $^{\text{TM}}$, SEEK $^{\text{TM}}$, and BUDI $^{\text{TM}}$.

Through the AIM^{TM} (Alternative Intelligent Materials) Program, ESI assists a client with the evaluation of the manufacturing process, the selection of raw materials used in production, and

how these choices can be made more effectively, environmentally sound, and economically more efficient. To facilitate this sensitive and complex program, ESI partners with top ranking professionals in the field working hand-in-hand with the client to evaluate the targeted processes or raw materials, taking into consideration the economics, technology, and processing requirements. ESI provides a recommendation to the client on reducing the creation of the waste (by-product) and/or the most environmentally friendly methods of reuse or recycling of waste (by-product) materials.





The $CAIR^{TM}$, Competitive Aspects and Impacts Review Program, supports the clients' existing EMS program by using it as a means of accelerating the successful implementation of solutions identified as targets by the client. ESI will review the specific initiatives and will make recommendations on how projects may be structured using the latest environmental, technological, operational, and economic solutions.



Through the SEEK™ (Systematic Environmental Evaluation Knowledgebase) Program, ESI draws on experience in structuring beneficial use projects incorporating a variety of innovative and technological solutions to beneficially use industrial and municipal wastes (by-products). ESI's access to technology, the availability of economic models, our network of manufacturers that seek alternative raw

materials in the form of by-products, and ESI's successful track record in managing projects from vision to operation brings a unique capability that is unmatched in the industry.

Finally, the $BUDI^{\text{TM}}$ (Beneficial Use Designation Implementation) Program is a proprietary program developed by ESI to address the challenge that solutions to beneficial uses of wastes (by-products) are as varied as the numbers of wastes (by-products) that are generated. ESI facilitates the selection of one of two paths of beneficial use for waste – brokering (where ESI brings together two parties in a mutually beneficial relationship) or Design/Build/Operate based on client resources and needs.

Brokering - Through its network of partners, ESI may recommend brokering

wastes (by-products) between two parties to achieve maximized, mutually beneficial use. The generator of the waste (by-product) will realize a savings as a result of cost avoidance or, in some cases, may actually be paid a fee for renewable raw materials. The user will benefit from the identification of a source of renewable raw materials that offer consistency at a reduced cost. In this brokering arrangement, ESI will charge a success

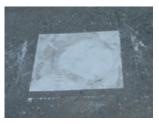


fee based on the saving to both parties that is then shared with the Virginia Manufacturers Association in a partnership to provide improved solutions for the industry.

<u>Design / Build / Operate</u> – ESI may determine novel methods to agglomerate diverse wastes (by-products) that, by themselves, may not be recyclable due to economics or characteristics. However, when viewed as a blend of raw materials, may result in a new product or even the creation of a new business opportunity. ESI has experience in combining materials, applying technology

solutions and structuring business deals to develop new products, technologies, or even the establishment of a business that provides economic development opportunities for the community. Large-scale projects such as these require





financial, business, technology, regulatory and manufacturing analyses. ESI is equipped to guide the design and development phases of a project and will engage the appropriate resources to achieve the objectives and has experience in fully implementing projects, obtaining the proper permitting, acquiring capital equipment ,setting up manufacturing facilities, and operating the business, itself. Based on feasibility, revenue sharing or joint venture opportunities will be established to facilitate project development and implementation.

ESI's depth and breadth of experience and longevity in the industry makes all this possible.



What stage are you in? ESI begins with you there and takes you to the next level. ESI can work with you to not just manage waste (by-products), but use it to your organizational benefit. ESI is different because:

- Longevity In business since 1990
- Creative Alternative Cost Savings
- Committed Getting to the heart of the matter
- Holistic Address Problems, not just Symptoms

At ESI, we turn waste (by-products) from a liability into an opportunity.



About ESI: Since 1990, Environmental Solutions, Inc. (ESI) has dedicated itself to providing environmental solutions integrating innovative processes, state of the art technology, and economics. ESI offers training and consulting, as well as, project development and management, using the Environmental Management Systems (EMS) principles. In addition, the company markets green products created as a result of projects managed by ESI.

Environmental Solutions, Inc. is a closely-held, woman-owned business headquartered in Richmond, Virginia. ESI's President, Brenda Robinson, has more than 15 years of experience in a Fortune 500 company and more than fifteen years experience with technology-based businesses and co-founded ESI with her late husband, W. W. "Phil" Robinson. ESI's solutions are applicable, successful, and repeatable, working within your unique organizational requirements. For additional information on how ESI can assist your organization in turning waste (by-products) from a liability into an opportunity, visit us online at www.envirsol.com or call 804.740.5605.



Environmental Solutions, Inc.

Synergistic Solutions for the Environment

www.envirsol.com

804.740.5605