



Restoring Environments for Long-Term Sustainability

Alpha Omega Bioremediation, “AOB”, believes that environmental sustainability and responsibility are good business practices – ones that can help companies better manage resources and grow for the future.

For more than 30 years, our proprietary microbiological technology has been used to provide natural solutions to clean properties contaminated with toxic waste and heavy metals such as:

- public stadiums,
- educational institutions,
- agricultural and public natural habitats,
- waste water treatment plants and
- various manufacturing facilities,

without harsh chemicals or unwanted side effects, helping our clients find lasting, financially responsible solutions to difficult waste problems.

AOB works closely with each client to deliver a site-specific solution to **restore contaminated environments** and provide long-term solutions to managing contaminants. The AOB system removes not just the initial contaminants including heavy metals, organic solvents, chemicals, petroleum products, acid mine drainage, and excess nutrients – but also handles the byproducts that can often be produced during the clean- up process.

The result is a restored environment that not only meets legal requirements but, also, can often exceed them. There are **no negative residual effects or unwanted materials produced (sludge)**. Lambda's proprietary microbial technology is more cost effective, “green” and faster than traditional remediation techniques such as dredge, dig and haul.

This methodology was developed by pioneering microbiologist, Dr. Jo Davison, more than 30 years ago at her company, Lambda Bioremediation, now known as Alpha Omega Bioremediation. Today, Alpha Omega Bioremediation, continues Dr. Jo’s scientific approach as it continues to build on the success of her work. The fundamental process remains the same – harness the brilliance of ‘Mother Nature’ to fix modern industrial dilemmas.

How Does It Work?

The restoration process is achieved with AOB’s proprietary microbial formulations and specialized technology. Our consortia include many different types of microbes, each specified to provide an important function in the remediation process. Our approach is to provide contaminated sites with the microbes that naturally “consume” the unwanted materials.



AOB **does not use**, nor has it ever used, **genetically modified or pathogenic organisms**. Each microbe is carefully selected and adapted for use in AOB's specialized consortia, optimizing the synergistic effects of the individual ingredients to provide a balanced, supportive ecosystem comprised of specially selected bacteria, fungus, protozoa and algae. It is self-sustaining and long-lasting.

No residual effects or by-products are produced. Simply put, the AOB process returns in sufficient quantities, the natural indigenous microbes to environments where they have been decimated by chemicals or other pollutants or washed away due to destruction of their natural habitat. Microbes provide nutrient-fixing activities for nitrogen, phosphates and potassium, and control the balance of trace elements such as iron, sulfur, copper, magnesium, calcium, etc. needed for healthy plant growth and/or clean waterways and sustainable habitable sites.

After a careful analysis of a given site, AOB introduces a custom formulation of microbes that thrive on-site to achieve their goal of reducing and/or eliminating the contaminants of concern. A monitoring program and resultant database are created specifically for the site, verifying that decomposition is on track and in compliance with established criteria. The **ecological re-balancing** of soil and fresh water microbial ecosystems renews over time, along with its natural organic remediation qualities, helping to maintain a clean environment.

The Science Behind Sustainable Solutions

AOB collaborates with The Smart Group, Inc., who provides specialized advisory services on various environmental projects. AOB has demonstrated the success of its microbial technology in more than 250 projects in 37 states and Canada. Couple that with The Smart Group's demonstrated success in 23 countries and 35 states and the strength of the AOB/Smart Group team is obvious.

The Smart Group provides natural science expertise to help develop innovative products and sustainable solutions for impaired water and land resources. Our staff is a varied set of ecologists, hydrogeologists, statisticians and toxicologists with decades of experience in all corners of the globe.

We collaboratively use that diversity of expertise in a team approach to develop ideas, recommendations, and solutions that are well- rounded, practical, and meaningful to our clients and to the environment. We work with AOB to merge our scientific expertise and use of innovative products with their microbial bioremediation expertise and proprietary technology to implement sustainable solutions.