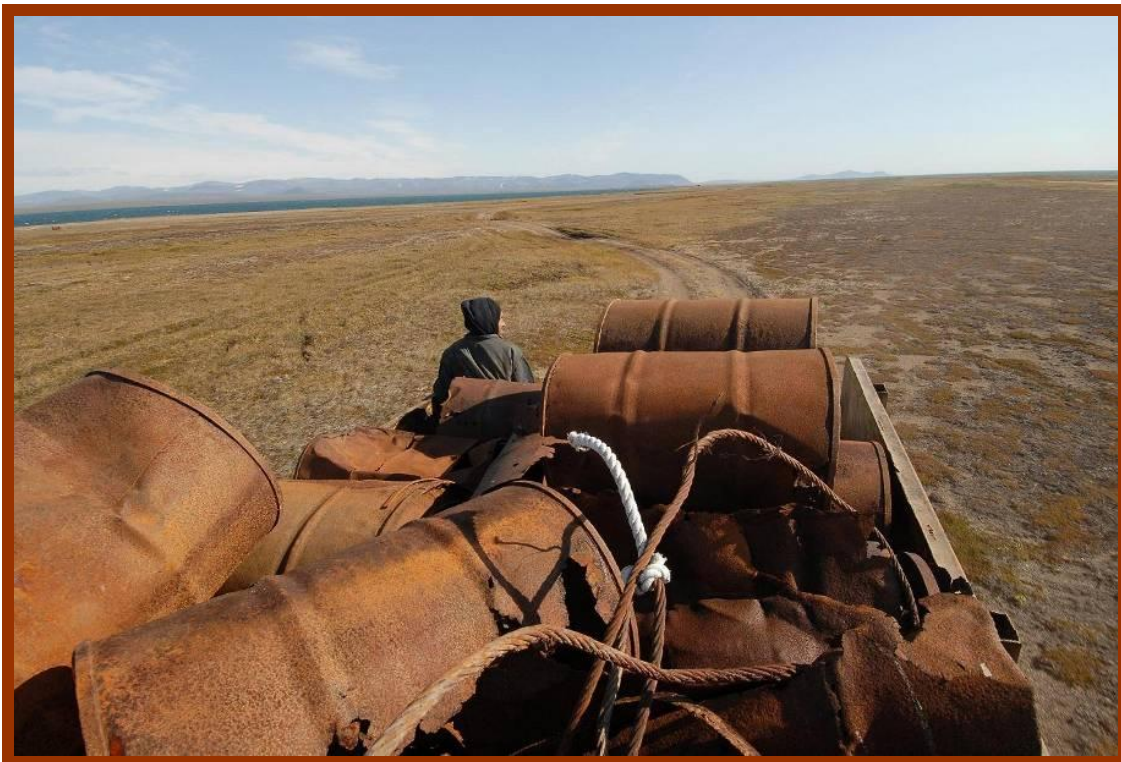


**Cleaning Up the Russian Arctic, One Village at a Time**  
**By Michael Y. Brubaker**

On the far shore of the Bering Strait, a mere 100 miles from the Alaska coastline, a group of men walk a stretch of gravel beach, hunting. They are Chukchi Natives from the village of Lorino in the Russian province of Chukotka. On this day, the men are not after walrus or gray whale. Nor are they seeking pink salmon, char, mushrooms or moss berries. What they are hunting is a quarry that threatens the health of the village and people as far away as Alaska. Their search is for the metal 55-gallon drums which have been cast far and wide by men, the sea and by winter storms. Tens of thousands of waste drums have been abandoned in villages and former military sites throughout the Russian Arctic, and their toxic contents are on the move through runoff, river flow and coastal current, into Arctic seas.

The men are participants in an international collaboration aimed at cleaning up abandoned drum sites in the Russian Arctic. This work is made possible with the help of the Environmental Protection Agency, the Alaska Department of Environmental Conservation, the Unga Tribal Council, the Russian Association of Indigenous Peoples of the North (RAIPON), the Chukotka Red Cross and the Northwest Public Health Research Center in St. Petersburg. ANTHC is also a partner, and so in August I had the opportunity to travel to Chukotka and to help local residents begin the cleanup work.



