



United States Department of the Interior

OFFICE OF THE SECRETARY
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Status Report
TEKTITE II
May 13, 1970

Following approval for the 50-foot missions of TEKTITE II by the Safety Review Board, the program began. The actual starting date was April 4 instead of April 1, 1970. The 3-day delay was due to the late arrival of the decompression system and the fact that certain structural modifications had to be made before the system was operational.

The first team entered the water around noon on April 4. By decreasing the amount of time between missions 1-50 and 2-50, we were able to regain one of the three days. During mission 1-50 we continued to have difficulties with our surface support equipment. One of the primary difficulties was maintaining proper voltage regulation in the primary and backup generators. Since that time the generators have been rewired so that the basic problem of keeping two 30 KW generators properly paralleled and synchronizing has been solved. We are now operating with one 30 KW generator providing power to the surface. A 60 KW generator is continuing to serve as backup. This arrangement seems to be working satisfactorily.

The ocean floor program during mission 1-50 went extremely well. A brief resume of the two scientific programs conducted during this mission is enclosed. Similar preliminary reports will be furnished by the aquanauts following the completion of each mission. Essentially, no medical problems arose during mission 1-50. The decompression proceeded smoothly without complications. The decompression schedule utilized was the same as that used in TEKTITE I.

The behavioral science program went extremely well and a brief summary of the results is also enclosed.

The ocean survey program is being conducted from the ADVANCE II which has been cruising around the general area in the Virgin Islands and will continue to do so. Preliminary reports of this segment of the program are not yet available.

The team for mission 2-50 entered the water on April 22.

Although the members of mission 1-50 did not use the closed-cycle rebreather due to lack of sufficient time for training, all members of mission 2-50 received the prescribed training course and utilized the rebreather during their mission. The scientific programs in mission 2-50 centered around geographic studies and a study of lobster behavior. The results of these studies will be disseminated in the next status report. The habitability studies and leisure time studies sponsored by the National Aeronautics and Space Administration were successfully carried out. Preliminary reports of these programs will also be distributed at a later date. Mission 2-50 was completed on May 12 and members will complete decompression May 13.

The food for the first team was provided by the Department of the Interior and was regular food purchased from commercial stores. The food for the second team was provided by the National Aeronautics and Space Administration as part of their food management program.

In spite of some other technical difficulties with regard to surface support facilities, the program has gone extremely well on the ocean floor.

Plans currently are underway towards developing a final operational plan for the mini-habitat (100-foot) program. The U. S. Coast Guard buoy tender, SALVIA, is scheduled to arrive in St. Thomas on May 14 carrying the wet room, pontoon catamaran and affiliated equipment for the mini-habitat operation. The mini-habitat pressure chamber will arrive by Air National Guard airlift on May 16 in St. Thomas. The system will be assembled and checked out in St. Thomas prior to shipping to St. John for sea trials. The surface support ship for the mini-habitat (UNDAUNTED) will arrive on site approximately May 26.

The team for mission 3-50 entered the habitat as scheduled on May 12. The habitat engineer from mission 2-50 will remain an additional 10 days as planned. At that time he will be replaced by another crew engineer who will stay throughout missions 2-50 and 3-50.

Periodic status reports will be issued by this office in order to keep the principal participants of TEKITE II informed.

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TEKITE II

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