

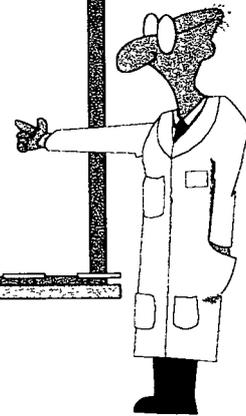
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BIOLOGICAL MONITORING BROCHURE NCBC GULFPORT MS
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Biological Monitor...

August 1998

Biological Monitoring is one way to test for chemicals in the environment. Just like scientists take water and soil samples to look for chemicals, they can also take organisms that live in the environment and look at what chemicals are in their bodies. This will tell if the organisms are being exposed to the chemicals.



What types of organisms are tested?

Many types of organisms, including fish, plants, birds, and mammals, can be tested. Because chemicals have been found in some ditches and creeks near the Seabee Center, the upcoming biological monitoring study will look at organisms that live in these waters. These organisms will include fish and crayfish, which are caught most often by people around the base.



What kinds of tests will be completed and why?

- ✓ Whole body and frozen fish fillet samples and crayfish samples will be sent to laboratories and analyzed for dioxin.
- ✓ Sediment (soil under the water) will also be tested for dioxin at selected fish sampling locations.
- ✓ Sediment is being collected because the fish and crayfish come into contact with it.
- ✓ Studying sediment will tell us if fish and crayfish are being exposed to dioxin.



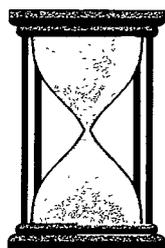
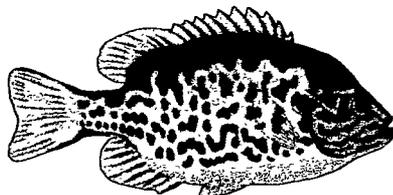
Fish samples being prepared for laboratory testing.

Biological Monitoring at the Seabee Center



Why are we doing biological monitoring at the Seabee Center?

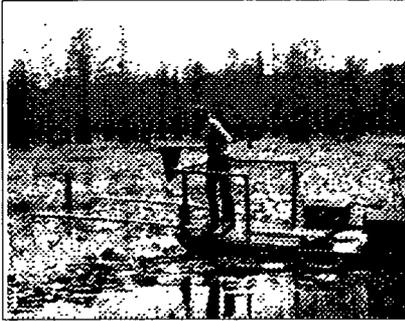
Biological monitoring is a good way to see if any chemicals that may be in the environment are actually being absorbed, or taken up, by the organisms living there. Because we know that dioxin has been found in some creeks and ditches around the Seabee Center, biological monitoring is needed to fully understand the extent of the dioxin contamination.



When will the biological monitoring program at the Seabee Center begin?

The biological monitoring program is planned for the fall. Details on the fish and crayfish sampling program will be shared with the public as the work is performed.

How Will the Fish and Crayfish Be Collected?



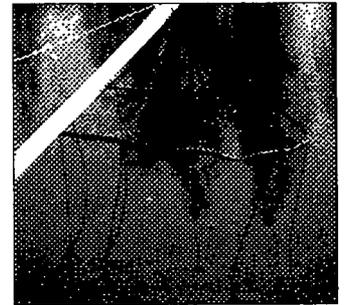
Electrofishing from a boat.

Electrofishing

Electrofishing uses an electrical current to slow down fish in the water. Two poles are placed in the water and an electrical field is created between and around the fish. The fish swimming near the poles are temporarily stunned, stop swimming, and are caught with a net. Scientists can also use backpack equipment to electrofish.



Electrofishing with a backpack unit.



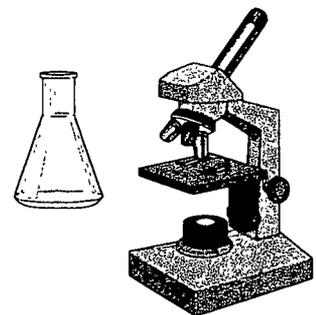
An electrical current runs through this pole and attached ring.

How Will the Biological Monitoring Results Be Used?

The results from the biological monitoring program will help answer two questions about current and potential future contact with dioxin released from the Seabee Center

- ✓ Are there risks to human health due to current or potential future exposure?
- ✓ Are there risks to the environment due to current or potential future exposure?

In addition, the biomonitoring results will be combined with results from earlier sampling to see if the dioxin released from the Seabee Center has any special chemical features. This process is known as "dioxin fingerprinting." Fingerprinting will help scientists separate the locations and effects of dioxin contamination from the Seabee Center from those of other potential sources in the area.





Biological Monitoring Questions and Answers

The Seabee Center has an ongoing environmental program in which scientists study areas on the base where chemicals and other waste may have been spilled or buried. They also look at ways to clean up these areas. The biomonitoring work described in this pamphlet is an important step in this process.

Q. Where will the fish and crayfish be collected?

A. Fish and crayfish will be taken from known fishing areas, both on the Seabee Center and in the ditches and creeks surrounding the base. The exact locations are currently being selected based on the results of previous studies.

Q. How many fish and crayfish will be collected?

A. Plans call for six samples to be collected at each sampling location. These will include bottom feeders (such as catfish), predator fish (such as bass), and crayfish or minnows.

Q. Is the biomonitoring study related to the door-to-door survey that was done in 1996?

A. Yes. The door-to-door "Community Exposure Assessment Survey" was conducted in response to public concerns regarding off-site dioxin releases. Data on potential human contact with dioxin in the ditches and creeks were among the information gathered in the survey. That information is being used to select sampling locations and plan other details of the biomonitoring study.

Q. What happens next?

A. Reports on the progress of the biological monitoring work will be prepared after each sampling event. Results from the biological monitoring program will also be used to prepare a report called a human health risk assessment.

Q. How can I find more information about the biomonitoring study at the Seabee Center's environmental program?

A. The first report on the biomonitoring study should be available by Spring 1999. At that time, the report will be added to the Seabee Center environmental program information that is available in the reference section of the Gulfport-Harrison County Library, 1,300 21st Avenue, Gulfport, 228-863-6411. You can also contact the Seabee Center's Public Affairs Office at 228-871-2393 for further information