



Advanced Microbiology Solutions. AOB has designed innovative and comprehensive approaches to remediate traditional contaminants. Our products address a wide array of the most pressing remediation issues, utilizing consortia of living organisms consisting of bacteria, fungus, algae and protozoa, to rebalance contaminated sites. These are a sampling of our products.

Enviro-Management-Plus. AOB's consortium contains microbes, enzymes, and natural nutrients for the degradation steps in a poly-microbial mix to treat:

- PCB's, BTEX, THP, GRU & DRO
- Oils, greases, anti-freeze
- Heavy metals, chlorinated compounds, semi-volatiles, sulfates
- Industrial waste – mixed and non-radioactive
- Soil and water degradation, wastewater

Our process allows the area to remain open and operational, while site inoculation and clean-up occurs.

Agri-Management Plus.

Manure Management Plus.

- Degrades dead organic matter on straw, litter, etc.
- Restores beneficial natural organisms destroyed by chemical additives
- Fixes (stabilizes) nitrogen, phosphate and potassium
- Reduces and/or eliminates over-production of ammonia (odor) and hydrogen sulfide
- Substantially reduces the instance and population of flies, darkling beetles and other insects
- Minimizes wastewater issues in run-off and retention ponds

Soil Management Plus.

- Amendment and conditioner are an alternative to agricultural chemicals
- Increases soil fertility by fixing nitrogen, potassium, phosphorus and trace elements in proper amounts without fertilizer burn
- Creates a balanced eco-system safely controls insect pests and overtime renews itself

Landfill Management Plus. Our microbial process handles all aspects of major problem areas: Leachate (hazardous waste, COC's, pesticides, chemicals, metals, etc.); High cost of operation; Finite space; and Available resources of clean soil to cap waste.

To enhance a landfill's viability, methane can be captured and used for energy and injected microbes will increase production of this valuable resource. To reduce methane gas – a reverse process is used. To ready soil as capping material or to be sold as top soil, our microbes reduce the renewal process from years to months or months to weeks.

ADVANTAGES

Safe & Effective

- All-Natural Materials – *NO* Genetically Engineered Organisms or Chemicals
- Uses only ATCC Bio-Safety Level 1 Microbes – Safe for Humans, Animals & Plants
- Classified as Non-hazardous, All-Natural Agricultural Food Products by USDA
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Consumer Benefits

- Long Lasting Solution Regardless of Wet or Dry Weather
- Can be used in Conjunction with other Technologies
- Adaptable to any Site, Regardless of Terrain & Changing Conditions without Artificially Changing Existing Site Properties
- More Cost Effective than Traditional Methods
- Greatly Reduces Remediation Time
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Environmental Benefits

- Does not Stress Existing Environmental Systems
- Indigenous, All-Natural Microbes Return to Normal Carrying Capacity Once Contaminant Source is Gone
- Maintains Nature's Normal Life Cycle Rather than Disrupting it

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Mine Management Plus.

Acid Mine Drainage

Mine waste, soil and water run-off is often acidic and contains high levels of oxidized iron, sulfur, manganese, aluminum and other heavy metals.

- Bioremediation utilize modified wetlands and pond systems with compost, mixed microbial consortia and plants.
- This treatment raises pH levels and reduces metals to non-toxic levels PRIOR to discharge into receiving streams.

Microbial Scrubbing

Removes carbon, carbon monoxide, carbon dioxide and other gases produced by coal firing plants.

- This additional "scrub" with microbes helps produce clean coal.
- Carbon Reduction Credits consist of the collection and storage of carbon through reforestation, forestation, and other collection methods.

Coal Fines

Reduction or elimination of moisture to levels of 20% or less, with potential of producing billions of tons of additional clean "green" coal.

- Bioremediation can remove iron, sulfur, manganese, nitrates and aluminum (increasing BTU's) and precursors of acid rain.
- If sulfur is removed before the fines get wet, the fines provide a more environmentally friendly fuel source.

Bio-Leaching

Microbial Mining. Recovers trace amounts of gold, silver, copper, etc.

- Alternative to cyanide gold reclamation.
- A microbial consortium is less expensive than single microbes that need replenished, so can become self-sustaining.

Bio-Transformation

Metals aren't bioremediated but transformed to another form by changing their oxidation state.

- Microbes and their interaction with soil, influences metal behavior.
- When supplemented with phyto-extraction, toxic metals are removed through metal-accumulating plants from the soil.

Hydro-Management Plus.

- Algae reduction and Algal bloom prevention
- Eutrophication treatment with indigenous microbes and phytoremediation
- Shoreline restoration from toxic contamination or industrial waste
- Clean and rebalance waterway's ecosystem to support aquatic life and vegetation

About Alpha Omega BioRemediation. In 1984, AOB began research on microbes that could clean and balance the environment. We provide specialized remedy teams, which bring 80+ years of expertise to each and every project we undertake. AOB's processes, along with our team of thought-leading experts, is the key component to AOB's 100% Bioremediation success rate for more than **30 years**.

For Additional Information Contact:

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