

McGovern: "It's a moral outrage."

such experts as Dr. D. M. Hegsted of the Harvard School of Public Health, Dr. Charles U. Lowe of the American Academy of Pediatrics, and Dr. Walter Unglaub of Tulane Medical School.

Was this enough to trigger some sense of outrage? It was for McGovern. And committee staff members report that there has been considerable reaction from many quarters. But to be constructive, the outrage, in their view, must be converted into Congressional funds for further hearings, and eventually into legislation, which McGovern will probably introduce in any event.

Having listened to the experts, the committee is now planning to go into the field and hold hearings in selected states.

New Jersey is the first to have the dubious honor, and this time the expert witnesses will be the world's undisputed champions—hungry people themselves. This is not likely to win McGovern friends from among New Jerseyites.

The committee will also listen to administrators of food relief programs tell their stories, and it is expected that these will deal with the often appalling infighting among political factions while the hungry get hungrier.

The committee would like to hold another round of hearings before the Senate in Washington, but that is the last item on the priority list right now.

It would also like to hear from the new Secretary of Agriculture, Dean Clifford M. Hardin, formerly of the University of Nebraska, but so far the Agriculture Department has not been in touch with the committee.

These are the things the committee would like to do, but if its appropriations are cut off or drastically reduced, and either is highly possible, it will then find its cause sinking inexorably beneath the waves of Congressional indifference.

Yet even if this should happen, some

of its champions will remain convinced that the committee has accomplished something worthwhile. "We documented the case that hunger exists in this country," a staff member said, "and nobody on the Hill ever did that before."

SEALAB AND TEKTITE

The second is first

The bizarre subsea habitat called Sealab 3, plagued by mechanical problems and a major mishap, is languishing on California's San Clemente Island. It looks like a misplaced railroad tank car, but is stranded like a fish out of water.

Originally to have been placed 620 feet down on the continental shelf off San Clemente last Oct. 15, Sealab has been held up by repeated equipment problems until at least late February.

One of its early difficulties appears to have been leaks of helium, the inert gas used instead of nitrogen in the habitat's breathing mixture to prevent intoxication at the extreme pressure. Helium's tiny molecules can, and did, find almost invisible openings to leak through, even when nitrogen would not leak at all.

A second problem was with Sealab's two 12-ton Personnel Transfer Capsules, large canisters intended to carry aquanauts up and down between the habitat and the surface. The capsules were each designed to have 1,000 pounds of positive buoyancy, or tendency to float, so that they would bob to the surface in an emergency and put less strain on the lowering gear. Instead, they turned out to be 2,250 pounds negative, meaning a total for both capsules of more than three tons of excess weight.

To make the capsules float, engineers replaced five spare bottles of helium and helium-oxygen mixture with buoyancy tanks. So now they're buoyant—



Navy

Sealab 3 still awaits its chance.

but by only half the originally intended amount.

The major mishap occurred when one of the capsules was being lowered in a routine unmanned dive last Dec. 2. The descent was intended simply to straighten out the cable on a deck reel; the capsule had already made six successful dives with aquanauts aboard on the same day.

But when the capsule was pulled up, shocked engineers found it full of water, its sensitive instruments and communications gear severely damaged. The culprit, apparently, was an improperly sealed hatch.

Last week, with much of the equipment rebuilt or completely replaced, the engineers were preparing the capsule for a full certification dive to 620 feet, in hopes that they would be able to set a new date for Sealab to get underway. A flawless test, Navy officials said, might let it begin less than two weeks later, although the complex capsule may need more work.

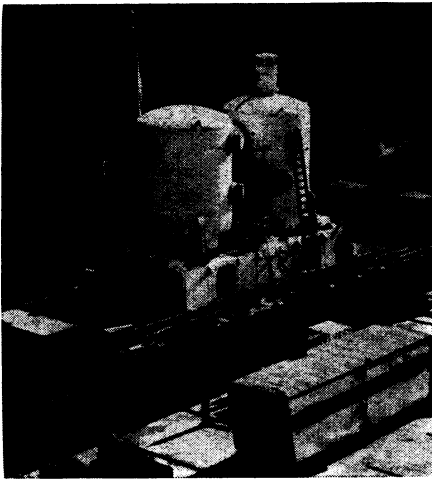
Meanwhile, though Sealab will ultimately make it look like small pickings on almost all counts—depth, manpower, budget and publicity—another ocean floor dwelling called Tektite is about to take the play away. Tektite 1 will be the scene of the longest continuous periods that man has ever lived and worked beneath the sea.

By contrast to Sealab, Tektite 1 has been going without a hitch. The General Electric Co., in Philadelphia, which is providing the habitat for research by the Interior Department, the Navy and the National Aeronautics and Space Administration, began its final design only last February. But it finished the habitat early in November. The residents were to take up occupancy Feb. 15, and that target date hasn't moved a day.

Unlike the deep, dark, cold ambience facing Sealab 3, Tektite 1 will be immersed in only 47 feet of clear, 78-degree water off St. Thomas in the Virgin Islands. There, two oceanographers joined by a geologist and a fishery biologist will spend 60 days together, five times as long as the 12-day stints planned for each of the five Sealab aquanaut teams.

