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STATEMENT OF

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on behalf of

**THE SIERRA CLUB
GREAT LAKES UNITED
THE LAKE MICHIGAN FEDERATION
ATLANTIC STATES LEGAL FOUNDATION**

REGARDING CONTAMINATED SEDIMENT CLEAN UP

submitted to the

**COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
UNITED STATES HOUSE OF REPRESENTATIVES**

April 8, 1992

Thank you, Mr. Chairman and Members of the Subcommittee for asking me to speak today and for your leadership over the past five years to solve contaminated sediment problem. My name is Brett Hulsey and I am the Director of the Sierra Club's Great Lakes Program, a member of the ARCS Communication Workgroup and the National Contaminated Sediments Working Group.

When I last addressed you two years ago, we were discussing why EPA had not made greater progress in Great Lakes contaminated sediment assessment and remediation. Today we can report that as a direct result of the Assessment and Remediation of Contaminated Sediments (ARCS) Program, sediment assessment and pilot demonstration projects are underway at five Great Lakes sites -- Sheboygan, Indiana

"When we try to pick out anything by itself, we find it hitched to everything else in the universe." John Muir
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Harbor, Buffalo, Ashtabula, and Saginaw Bay. The worst PCB site in the Great Lakes at Waukegan Harbor, Illinois is being cleaned up under a Superfund decree and has benefitted from ARCS.

These efforts demonstrate that further significant steps toward effective, environmentally sound, and cost efficient actions to rid our Great Lakes and other critical national waters of these historic poisons are possible and practical.

Understanding the cost of sediment remediation is one of the important advancements that the ARCS program has achieved. Original cost estimates for sediment clean-up have been cut in half by the assessment tools and remediation technology developed by the U.S. EPA's ARCS program and by the Superfund SITES program for study of innovative technologies. Only five years ago, the standard estimate for sediment remediation -- including assessment and analysis, dredging, storage and treatment -- was from \$200 to \$250 per cubic yard of sediment. Given our current knowledge we estimate costs could be as low as \$100 per cubic yard.

It is now apparent that a major difference can be made in the water quality of the Great Lakes by a careful expenditure of funds for sediment clean-up. For example, according a report by the National Wildlife Federation and Canadian Institute for Environmental Law and Policy, contaminated sediments account for 75% of the PCBs loading in Lake Michigan fish. An expenditure of \$800 million--spread over just five sites: Waukegan, Illinois, the Grand Calumet River in Indiana, Green Bay, and Sheboygan in Wisconsin, and the Kalamazoo River in Michigan would significantly reduce the contamination of Lake Michigan fish. Some of those efforts, paid for by the polluter, are already underway.

Your support of contaminated sediment assessment and remediation has been and continues to be critical. Scientific evidence continues to support the conclusion that chronic exposure to even low levels of bioaccumulative persistent toxic chemicals, such as PCBs, adversely affect human and wildlife health. Just last week, Dr. Frank Falck at the University of Michigan released a report that showed that women with breast cancer have 50 to 60 times the level of pesticides and other toxic chemicals in their body fat than women without breast cancer. Breast cancer is a disease that today affects one in every nine American women and is increasing. The specific chemicals found in the cancerous tumors include DDT, hexachlorobenzene, PCBs (polychlorinated biphenyls), and PBBs (polybrominated biphenyls).

Other studies of people living near Superfund sites indicate that exposure to mixtures of persistent contaminants have a synergistic effect. They are much more hazardous than exposure to each of the chemicals separately and such exposure, if not immediately detrimental, weakens resistance to subsequent exposure. Effects documented include immune suppression, impaired liver function, and learning disabilities in children. These effects are very similar to findings already reported from exposure of Great Lakes fish, bird and mammals to PCBs and pesticides.

In addition to better information on sediment assessment and remediation costs, the ARCS program has provided useful information about ways to reduce our exposure to toxic chemicals from contaminated sediment. Chris Grundler of EPA's Great Lakes National Program Office has detailed a number of the specific activities and results of the ARCS program. Our organizations have observed and responded, in our role as citizens involved in Great Lakes clean-up, to projects of this program throughout their development. I will therefore confine my remarks to what we see as the significance of the findings and their implications for the future.

First, we know a lot more about how to find toxic "hot" spots of contaminated sediments within a river or lakebed and how to make remediation choices based on the extent to which the contaminants are finding their way into the local food web of plants, animals and people.

In particular, ARCS has pioneered practical, cost-effective "tiered testing" for contaminant effects--developing minimum sets of sediment chemical criteria, toxicity bioassays, bioaccumulation and mutagenicity tests to detect synergistic and long-term effects and to chose the most appropriate clean-up plans. This approach, long favored by environmental groups, represents a great improvement over traditional chemical only testing. This effort should also help develop the national sediment criteria so badly needed.

Second, we know a lot more now about how, where and how fast sediment travels at particular locations -- both before and after dredging and disposal operations.

Third, the ARCS program has examined 250 potential technologies for treating contaminated sediments and narrowed them down to fewer than 20 practical techniques, some of which are being tested in the field this year. The practical demonstration of remediation technologies is perhaps the most obvious benefit of the ARCS program. For example, ARCS is successfully using mining technology to separate clean sand from contaminated sediments in Saginaw, Michigan. The TACUIK process is being used to separate PCBs from Waukegan, Illinois sediments.

