



AIR & Earth™

Environmental Technology

Environmental Technology





Air & Earth LLC, (A&E) is a global research and development firm specializing in the environmental and energy fields. A&E's mission is focused on the development, commercialization, marketing and licensing of patented technologies that operate in a sustainable and social manner for the benefit of the environment and people globally. A&E is committed to international development and partnerships in an effort to promote and foster worldwide sustainability.

Lack of fresh water has serious implications for public health and quality of life, it can slow or stop economic expansion, reduce agricultural output and endanger food independence. **Environmental Lunch Box Technology LLC, (ELBT)** a subsidiary of A&E is charged with the task to commercialize environmental technologies to recover, separate and harvest "materials" from both **natural environments** and **man-made waste stream environments**. A&E's aquatic technology **accelerates** recovery of natural resources and contaminated materials thereby reducing liabilities and restoring the site to its natural state more rapidly.

A&E's technology used for recovery of materials in; streams, rivers, lakes, reservoirs, dams, bays, estuaries, harbors, oceans, mining and manufacturing waste storage ponds and lagoons.



Areas of research and expertise

Sediments and soils - clean and contaminated, sand, minerals, elements, compounds, chemicals and residues;
interface/core sampling, in-situ treatment, removal, recovery, dewatering, separation, remediation, capping, processing, treating and suppressing contaminant releases

Manufacturing, mining and chemical spill response;
sampling, in-situ treatment, removal, recovery, dewatering, separation, remediation, process and treatment and/or disposal

Material;
sampling, recovery, separation, dewatering, process and treatment, reuse and/or disposal

Water;
sampling, recovery, filtering and processing treatments leading to reuse, gray and potable water

Wastewater;
sampling, recovery and separation, filtering and processing treatments leading to reuse, gray and potable water

Invasive specie;
discovery, sampling, control and eradication

Native species;
reintroduction and establishment monitoring

Habitat;
sampling, removal and restoration

Artifact;
discovery, recovery and documentation

Energy conservation;
equipment design and development

Carbon footprint reduction;
design and development

Equipment;
design and development

Process;
design services

Project;
design and engineering services



Legal Support Staff

Lindsey Johnston, JD
*US Legal Representation
and Grant Writing*

Alan Hoffman, JD
*US Legal Representation
and Contract Writing*

Stephen Petras, JD
*Baker And Hostetler LLP,
International Representation*

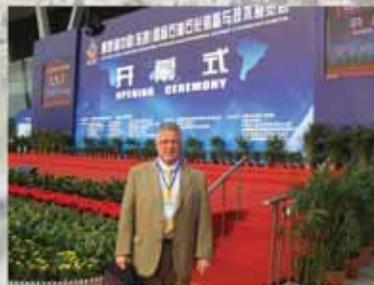
Jeffry Hoffman
A&E Publicist

Michael Burton
*A&E Superintendent of
Construction Operations*

Knolls Atomic Power Laboratory Project



China Exhibits



**NEW YORK STATE TRADE MISSION
KUNSHAN, JIANGSU PROVINCE, CHINA**



**AIR &
Earth™**

NEW PATENTED SEDIMENT SAMPLING, HARVESTING, REMEDICATION AND HABITAT RESTORATION TECHNOLOGY

September 4, 2007: Tom Kryzak of Air & Earth, LLC (A&E) announces new patented technology for contaminated sediment remediation. This technology was announced in light of the University of Maryland's 6 yr study led by Professor Joel Baker on Hudson River PCB sediment releases unveiled on 12/08/2004 in NY City at the Hudson River Foundation. The study found that up to half of the PCBs in sediment are swept downstream when the river bottom is disturbed. Environmental Lunch Box Technology LLC, a subsidiary of A&E, recommends the use of the Environmental Lunch Box (ELB) which works under water during sediment remediation projects to suppress incidental releases and fallback of contaminants that trigger a release and cause turbidity. It is nominally 100% effective.

