

UC Santa Barbara Diving Safety Program
Research Dive Plan Proposal

Project ID #

Date Submitted: 2/20/2005

Submitted By: Crow White

Dates Proposed: 03/03/2005

Dept: EEMB

Principal Investigator: Crow White

Lead Diver: Crow White

General Dive Site Location: Naples Reef

Proposed # of Dives per day/week: 2 /d

Max. and Average Dive Depths: av:50ft;mx:60ft Min. Surface Interval Time: 30 min

Estimated # of Research Divers: 3 Use of Undergraduates: Yes No

Mode:

Open Circuit (SCUBA) Closed Circuit Hookah Surface-Supplied

Environment:

Coastal Island Bluewater Oil Platform Seeps Ice/Polar Altitude

Dive Entry:

Shore UCSB Boat other R/V: Other:

Breathing Gas:

Air Nitrox (%O2) Other:

Joint Diving Operations (Diving conducted jointly with other agencies/institutions)

Yes No If Yes, list agencies/institutions: CalState-Fullerton

Oxygen at Site:

Yes No

First Aid at Site:

Yes No

Dive Flag at Site:

Yes No

Detailed Dive Plan: (Describe sub-tidal techniques: add a separate page and/or a copy of the proposal if necessary)

Night Dive schedule for March 3, 2005 at Naples Reef. Boat captain and safety diver: Shane Anderson. Diver Master: Crow White. Dive master's dive buddy: Sara Koch. Divers will begin each dive with 2200 psi. During all dives, Crow and Sara will remain in close proximity like dive buddies on a very low visibility dive. Shane will act as a safety diver, keeping both of us in sight, and alerting one of us if he can not see the other. Boat to site before dark (before 6 pm), GPS location, and set up anchor in approximately 45 feet water. Equip all divers with two flashlights and a glow stick tied to their regulator on top of their tank. Conduct dusk dive, with a bait trap (tied to a glow stick) in a game bag, down anchor line. Secure anchor. Tie transect tape to anchor and roll out line (max 30 meters) until locate preferred habitat (kelp/sand interface). Try to make at least the final 5 meters of the tape lie along preferred habitat. Tie bait trap to end of transect tape. Swim back along transect tape and surface (with a rest stop) with the anchor line. Wait on boat until gets dark (min 30 min, maximum 1.5 hour). Conduct night dive. Descend down anchor line, then follow transect tape to its end. Collect bait trap and any small foraging *Kelletia kelletii*. While holding onto different segments of the transect tape, search vicinity for small *Kelletia*. End search and head back along transect tape (while winding up tape), when first tank reaches 1000 psi. Untie tape from anchor line, and surface with the anchor line. Neither dive is to exceed 60 feet depth. If, at anytime during the dive, someone is discovered missing and can not be found, all divers will surface along the anchor line.

Special Tools/Equipment: (sampling equipment, compressor, air tools: drills, vacuum, lift bags, scooters, etc)

Two underwater flashlights (with new batteries) per diver. One glow stick tied to the regulator (where it connects to the tank) per diver. One whistle per diver. Boat with dive flag, running lights, glow stick on flag mast, 1 million candle-power flashlight, first aid, O2 kit, and cell phone.

Hazardous Conditions Anticipated: (ie: cold water, currents, deep depths, low visibility, etc)

Dive will only be conducted if winds are less than 10 knots, daytime air visibility is at least 4 miles, daytime water visibility is at least 20 feet, and swell is less than 4 feet. Even with flashlights, visibility conditions are expected to be narrow in view and limited in distance.

Safety Precautions/Training:

All divers and boat personnel will go through dive plan, and flashlights will be checked, prior to leaving UCSB. From the anchor spot, a compass bearing of the direction to shore will be taken from the boat. In case a diver surfaces and is unable to locate the boat (using lights, whistle, etc.), this bearing can be used to swim to shore (approximately 1 mile). If a diver can not be located, the coast guard (channel 16) and oil rig boats from platform Holly (channels) will be hailed and alerted of a missing diver. Current speed and direction will be estimated (e.g. 20 feet in 6 seconds = 1 knot = 1.15 mile/hour = 1.8 km/hour). Based on the time elapsed since the missing diver was last seen, potential drift distance will be calculated (e.g., with a drift speed of 0.5 knots and last seen time of 20 minutes, the missing diver could have drifted 0.6 miles = 0.9 km). The anchor line will be untied from the boat, and a life ring with glow stick will be tied to the anchor line. The boat will then be slowly driven in the direction of the current twice the estimated drift distance (e.g., 1.2 miles), while all people search and shout for the missing diver. Having travelled twice the drift distance, the boat will be turned around and driven very slowly toward the anchor line (using the GPS finder), while searching for the missing diver. If a diver needs medical assistance, we will administer O2 if appropriate, call channel 16 and 911, and meet an ambulance at Ellwood pier.

