

## **Zeolites - An Alternative Approach to Saving Contaminated Lakes**

*By ECOMIN Remediation Technologies*

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*Zeolites may be America's answer to safely and naturally removing heavy metals, toxins, chemicals and carcinogens from lakes, soils and sediments and also for complete detoxification of human and animal bodies.*

In May there was a news story about Pena Blanca Lake near Rio Rico and the problem that they are having with mercury contamination in the lake sediment and the fish. The report said that the Forest Service was getting ready to address this problem by draining the lake, removing and destroying the fish and taking about 10' of sediment out of the lake bottom. They would then allow mother nature to refill the lake and then restock it with fish. Several questions immediately came to mind: What were they going to do with all that water and where were they going to 'dump' the mercury laden sediment? The mercury that has accumulated in the lake and fish probably got there from water run off to start with, so by letting the lake refill itself from run off wouldn't it re-contaminate itself upon self filling? To remove 10' of sediment out of the bottom of the lake, wouldn't you be causing damage to the fragile lake ecosystem?

Additionally, a more recent article discussed the use of a chemical to euthanize the fish and then allow the lake to dry before sediment removal. What other environmental effects will this process have on the ecosystem, the invertebrates, the reptiles and the birds and mammals that use the lake? Current proposal estimates to remove water, fish and sediment have been estimated between \$11 Million to \$14 Million, the proposed method of using zeolites on the lake would reduce that cost by more than 70% and could enable the Forest Service to remediate several contaminated lakes in the area instead of just one.

A recent proposal was submitted by ECOMIN Remediation Technologies, LLC, a North Carolina Company, to the USFS Coronado Nogales District on an alternative method of cleaning up the mercury contamination in fish and sediment of Pena Blanca Lake. This alternative remediation uses an all natural mineral, an activated zeolite powder disbursed into the water to remove mercury as well as other heavy metals, chemicals and toxins naturally and safely that may be present in the lake, zeolites are non-toxics and safe for this remediation process. Zeolite lake remediation has proven successful in many parts of the world and we hope that Pena Blanca Lake zeolite remediation will set the stage so that we can also clean up Arivaca Lake, Patagonia Lake, Parker Canyon Lake and some 40 other contaminated lakes across Arizona. In New Zealand, the heavily contaminated Rotorua Lakes were remediated with zeolites with tremendous success. An added benefit of this method of lake remediation is that there is absolutely no possible damage to the fragile lake ecosystem.

### **WHAT ARE ZEOLITES?**

Zeolites are a naturally occurring minerals that are formed when lava contacts fresh or salt water lakes . There are several types of zeolites, but the ones that we use are called clinoptilolite or cage-like zeolites. This unique mineral created from the 4 elements: air, water, earth and fire has very unique properties that have been proven to detoxify and balance the pH of human, animal and water bodies. Zeolites are negatively charged minerals, actually one of the few negatively charged minerals in nature, and when they come into contact with positively charged particles such as lead, mercury, cadmium, arsenic, pesticides and chemicals they actually pull them into their 'cage-like' structure . In nature, zeolites draw these positively charged particles to it, so that when you mine zeolite minerals they are already quite full of heavy metals, etc., Our zeolites are put through an activation process that actually cleans out the cages of the zeolites and creates a surface area for absorption of metals of approximately 90 square feet per gram of zeolite which is actually more than double the absorptive capacity of raw mined zeolite. In humans and animals the zeolites

that are full of heavy metals and toxins are released naturally through urine output. In lakes, the zeolite will settle at the bottom of the body of water where it will continue to collect additional contaminants and will never re-release them into the ecosystem. One of the most positive aspects of using the activated zeolites in lakes is that the contaminated water, fish and sediment do not have to be removed from the lake, they all will be remediated by the zeolites and therefore will not destroy the fragile ecosystem of lakes.

500,000 tons of zeolite were used successfully in the clean-up after the nuclear power plant disaster at Chernobyl which involved cohesive efforts by virtually every zeolite production facility in the entire former U.S.S.R. Zeolites were fed to cattle in an effort to keep radioactive ions out of the milk, and were baked into bread and cookies for children in an effort to minimize the radioactive contamination in humans. Zeolites were also used at 'Three Mile Island' a decade or so before Chernobyl. Contaminated land, such as Brown Field near Three Mile Island was rendered fit for building and agriculture after treating the soil with sufficient quantities of zeolites.

There is a lot of concern and discussion currently going on in southern Arizona regarding mining and it's affect on the quality of groundwater. Activated zeolites can be applied in powdered form directly to open pit mine lakes to pull out the heavy metals, chemicals and toxins in the water and prevent them from entering the local groundwater and aquifers. Activated zeolites can also be used to remediate contaminated soils and sediments that have been impacted negatively by mining, industrial releases and antiquated fertilization practices.

#### BENEFITS OF USING ZEOLITES

People and animals across the world are benefiting from incorporating zeolites into their lives. It is clearly evident that we live in a toxic world and it has been reported that the average American takes in over 150 chemicals, toxins, carcinogens and/or heavy metals each and everyday. After time, this intake of toxins builds up in the body and creates what is called a 'body burden' which can and usually does result in chronic disease. By adding liquid activated zeolites to you and your pets daily regime you can remove these toxins from the body naturally and also balance the body's pH to a normal alkaline state. Disease thrives in an acidic body but does not do well in an alkaline body. Most people who have integrated activated zeolites into their lives have noticed increased energy and stamina as well as the disappearance of many chronic health problems.

Zeolites seem to address many issues that are of great concern to Americans across the country. With just one naturally occurring mineral we can remove toxins and carcinogens from our body, clean up our water and our land. Hopefully, the USFS Nogales District will recognize the tremendous benefits of treating Pena Blanca Lake and remediation by zeolites of water, sediment and fish and this will set the precedence for cleaning up lakes across Arizona and around the country. Safely and with no adherent side effects.

If you would like more information on remediating waters in your area, the use of zeolites in people and animals, or if you would like an interview, contact ECOMIN Remediation Technologies at 1-800-232-9549.

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ECOMIN Remediation Technologies 1-800-232-9549 Promotes the use of activated (or clean) zeolites for lake water, sediment and soil remediation and to improve health and wellness in humans and animals.

Category Environment, Health, Pets  
Tags zeolites, mercury, detox, contamination, animals  
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