**Figure 1**

**After the Clean Up - the Beach in Lorino**

**V. Devyatkin 2008**

The drums in Lorino contain the waste from half-a-century of village industry: oil, grease, spent fuels and solvents, chemicals common to villages everywhere. In Russia, however, these chemicals have an especially destructive nature due to the widespread use of persistent toxic pollutants such as PCBs and DDT. These are resilient chemicals that concentrate in the food chain, and can reach levels that are harmful to wildlife and humans.

According to the Russian inventory, 53,000 tons of the 180,000 tons of PCBs produced in the former Soviet Union were used for paints, varnishes and lubricants—applications uncommon in the United States. Random tests performed in 28 Native homes revealed that 100% tested positive for persistent toxic substances, mostly PCBs and DDT. Health officials in Russia are beginning to understand the implication of high levels of localized pollution in Arctic indigenous communities.



Figure 2 Chukchi natives are cleaning up one village at a time. M. Brubaker 2007.

Between 65% and 100% of homemade local foods were found to be contaminated with PCBs and DDT. One reason is the traditional practice of storing and fermenting meat, such as walrus, in underground pits. In villages where the soil is saturated with waste from leaking drums, meltwater seeps into the pits and contaminates the meat. The problem is becoming more serious with climate change. As permafrost melts, toxins that

previously were frozen are mobilized and find their way into water, wildlife and traditional foods. Blood testing of 237 Native women in the Russian Arctic confirmed that the levels of these pollutants in Chukotka Natives are among the highest of all Arctic regions. So high in fact that significant association has been found between PCB blood concentration and the number of low birth weight and premature babies.

In Russia there is no national policy for the assessment and cleanup of these abandoned drum sites either in villages or on former Soviet military installations. Consequently, Chukotka Red Cross has been looking for model projects in Alaska on how to perform cleanup work in rural villages. One good model was recently completed in the southwest Alaska village of Sand Point. Three tribes in Sand Point collaborated with the Aleutian Pribilof Islands Association, the State of Alaska and EPA to cleanup a drum site in the town quarry. In June, ANTHC partnered with Unga Tribal Council, EPA and ADEC to hold an international workshop on drums site cleanup. Participants from Alaska, Russia and Canada traveled to Sand Point for a first hand look at the work site.

Leaking drums in Russia may seem to be a distant problem to some people, but the condition of the environment in Chukotka is relevant for Alaska as well. Most of the water in the Bering and Chukchi seas (85%) ultimately flows north and east into the Beaufort Sea. Thus, Alaska and Canada are downstream from shorelines and rivers in Chukotka and the Kamchatka Peninsula, so there are regional sources of pollution that stand to affect Alaskans. Fortunately in Alaska, we do not have the same level of village contamination, but we do depend on the same resource—the salmon, sea mammals and birds that move and migrate back and forth between the two regions. Alaska could have the cleanest villages in the world, but if upstream contaminants enter the marine environment then we can expect our food to also be affected.

So the work of these Chukchi hunters on a remote beach in Russia is a sign of progress and a ray of hope for the residents of this village and for those of us who live downstream. Over the course of two weeks this August, some 2,000 drums were recovered in the vicinity of Lorino. Drums that contained hazardous contaminants were labeled and set aside for testing and later disposal. Where once one could scarcely walk the beach without tripping over a drum, today the only obstacles are whale bones. Lorino is beginning to look less like an environmental disaster, and more like what it really is, a Native whaling village.

Next year Lorino hopes to tackle the drum stockpiles in the village center, transferring tens of thousands of gallons of toxic liquids into secure storage. ANTHC and our partners hope that providing assistance to villages like Lorino will encourage other communities across the Arctic to cleanup their own drum sites. By doing so, we are taking one small step towards assuring a safe and healthy future for Alaska Natives.

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Reference: Persistent Toxic Substances, Food Security and Indigenous Peoples of the Russian North. Final Report. Arctic Monitoring and Assessment Programme, 2004.