

**Application for Consent to Conduct Marine Scientific Research
in Areas Under National Jurisdiction of**

Philippines

(name of coastal state)

Date: 12/02/09

1. General Information

1.1 Cruise name and/or #:	Generation and Evolution of Internal Waves in Luzon Strait
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1.2 Sponsoring institution:	
Name:	U.S. Office of Naval Research
Address:	875 North Randolph Street, Suit 1425 Arlington, VA 22203-1995
Name of Director:	

1.3 Scientist in charge of the project (include CV and passport photo):	
Name:	Dr. Ren-Chieh Lien
Address:	Applied Physics Laboratory University of Washington 1013 NE 40th St Seattle, WA 98105-6698 USA
Telephone:	206-685-1079
Fax:	206-543-6785
Email:	lien@apl.washington.edu

1.4 Scientist(s) from coastal state involved in the planning of the project:	
Name(s):	Dr. Cesar Villanoy
Address:	Marine Science Institute University of the Philippines Dilman, Quezon City Email: c.villanoy@gmail.com

1.5 Submitting officer:	
Name and address:	Elizabeth Brenner /Rose M. Dufour Scripps Institution of Oceanography University of California, San Diego La Jolla, California 92093-0210
Nationality:	USA
Telephone:	(858) 534-2841
Fax:	(858) 822-5811
Email:	Shipsked@ucsd.edu

2. Description of Project (Attach additional pages as necessary)

2.1 Nature and objectives of the project:

We would like to request an addendum to the existing clearance granted under State File No. 2009-027. Philippine approval number 09- 2727.

In June 1-6 2010, we plan to perform a towed CTD chain operation from R/V Revelle in Luzon Strait to study internal tides and Kuroshio. Likely, we will have both the 200 m cable and the 800 m cable systems. The cable will be equipped with 100 CTD fins to measure temperature, conductivity, and pressure while towing behind the ship. We will also take shipboard measurements of CTD, ADCP, HDSS, and multibeam.

2.2 Relevant previous or future research cruises:

Work granted under Philippine diplomatic note no. 092727

2.3 Previously published research data relating to the project:

None

3. Methods and Means to be Used

3.1 Particulars of vessel:

Name:	<i>R/V Roger Revelle</i>
Nationality (Flag state):	USA Flag
Owner:	U.S. Navy
Operator:	University of California, San Diego, Scripps Oceanography
Overall length (meters):	84 m. [275']
Maximum draught (meters):	17'
Displacement/Gross tonnage:	3,180 long tons
Propulsion:	Tow 3000 hp Propulsion General Electric Bow Thruster: 1180 hp Azimuthing jet Tyupe Elliot Gill Model 50T 35 Propulsors: Two 3000 hp Z-Drives Lips Type FS 2500-450/1510BO
Cruising & Maximum speed:	12 knots
Call sign:	KAOU

Method and capability of communication (including emergency frequencies):	Email, master@rv-revelle.ucsd.edu Inmarsat-B, Telephone, Indian, 011-873-336780030 Alternate, 011-873-336780020 Fax, Primary, 011-873-336780031 Alternate, 011-873-336780021 Telex, Primary, 336780033 (AnsBk=KAOU) Alternate, 336780022 (AnsBk=KAOU) Inmarsat-C, 436780010 Radio, Vessels guard standard GMDSS frequencies for calling, distress and dissemination of marine safety information. MMSI #, 367800100 SELCAL #, 71410 Telex, Primary, 336780033 (AnsBk=KAOU) Alternate, 336780022 (AnsBk=KAOU) Inmarsat-C, 436780010 Radio, Vessels guard standard GMDSS frequencies for calling, distress and dissemination of marine safety information. MMSI #, 367800100 SELCAL #, 71410
Name of master:	Captain Tom Desjardins
Number of crew:	22
Number of scientists on board:	No more than 37

3.2 Aircraft or other craft to be used in the project:
None

3.3 Particulars of methods and scientific instruments		
Types of samples and data	Methods to be used	Instruments to be used
R/V <i>Revelle</i>		
T, S, Pressure profiles	Towed CTD profiles behind the ship	Towed CTD chain
T and S profiles	Ship-based CTD casts	Shipboard Seabird lowered CTD
Water velocity profiles	Ship-based surveys	Shipboard ADCP, GPS, GPS attitude, and <i>Revelle</i> HDSS
Meteorological variables (e.g. wind speed, heat flux, air temperature, etc)	Ship-based surveys	Shipboard meteorological sensors
Underway (UW) multibeam	Swath mapping	Kongsberg EE122 150 degree swath width, 121 bathymetry beams, plus backscatter imagery

