

Amchitka food chain found safe in study

RADIOACTIVITY: Only normal traces turn up in waters off nuclear-testing site.

By DON HUNTER
Anchorage Daily News

(Published: August 2, 2005)

Comprehensive sampling of plants, fish, birds and animals in the waters around Amchitka Island last summer found no sign of seepage from underground atomic tests conducted there more than three decades ago, a panel of scientists said here Monday night.

Testing of subsistence foods and varieties of fish harvested by commercial fishermen found everything safe for human consumption, said Charles Powers, a professor of Environmental and Occupational Medicine at Robert Wood Johnson Medical School and the principal investigator on the project. Only low levels of radionuclides that "are well below any normal human health risk" were detected, he said.

Still, the scientists said, eventually radionuclides left from the atomic era will begin to leak from Amchitka. That might be thousands of years, or hundreds. Or less.

Powers and a team of scientists working through the Consortium for Risk Evaluation with Stakeholder Participation, or CRESPE, spent about six weeks on and around Amchitka last summer. They collected biological samples from more than 20 species and geophysical samples from ocean sediments. In short, said Powers and Joanna Burger, the lead biological investigator from Rutgers University, the levels found at Amchitka were similar to those found in another location in the Aleutians and to noncontaminated places in the northern hemisphere.

Amchitka, located 1,340 miles southwest of Anchorage, was the site of three underground nuclear tests conducted by the Atomic Energy Commission from 1965 to 1971. The last, the 5-megaton explosion of a Spartan missile warhead, was the largest underground test conducted by the United States. The island is uninhabited now but has supported military installations over the years since the testing program ended and is occasionally visited by subsistence hunters and fishermen.

The environmental organization Greenpeace collected samples from the island in 1996 and announced it had found traces of radioactive substances that may have leaked from the underground blast pits. A subsequent review by the Alaska Department of Environmental Conservation and the U.S. Department of Energy,

however, attributed the findings to fallout from above-ground tests conducted elsewhere and other nuclear events.

State environmental officials, residents of other Aleutian islands and the Aleutian Pribilof Islands Association continued to press the federal government to begin a comprehensive monitoring program on the island. In a letter to the federal agency in 2001, then-DEC Commissioner Michele Brown warned that if radioactive contaminants leaked from the island, they could threaten subsistence resources and, conceivably, the rich North Pacific commercial fisheries.

In a 1,300-page report released Monday night, the CRESP scientists say that clearly is not the case today. But, they also cautioned, the nuclear residue beneath Amchitka will remain dangerous for thousands of years, and sooner or later it will begin to emerge. A long-term, intermittent sampling program should be implemented, they said.

"We think one of the real challenges is to remember that it's going to take a long time for that stuff to (decay)," Powers said in an interview before the report was released. "It is eventually going to come out."

"The question," Burger added, "is whether it's going to go out in 400 years or 4,000 years."

"Or 48," Powers said.

Burger and Powers said it isn't possible to distinguish the kind of radionuclides that result from fallout from the sort that might seep from beneath Amchitka.

"But the fact that we have low levels indicates that they're not leaking out, seeping out, right now or you'd have higher levels than you have," Burger said. "So then it becomes a matter of, is this residual, left over from when these shots happened from 1965 to 1971, or is it from fallout?"

Powers said the levels found in last summer's samples are lower than those recorded in the Amchitka ecosystem immediately after the tests. That, too, indicates that radionuclides are not yet migrating out of the island, he said.

Burger said she sampled a wide range of species, including kelp and algae, sea urchins, halibut, cod and other fish, and puffins and eagles. She said she placed one scientist on a trawler to collect commercial fish samples and enlisted the assistance and knowledge of Aleut hunters and fishermen.

"This is one of the very few studies of this type that I know of that actually included subsistence hunters on our voyage as subsistence scientists who were collecting in the way that they would collect subsistence foods," she said. "When we got to one of these beaches, I would say to them, 'Let's say you were stranded here, what would you eat?' And they would go off on the beach ... and collect things the same way they would if in fact during one of their fishing expeditions they had gotten stranded."

The result of Burger's biological research, Powers said, is "the most complete evaluation of a small region of the sea for radionuclides that's ever been done."

The threshold work will be useful for planning future monitoring efforts, they said.

Burger said she and her team collected samples from 20 to 30 different species, which accumulate radionuclides at differing rates. By identifying which are the first and most effective at doing so, she said scientists will be able to target fewer species in future rounds of monitoring, making the effort less expensive.

Daily News reporter Don Hunter can be reached at dhunter@adn.com.

THE STUDY: Go online for more information about the Amchitka research.

www.cresp.org

Copyright © 2005 The Anchorage Daily News (www.adn.com)