

## **Opposition to EPA's Decision to Not Regulate Perchlorate – A Threat to the Great Lakes**

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Removal of an estimated one million tons of unexploded ordnance and bulk containers abandoned on the floor of the Great Lakes is unlikely if the US EPA decision to deregulate perchlorates stands. Perchlorates are the most persistent munitions constituent leaching from decaying military explosives abandoned in a marine environment. Already beginning to show up at certain lakefront municipal water treatment facilities on both the US and Canadian sides, deregulation of perchlorates threatens the essential rationale for removal of these "point source" emitters of perchlorates, and sets the stage for irreversible and unnecessary perchlorate contamination of the Great Lakes.

Rocket fuel is commonly provided as the most likely source for perchlorate contaminated drinking water. While perchlorates are used for that purpose, they are also a major component of conventional military explosives. Prior to WWII, Germany manufactured an entire class of civilian explosives based solely on perchlorates, and throughout WWII Russia manufactured numerous types of explosive filled projectiles containing up to 89% perchlorates by volume. The percent by volume of perchlorates used in period manufacture of US military explosives vary but 25% is a conservative number overall.

Unaware of the impending threat to the United States and Canada's shared strategic asset known as the Great Lakes, the US Environmental Protection Agency is said to have bowed to pressure from the Pentagon, according to US Senate Environmental Committee Chair, Senator Barbara Boxer (D-CA), adding; "To see the Bush EPA just walk away is shocking". Paul Yaroschak, Pentagon Deputy Director for Emerging Contaminants denies this, saying; "We have not intervened in any way", adding "The EPA decision was based on the Safe Drinking Water Act".

The EPA has identified over 400 land based active or formerly used defense sites across 35 states where perchlorates have already been detected at dangerous levels in local aquifers, affecting an untold number of adjacent communities. Most of these sites have had little exposure to rocket fuel, but do have a documented history of military high explosive use or manufacture. Soils contaminated with decade's worth of perchlorate laden high explosive residues have become "non-point" sources of pollution, and are as difficult and costly to remediate as the aquifers they continue to pollute every time it rains. By contrast, unexploded munitions and other defense wastes intentionally dumped and abandoned on the floor of the Great Lakes remain largely intact due to cold fresh waters, and fit the classic description of "point source" emitters of pollutants that can and must be eliminated.

The most common critical pathway for perchlorate to enter the human body is through contaminated drinking water. It primarily attacks the thyroid gland where it slows metabolic rate, which is why it was once used to fatten livestock and poultry before being linked to breast and testicular cancer. The thyroid glands of children are most susceptible to perchlorates, which can also be transferred to the fetus maternally. Women are said to be ten times more susceptible to perchlorate uptake than men.

The incredible persistence of perchlorate gives it the ability to migrate far from its point of origin, including into crops. Because of this persistence, the technical and economic challenges involved in attempting to eliminate perchlorate once it has entered an ecosystem illustrate that removal of point sources is the most economical course of action. Much of southern California for instance, is already forced to use perchlorate laced waters from the Colorado River, contaminated from a single DoD managed perchlorate

manufacturing facility that used unlined retention ponds and operated in the middle of the Nevada desert; miles away from the Colorado River.

Some might be surprised to learn the scope of the problem in the Great Lakes, and can't imagine how or why it happened. The question is what we are going to do about it. Ask a Great Lakes resident and the answer is a foregone conclusion; pull the munitions and related defense wastes out of the Lakes before it's too late. While few are aware that high explosive filled munitions provide a substantial source of perchlorates, large numbers of munitions found elsewhere in a more advanced state of decay have been linked to a decline in fisheries. Where others were helpless to address such problems due to a lack of removal technology, we are not; but in fact are on the verge of choosing a similar fate.

The prime directive of the US Department of Defense is defending this nation against international strategic threats, and the projection of US influence and power; not long term domestic environmental threats, especially the ones they had a hand in creating. Allowing any waste originator into the decision making process regarding toxic waste clean up is a fool's game; and the DoD's dismal track record pertaining to underwater unexploded ordnance clean up bears this out. Where considerable resources are being devoted to protect the health and economic viability of individual communities from land based defense wastes that you can see; the health and economic viability of a nation is being neglected for what you can't.

Ask a US defense official what we are going to do about the defense wastes in the Great Lakes, and if you can get past the debate on whether the threat justifies remedial action, he will ask you who is going to pay for the clean up. At the upper levels in the Pentagon it's all about the money, and how long you can delay spending a dime on anything other than your prime directive. While that approach has worked well for them in the past, time is running out for the rest of us.

Deregulating perchlorate will not make it go away nor mitigate its harmful effects; using the Safe Drinking Water Act to justify it is an affront to our national identity; and its impact on the Great Lakes is a threat to our national security.

This action is clearly not the will of the men and women who proudly serve the US EPA, and does a disservice to the citizens whose interests they represent. Therefore, the decision to deregulate perchlorates must be delayed until after responsible leadership returns to the White House.

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