Expected Dive Team Members *(if known)*

UCSB Research Diver:

Name	Depth Certification
1. Diver in Charge: Crow White	60ft
2. Shane Anderson	100ft
3.	Select Depth
4.	Select Depth
5.	Select Depth
6.	Select Depth
7.	Select Depth
8.	Select Depth

Visiting Research Diver: *(AAUS Reciprocity Form also required from Agency/Institution's DSO)*

Name	Agency/Institution	Depth Certification
1. Sara Koch	CalState-Fullerton	30
2.		
3.		
4.		
5.		

General Dive Plan Considerations

- Any diver has the right to refuse to dive without fear of penalty if s/he feels the conditions are unsafe or unfavorable **OR** the dive violates the precepts of their training **OR** the regulations of the UCSB Diving Safety Program. UCSB Dive Manual: <http://ehs.ucsb.edu/units/diving/dsp/html/dsm.html>
- All Dive plans **MUST** be based on the competency of the least experienced diver.
- An ascent rate of **30ft/min** and a precautionary stop at **15-20ft for 3-5min** should be made for each dive.
- Depth certification levels may be extended only to the next deepest certification level and only if the diver with the limiting depth certification level is buddied with a diver certified to the deeper depth level.
- For all diving conducted under hazardous conditions a plan must be formulated to deal with such conditions.
- All divers using dive computers to plan dives and indicate or determine decompression status will follow the AAUS recommended dive computer guidelines noted in Dive Manual.
- Plan dives conservatively and maximize surface intervals.
- A diver should wait at least **24hrs** before flying or traveling to altitude (1000+ft) after any dive.
- An Emergency Plan should be reviewed for each project including the following: emergency contact information (including name, relation and telephone number are available online) for each diver, nearest recompression chamber, nearest accessible hospital and anticipated means of transportation.

Diving Accident Emergency Management Plan

A diving accident victim is any person who has been breathing air underwater regardless of depth. It is essential that emergency procedures are pre-planned and that medical treatment is initiated as soon as possible. It is the responsibility of the "Diver-In-Charge" to develop procedures for such emergencies including evacuation and medical treatment for each dive location.

General Procedures:

Depending on and according to the nature of the diving accident, stabilize the patient, administer 100% oxygen, and initiate the local Emergency Medical System (EMS) for transport to nearest medical facility. Explain the circumstances of the dive incident to the evacuation team, medics and physicians. Do NOT assume that they understand why 100% Oxygen may be required for the diving accident victim or that recompression treatment may be necessary.

- 1. Rescue victim and/or position so the proper procedures may be initiated.**
- 2. Establish (A)irway, (B)reathing and (C)irculation as required.**
- 3. Administer 100% oxygen, if appropriate (in cases of Decompression Illness or Near Drowning).**
- 4. Activate the local EMS for transport to the nearest appropriate medical facility. (the local EMS will vary from site to site – it must be stated in dive plan)**
- 5. Contact the Diver's Alert Network as deemed necessary.**
- 6. Contact Diving Safety Officer (DSO) and Emergency Contact Person, as deemed necessary.**
- 7. Complete and submit Incident Report Form (in manual) to DSO.**

Expedition Emergency Contact Numbers:

- United States Coast Guard – Channel 16 on Marine VHF Radio
- Local EMS telephone number -

Nearest Medical Treatment Facility to Dive Site:

- Location: Goleta Valley Cottage Hospital; 351 Patt
- Telephone: 967-3411

Nearest Recompression Facility to Dive Site:

- Location: Camarillo
- Telephone: (805) 389-5944

Diver's Alert Network (DAN):

- **1-919-684-8111 or 1-800-326-3822**
24 hour medical advise–if necessary call collect and state "I have a Medical Emergency"–Use to locate closest recompression chamber or physician consultations. The emergency procedures for all dive sites in the Santa Barbara area are in the Oxygen Kits.

UCSB Diving Safety Cell Phone # (805) 451-5099