

**HAWAI'I UNDERSEA RESEARCH LABORATORY**

**QUICK LOOK REPORT**

**DIVE: P5-767**

**MISSION STATUS**

**Location: Proposed HSWAC Pipe Route, South of Honolulu**

**Latitude:** 21° 13.500

**Longitude:** 157° 52.070

**Mission Date: March 28, 2011**

**Duration: 8 hours mins**

**Maximum Depth:** 559 m

**Project Title:** Survey of the Proposed HSWAC Pipe Route

**Principal Investigator:** Christopher Kelley

**Address:** HURL

**Phone:** 808-956-7437

**Observer 1:** Christopher Kelley

**Address:** HURL

**Observer 2:** Dale Jensen

**Address:** Makai Engineering

**Pilot 1:** Terry Kerby

**Pilot 2:**

**Scientific Data Acquired: Prepare an abstract outlining your objectives, techniques, findings, etc.**

Objectives:

To survey the proposed Honolulu Sea Water Air Conditioning (HSWAC) pipe route starting at the intake position at 544m and ending at the point the route reached a depth of 250m. The Pisces 5 was tasked with surveying a 40m wide corridor west of the pipe route while the Pisces 4 (P4-243) was tasked with surveying a 40m wide corridor east of the pipe route. Observers were asked to locate, identify, and video-document objects of concern along the pipe route which would include large disposed or fired ordnance such as depth charges, sea mines, 500+ lb aerial bombs, and torpedoes, as well as large carbonate outcrops, boulders, or metal wreckage. These objects could pose a risk to the successful installation of the pipe and their presence could require the route to be altered.



Observations, findings, etc:

The survey was completed as planned. No large ordnance objects of concern to HSWAC were observed along the pipe route. Smaller ordnance objects observed and documented included M1 30 lb chemical bombs, MK47A2 mustard gas bombs, artillery projectiles, mortar shells, and a Livens projectile. All ordnance objects observed were clearly old and in advanced states of corrosion. A number of carbonate boulders and dredge spoil deposits were observed in the survey corridor, particularly along the upper third of the survey area. Additionally, a metal frame was found near the intake site and a small wrecked barge or boat as well as 2 large unidentified metal objects were found further up the route. HSWAC and their contractors, Makai Engineering, will need to evaluate the potential risk these objects pose.

No particularly unusual animals were found along the pipe route. Deepwater corals were observed on only one carbonate boulder, and were tentatively identified as being a *Paracis* sp (Plexauridae), *Narella muzikae* (Primnoidae), and possibly *Narella vermifera* (Primnoidae). Observer 1 was noting these and other species encountered and can provide HSWAC a list upon request at a later date.

**MISSION EVALUATION:**

**Limitations, failures, or operational problems noted:**

After processing the tracklink data, a westerly offset of approximately 20m was noticed on both the Pisces 5 and Pisces 4 tracks, which presently cannot be explained. This problem could be in the tracklink system, the underlays created for the IPS system, the Fugro AUV sidescan data, or some problem during the data processing. Of interest was an approximately 13 minute segment of the dive where both subs remained stationary on the bottom while the ship was required to maneuver out of the path of a barge entering Honolulu Harbor. During this period, the tracking positions were clearly effected by the movement of the ship and were scattered but as much as 25m. Therefore, the ship position relative to the submersibles could explain at least part of the tracking offset.

**Recommendations for corrective action or improvement:**

The source of this error is presently being investigated. Once it's identified, it will be corrected.

**In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.**

Yes.

**List specimens or samples collected on the mission.**

None.

## DATA RELEASE

Data may be retained by the project leader for up to 2 years after the mission date with the following exception. NOAA may request to use photos for publication or publicity purposes at any time.

Fill in the appropriate statement below and sign this form.

I hereby release the data archived by HURL for public consumption following mission (project title)

held on 3/28/2011 (date) in the following way:

- a. CTD data by 3/28/2013 (date)
- b. video and images by 3/28/2013 (date)
- c. other 3/28/2013 (date)
- d. I will give my written consent to individuals wishing to use these data prior to the above dates depending on the nature of the request(s).

\_\_\_\_\_ Principal Investigator