And fourth, we have developed an extensive and thorough model for multi-agency and citizen involvement in a complex process.

The down side is that the work has taken more time than anticipated and citizens and state agencies working on Remedial Action Plans for Great Lakes Areas of Concern need the information generated by ARCS and additional funding to implement it right now.

Some ARCs officials fear promising more than they can deliver or recommending an action that turns out to be ineffective. This has unfortunately caused some ARCS officials to talk too much about what ARCS isn't and can't do rather than what it has achieved. We would rather detail what the findings are and trust the recipients to make intelligent

decisions--or even take a few risks--based on the new information.

That history of hesitation may come to an end this summer and fall as an initial series of technology transfer workshops are scheduled throughout the Great Lakes Basin.

After these initial workshops are finished and after EPA generates its "how-to books" called Guidance Documents to states for contaminated sediment assessment and remediation, we need additional resources to clean-up Great Lakes toxic hotspots.

To ensure that the ARCS information is fully utilized and channeled into effective sediment remediation, we recommend that the following actions be taken:

* Provide additional authorization and funding for technical consultation on sediment assessment and remediation to state officials responsible for Great Lakes Areas of Concern.

* Provide states grant to conduct full-scale demonstration/clean-ups in key sites in the Great Lakes.

* Develop a comprehensive funding program to guarantee timely sediment remediation. Such a program might include user fees, state and local matching grants, and/or the development of a Sediment Restoration Trust Fund supplied by fines levied for spills and through court actions for permit violations. We respectfully request that you, as a subcommittee, ask the Congressional Budget Office, the Office of Technology Assessment, or the appropriate body to develop such recommendations along with estimates of income needed and potential funding sources.

* Set aggressive schedules and provide resources to assure that EPA completes national sediment criteria issuance. Require the EPA to put the first round of standards that they have been working on for six years in the Federal Register this summer.

* Encourage the U. S. Army Corps of Engineers to use its new mandate for environmental remediation with EPA guidance for specific water resource projects. These should follow sediment remediation guidelines established by programs such as ARCS for dredging and disposal beyond navigation channels. The Army Corps should also adjust its normal cost-benefit analysis restrictions to allow these projects.

* Provide mechanisms to transfer the ARCS knowledge and expertise to other areas of the country dealing with contaminated sediments.

We hope the members of this subcommittee will continue to express strong personal interest and encourage agency efforts--particularly to specify pollution prevention plans and contaminated sediment remediation in any legal settlements or consent agreements reached with polluters that violate air, water discharge permits, or RCRA and TSCA

regulations. You might be surprised to realize just how much your interest and attention means to government employees trying, often under great stress and under the sometimes impersonal weight of bureaucratic inertia, to make a real difference.

And finally, we appreciate your continued efforts to ensure that strong contaminated sediment remediation and pollution prevention programs are incorporated into re-authorizations of the Water Resources Bill, the Clean Water Act and the Toxic Substances Control Act. Thank you.

PCBs May Be Linked to Breast Cancer

Study Finds Toxins in Fat Samples Taken From Women With Tumors

Associated Press

DETROIT—The widespread industrial toxins known as PCBs may play a key role in breast cancer in women, a researcher has found.

Frank Falck Jr. of the University of Michigan said his pilot study found higher than normal levels of polychlorinated biphenyls, or PCBs, in fat samples taken from women with breast tumors.

The chemicals were widely used to insulate and cool electrical transformers until the Environmental Protection Agency banned them in the 1970s.

PCBs have been shown to accu-

mulate in animal fat, causing cancer and reproductive hazards, but no study has proved a link between the chemicals and cancer in humans.

"When you look at PCBs, they're definitely potent cancer promoters. They have widely contaminated the food chain," Falck said Friday.

His study is to be published in the March-April issue of the Archives of Environmental Health.

Fifty women in their early sixties with breast abnormalities were studied beginning in May 1987 in Hartford, Conn. Pathologists chemically analyzed breast tissue taken during biopsies or mastectomies on

the women, 23 of whom had malignant breast cancer.

The women with malignancies had 50 percent to 60 percent higher traces of PCBs and the environmental toxins dichloroethene and trichloroethane in their breast tissue than did women with benign disease.

The results are preliminary but suggest a connection between PCBs and breast cancer that previously had not been established, Falck said.

Janet Osuch, associate professor of surgery at Michigan State University and a breast cancer spokeswoman for the American Cancer

Society, said the findings suggest a link between diet and the disease. "I think it's certainly possible. . . . I definitely think it's worth studying," she said.

But Stephen Safe, a toxicologist at Texas A&M University, said he recently concluded a study that showed some PCBs may actually protect against breast cancer by chemically stopping other carcinogens.

"This doesn't negate what he's done. It's an interesting observation, but it needs more study," said Safe, whose findings were presented last month in Seattle at a national meeting of the American Society of Toxicology.

About 175,900 U.S. women were diagnosed with breast cancer in 1991, and 44,500 of them died of the disease, according to estimates from the National Cancer Institute.