

File Number: **0539-EX-PL-2015**
Confirmation Number: EL712925

Form 442 Question 6:

6. *

Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", include as an exhibit the following information:

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project.
- c. A showing that existing communications facilities are inadequate.

Answers:

- a- Research Project description: The objectives are to resolve event-scale ocean phenomena and to understand linkages between changes in the physical-chemical environment and the responses of ocean biota, including but not limited to the ocean carbon system in the light of anthropogenic climate change. Some of the mooring components (e.g. self-sufficient pH sensors, aspects of the data telemetry system, integration of multi-disciplinary sensors) are new, ground-breaking technology. Embedded in and coordinated with other projects, such as CalCOFI, LTER, and CORC, these efforts comprise a powerful ocean observing network off Southern California that is both scientifically interesting as well as economically and socially relevant.
- b- The AIS ATON (Aid to Navigation) communication will transmit essential safety broadcast to mariners and provide protection to our valuable dataset of climate monitoring.
- c- The existing communications are suitable for data transmission only and are not capable of transmitting safety broadcast therefore we would like to install an AIS ATON equipment on all of our surface buoys.