The ELB provides sampling, viewing, sonar detection, monitoring, separating, testing, treating, injecting, removing or replacing silt, sediment, and materials from a contained site from water bottoms. The open faced container forms a re-sealable seal with the bottom materials, then uses "agitators" for suspending the sediment and materials within the container and provides outlets through which the materials and fluids may be withdrawn from the container for harvesting, separation, replacement or treatment while monitoring for natural or manmade toxins. The "agitators" are variable speed impellers, whips and nozzles used for directing streams of water and/or air at variable pressures. GPS is used for precision tracking of the ELB units.

A closed loop piping system includes forward and reverse pumping to remove the sediment and materials while the seal prevents additional sources from entering the ELB during the process. The monitoring process includes real-time testing for gases, nutrients, organisms, elements, toxins natural or manmade, etc. Treatments include additives, reducers, catalysts, microbes, stabilizers, adhesives, charged particles, gases or other elements. Once treated, "clean" separated materials may be returned via the apparatus. The ELB allows for

research, sampling, treatments or removals with continuous monitoring and minimal exposure to the surroundings with nominally 100% effective results. By reversing the process the voids left from removals can be filled with a select amount of cleaned or new materials mixed with Green PEAS packets to advance the habitat restoration process.

The Green Plant Energy Aid System (GREEN PEAS) is a biodegradable packet filled with plants, (cuttings, roots, tubular, seeds, etc), nutrients and soil organisms necessary to accelerate plant growth in a greenhouse growing effect that shelters the new growth from the forces of nature over a controlled period of time. The GREEN PEAS are pre-packaged high energy growing pods, round in shape to facilitate easy movement and placement. Installed in three different ways GREEN PEAS are; 1) pumped via the ELB units piping system into the soil/sediment, 2) via a sled planting system or 3) rolled out in the form of a blanket planting process. Planting can take place above or below the water line or on shore. GREEN PEAS do not have a top or bottom, allowing growth to occur at 360 degrees (tropism) thus finding “top” on its own as it grows toward the sunlight. GREEN PEAS can be weighted to sink or use an air-bladder to tether at multiple water column elevations or float, as in hydroponic farming.

In areas with historic artifacts, the ELB searches with radar, identifies and frees artifacts from clean and/or contaminated sediment using a Sediment Active Mining System (SAMS) which suspends and removes the sediment within the ELB to allow for artifact recovery without releases to the water column.

Tom Kryzak has filled international patent applications in the US, Canada, Russia, China, Hong Kong, Japan, India, Australia, New Zealand and the European Patent Office.

From: **BP Spill Technology Solutions (EPA)** <donotreply@epa.gov>

Date: Wed, Sep 8, 2010 at 5:08 PM

Subject: Technology Solution Website Submission for BP Spill

To: tomkryzak@gmail.com



**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
WASHINGTON, DC 20004**

**OFFICE OF
RESEARCH
AND
DEVELOPMENT**

Dear Thomas Kryzak:

Thank you for submitting your idea to the U.S. Environmental Protection Agency and for your willingness to help with the BP Deepwater Horizon oil spill cleanup in the Gulf of Mexico. Your suggestion was reviewed by EPA experts. Because of the type of suggestion you submitted, it was forwarded to the U.S. Coast Guard (USCG), which will contact you for further information or clarification if necessary.

Since the Deepwater Horizon oil rig exploded, the federal government has received more than 20,000 suggestions and technology solutions from vendors and other members of the public in the United States and abroad. The EPA alone has received more than 2,000 suggestions each of which were reviewed in an orderly and expeditious manner.

Because we take every suggestion seriously, the EPA engaged a team of technical experts from various parts of the Agency who initially reviewed each submission. Potentially viable ideas were placed into categories (surface water containment and cleanup, air monitoring and detection, landfall cleanup, wildlife protection and cleanup) and then submitted to a more robust, second-level review by additional EPA technical experts. These ideas, along with EPA's reviews, are shared on a regular basis with the Coast Guard and BP to ensure that the suggestions are considered in the federal government's ongoing efforts to address the oil spill. Your suggestion pertains to one of these categories and received a second-level review by additional EPA experts before being sent to the Coast Guard.