3.4 Indicate whether harmful substances will be used:
No harmful substances

3.5 Indicate whether drilling will be carried out:
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No drilling

3.6 Indicate whether explosives will be used:
No explosives will be used

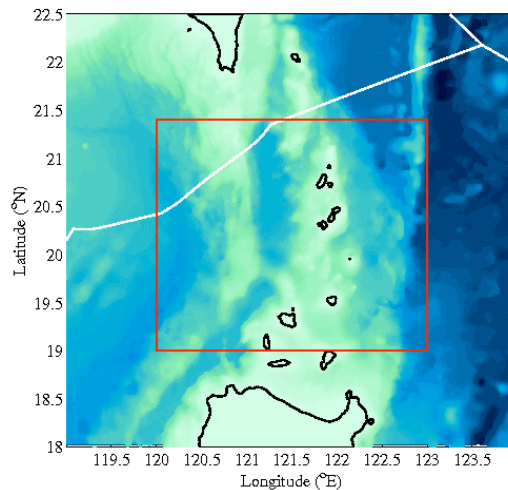
4. Installations and Equipment

Details of installations and equipment (dates of laying, servicing, recovery; exact locations and depth):
Ship Surveys within the red boxes in the chart under 5.2: The ship survey will be conducted in approximately 1-6 June 2010. We will tow a CTD chain of 200-800-m long with 88 CTD sensors on the chain behind the ship. The towing speed will be 2-6 kt. Our towed CTD measurements will be taken within the red box shown in 5.2 and will be outside of the territorial water of the Philippines. Our operation will be conducted at water deeper than 800 m.

5. Geographical Areas

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):
The project is to be conducted in Luzon Strait beyond territorial waters of Philippine. The general areas of operations are shown in the following chart in 5.2. The coordinates of the red box is 19N 120 E, 18 N 123 E, 21.3 N 123E and 21.3N 120 E.

5.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment.



The red box indicates the survey region. The exact survey tracks will avoid territorial waters of Taiwan and Philippine.

6. Dates

6.1 Expected dates of first entry into and final departure from the research area of the research vessel:
R/V Revelle: Planned first entry 1 June 2010, final departure in 06 June, 2010
To summarize: We request for an addendum to the existing clearance for Dr Lien, DOS No. 2009-027 Philippine Approval number 09 2727 that was granted for the time period September

2009- November 2010. To cover unforeseen circumstances that might advance or delay the planned cruise dates of 1-6 June 2010 we request the time period of 25 May, 2010 to 15 June, 2010 for this cruise.

6.2 Indicated if multiple entry is expected:

Yes, If tropical cyclone is encountered, we might leave the region for safety and return to continue survey after the tropical cyclone passes.

7. Port Calls

7.1 Dates and names of intended ports of call:

29 May – 1 June 2010 Kaohsiung, Taiwan

6-11 June 2010: Kaohsiung, Taiwan

7.2 Any special logistical requirements at ports of call:

Normal: scientific equipment loading, fueling, storage, and personnel exchange of science party and crew

7.3 Name/Address/Telephone of shipping agent (if available):

We will be working with National Taiwan University, National Taiwan Ocean University, and Naval Academy of Taiwan to work out logistics and harbor needs.

Ship's Agent

Jardine, Matheson & Co

13/14F, No. 50 Hsin Sten South Road, Sec.1

Taipei, P.O. Box 81

Taiwan

Tel: 886-2 23931177

Fax: 886-2 23920435

Gen Email: operation.tpe@jm.com.tw

8. Participation:

8.1 Extent to which coastal state will be enabled to participate or to be represented in the research project:

There will be Philippine colleagues onboard of cruise.

8.2 Proposed dates and ports for embarkation/disembarkation:

Kaohsiung, Taiwan

May 29- Jun 1, 2010

Jun 6-11, 2010

9. Access to data, samples and research results

9.1 Expected dates of submission to coastal state of preliminary reports, which should include the expected dates of submission of the final results:

No more than 30 days from the end date of the cruise.

9.2 Proposed means for access by coastal state to data and samples:

CD or DVD or via internet access provided at conclusion of cruise, with further access to the data via internet download or CD/DVD on request.

9.3 Proposed means to provide coastal state with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

Participation in international workshops and science symposia during the analysis phase of the project.

9.4 Proposed means of making results internationally available:

Publication in scientific journals and reports.

(Revised November 25, 2009)