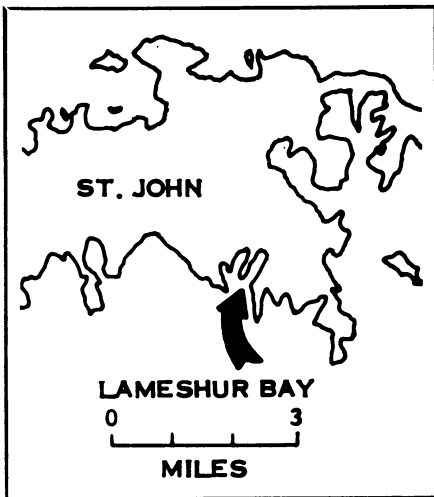
A major goal of the experiment, in fact, is to see how a small group of men fares when confined for an extended period, with no respite from one another's company, in a demanding situation. The space agency is interested in the psychological effects as they might be found on long-term space flights such as extended earth-orbiting missions. To prevent any refreshing contact with the outside world, NASA has forbidden visiting divers around the habitat, even to take pictures.

The habitat itself resembles two big



G.E.

For two long months, a tiny home.



G.E.

Tektite 1 site: warm and shallow.

cans, 18 feet high and 12 feet in diameter, connected by a tunnel and each divided into two levels. One can contains the environmental control system and storage area upstairs, and a so-called wet laboratory below with a hatch in the floor. The hatch is always open to the sea, which is kept out by the equalized air pressure. A dry lab is in the upper half of the other canister, with living quarters below.

General Electric, which built the habitat at an estimated cost of some \$750,000, says that it could be raised and transported to another spot for reuse if other organizations showed interest. The Smithsonian Institution reportedly intends to visit the Tektite 1 site with an eye toward using it in the future for such tasks as inventorying marine life around tropic reefs.

The Navy is particularly interested in Tektite as, among other things, an exercise in underwater construction technology. In addition, biomedical and physiological data gathered from the aquanauts are important to the Navy's Man In The Sea program, which includes Sealabs and other activities.

To the four scientist-aquanauts—Richard A. Waller, Conrad V. W. Mahnken, H. Edward Clifton and John G. Van Derwalker—who will live in Tektite, however, their own scientific researches will be the primary activity. This is opposed to the elaborate physical and psychological tests and trials of experimental equipment that are the main part of the Sealab program.

Plankton and other forms of marine flora and fauna will be studied intensively, with great care being given to preserve the natural conditions in which they live. At night, for example, the

portholes of the habitat will be covered, to prevent light from shining out and attracting abnormal amounts of plankton and fish—"as they do in Sealab," adds one of the aquanauts with evident disdain.

Despite their isolation, it is unlikely that any of the aquanauts will suffer from much boredom. Their habitat is equipped with television and AM and FM radio, but even those diversions are not deemed vital.

"At night, we can look out the window," says Aquanaut Van Derwalker. "That's better than any TV."

FEDERAL LABORATORIES

Keeping track of a national asset

Efficient use of Government research facilities has been a problem ever since the beginning of the era of big science and big Federal support. In the next budget year, for instance, despite both a holddown, and a March revision of his predecessor's budget by President Nixon, some \$200 million is expected to be invested in Federal research and development facilities, on top of some \$5 billion spent in the last decade alone. Despite the billions already invested in national laboratories, new research programs tend to lead to new construction instead of using available facilities.

A major barrier, says a report by the House Subcommittee on Science, Research and Development, is that few agencies needing research facilities actually know what is available elsewhere in the Government. There is no single office or official with information about the capabilities, the special proficiencies and the equipment and facilities of these national laboratories.

Some agencies do keep track: The Department of Defense and the National Aeronautics and Space Administration know what they have and what it can do. But their efficiency is not the rule.

The subcommittee finds it "curious that the Department of Defense with laboratories that operate at a level of \$0.9 billion and represent capital investment of about \$2.2 billion has information systems about them while the overall Federal Government with more than 100 major and countless smaller laboratories spending about \$3.5 billion annually and representing a capital investment of more than \$11.2 billion, does not."

The committee, headed by Dr. Allen V. Astin, director of the National Bureau of Standards, has a task force working on proposals for making the inventory, but such a national stock-taking remains in the discussion stage.

The subcommittee report stresses that tighter budgets mean that greater

interagency use of Federal laboratories, instead of creating new institutions, has become essential. For example, the Department of Justice, in implementing the Omnibus Crime Control and Safe Streets Act of 1968, could save critical time and expedite establishing the new Crime Institute by using existing Federal laboratories for required research.

APPOINTMENTS

Seaborg to stay on



AEC

AEC's Seaborg will stay on the job.

Dr. Glenn T. Seaborg, who has served as Chairman of the Atomic Energy Commission under both the Kennedy and Johnson Administrations, will continue in that post under the Nixon Administration. Dr. Seaborg emerged from a White House conference on Jan. 28 to say that the President had asked him to stay on and that he had accepted. His term as AEC member is due to expire June 30, 1970.

Meanwhile other Government scientific posts are hanging fire. The National Aeronautics and Space Administration has been without a permanent administrator since October when Dr.