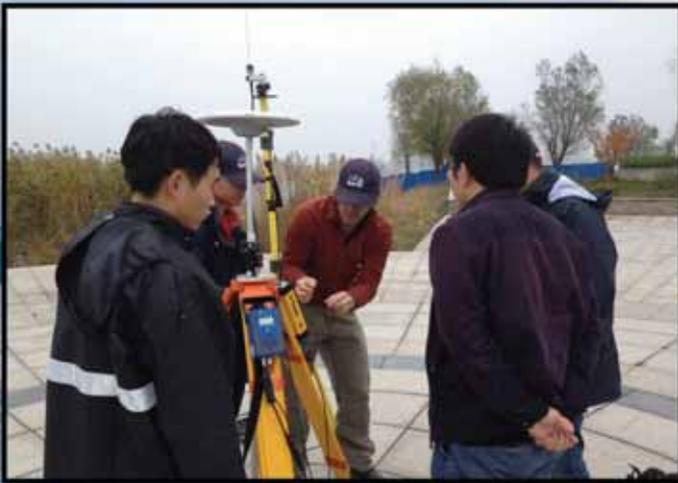
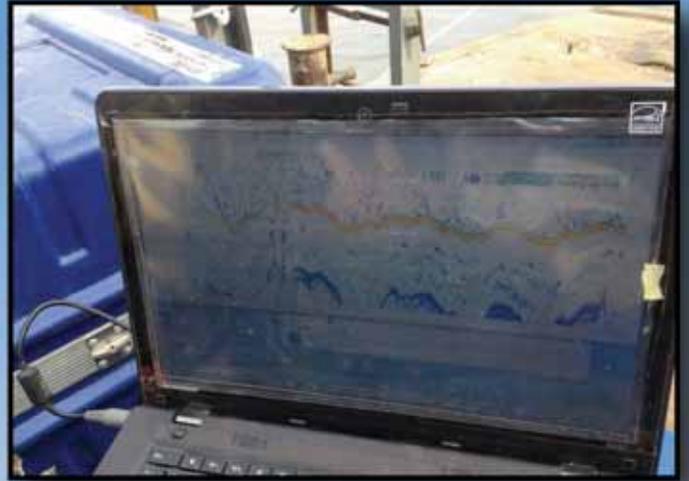
While looking for ways to improve the identification and implementation of new ideas to address the Gulf spill, the Interagency Alternative Technology Assessment Program (IATAP), was established. The primary focus of this program is to collect, review and, where appropriate aid in the deployment of oil spill response solutions from interested submitters. This new program was established by the National Incident Commander for the BP Deepwater Horizon oil spill and will allow for quicker review of ideas and the implementation of workable technologies. There is no need to resubmit your initial suggestion, but if you have other ideas you would like to submit, please visit the IATAP webpage

Lek Kadeli
Deputy Assistant Administrator

Lake George Asian Clam R&D Project



YI RIVER SEDIMENT TREATMENT AND ECOLOGICAL RECOVERY PILOT PROJECT
OCTOBER, 2014



YI RIVER SEDIMENT TREATMENT AND ECOLOGICAL RECOVERY PILOT PROJECT
OCTOBER, 2014



Current and Past Membership Associations

AIR & WASTE MANAGEMENT ASSOCIATION

AMERICAN WATER RESOURCES ASSOCIATION

ASSOCIATION FOR ENVIRONMENTAL HEALTH AND SCIENCE

SOCIETY FOR CONSERVATION BIOLOGY

NORTH AMERICAN BENTHOLOGICAL SOCIETY

NORTH AMERICAN LAKE MANAGEMENT SOCIETY

CAPITAL DISTRICT ENVIRONMENTAL BREAKFAST CLUB

SIERRA CLUB

SEDNET

US-CHINA PEOPLES FRIENDSHIP CLUB



Environmental Technology

341 Settles Hill Rd.
Altamont, NY 12009

(518) 355-2005

www.airearthworks.com