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Event #(s): O-274-N, O-399-N	E-mail: sjacobs@ldeo.columbia.edu	Cruise #: NBP07-02

Required fields are highlighted in yellow. Click in the gray text box to enter comments.

Send completed outbrief form to marine.super@usap.gov

Planning Services	
Yes	SIP Process Met Expectations?
Comments: The SIP process generally works well but would be more useful if there were more feedback. For example, the status of procurements and shipments was not very transparent to PIs.	
Yes	RSP helpful and timely?
Comments: The RSP was helpful but not necessarily timely. It should be distributed earlier to allow feedback from the scientists and RPSC techs who will be sailing the cruise before a revised edition is distributed. Perhaps RSPs should be sent to NSF?	
Yes	POC Responsive?
Comments: POC was very responsive. This capability may circumvent the need to have the SIP and RSP exactly correct.	

Medical Services	
Yes	Kits received on time?
Comments: Kits were received well in advance. It is probably not necessary to send blood draw tubes to all grantees since very few of their personal physicians are willing to use them and therefore it's a waste of program money. Sometimes a grantee's local diagnostics lab is unwilling to use the enclosed tubes to perform the required blood tests and simply send the results in. Sending in the actual blood samples can be burdensome: The processing in which some of the tubes require centrifugation, and all require settling under refrigeration means added time. Grantees must then return to the medical office to pick them up and hand-deliver to a FedEx center. Some of the paperwork (personal medical history, Personal Info/clothing size sheet, etc.) must be filled out, by hand, every year which takes a lot of time. Perhaps there should be a way to make these forms electronic so that grantees could access them via the web and make updates each year rather than starting from scratch. The paperwork becomes redundant for people who deploy frequently.	
Yes	Questions answered?

Medical Services

Comments:

The dental standards seemed unnecessarily tough this year, with many requests for further info. People deploying to the NBP seem to be held to an inappropriately high standard for PQing. Marine deployments are typically shorter than terrestrial ones and other oceanographic organizations (UNOLS) do not require such extensive documentation. Some tests are unduly difficult and unnecessarily expensive for the participant and requests for them should be kept to a minimum. For example, it may not be necessary to complete a treadmill test every other year if people have a history of getting PQed every year. Receiving a PQ should not be a substitute for having RPSC provide adequate medical care in the field. The time from submission of forms, through their review, to a PQ decision seemed to happen more quickly this year than previously.

Travel Services

Yes | TRW available and understandable?

Comments:

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Yes | Ticketing completed easily?

Comments:

We generally received good travel support this year. There was some confusion about one grantee's ice date, indicating that RPSC needs to communicate better internally. Everyone got their requested travel arrangements, including excess baggage requests for the CHC-MCM flight. The C-17 aircraft are a big improvement over previous years.

Yes | Meet and assist service met requirements?

Comments:

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Environmental Services

Yes | Sample permits received okay?

Comments:

N/A

No | ACA permits received okay?

Comments:

No ACA permits were required for the activities done during this cruise. However, permission to deploy moorings was denied based on vague "environmental concerns". This precluded a significant portion of the science plan.

Yes | Waste handling needs met?

Comments:

After some initial misunderstanding about the way lab waste was to be collected everything worked out well.

Equipment Availability	
Yes	Requested equipment available?
<p>Comments:</p> <p>Equipment necessary to dredge for balky moorings was aboard the ship but the large block was not hung on the aft A-frame. If deteriorating weather had not precluded a dredging attempt this could have been more significant, because installation of such gear in open water is not advisable.</p> <p>Unlike previous years, Port Hueneme did not acknowledge receipt of southbound grantee-generated cargo. Available cargo lists often include only the first line item of a shipment. There is no indication whether the other items are included in separate TCNs or are missing completely. Cargo documentation could be more complete and timely.</p> <p>The NBP needs more salinity sampling bottles. If sample analysis were delayed on a CTD-intensive cruise such as this one there would have been insufficient bottles to collect further samples.</p> <p>The grantees will require post-calibration data from the oxygen titration bottles that are being sent back to the vendor after this cruise.</p>	
Yes	Damaged?
<p>Comments:</p> <p>Several bottles of lab chemicals arrived at the home institution broken. For some reason, they had been repacked inadequately from the vendor-provided packaging. RPSC was able to provide replacement items, but this caused unnecessary delays and added cost.</p>	
No	Late?
<p>Comments:</p> <p>One box of pre-weighed chemicals from the home institution was inexplicably split into two boxes by Port Huenene with no notification given to the grantees. One box arrived OK, the other never did and we never knew to look for a second box. However, RPSC was responsive to a late shipment of grantee-generated cargo and these items arrived in time.</p>	
Yes	ECW gear in good condition?
<p>Comments:</p> <p>ECW was in good condition, but generally useless in a marine working environment.</p>	
Yes	Lab space adequate?
<p>Comments:</p> <p>General laboratory facilities were more than adequate. Space for grantee-supplied laptops was available to anyone who wanted it. Some systems, such as the SSA computer/software appear to be on their last legs and experienced difficulties during this cruise. This should be upgraded or replaced due to its importance to ship and science operations.</p>	
No	Remote sensing support needs met? (TeraScan, RadarSat)

Equipment Availability

Comments:

Remote sensing support was disappointing. AMSR-E images were not provided as frequently as expected and the land mask applied by the data originators was incorrect, even though at one point they seemed to have it fixed. The potential of this data product was not fully realized. Radarsat was not particularly useful, either for science or ship navigation during the cruise. The long lead time in estimating ship position, without knowing the current ice conditions, made it nearly impossible to accurately schedule images months ahead of time. When they did arrive they were not well annotated, had poor image quality, and in one case was mirror-image reversed without explanation. This product is probably not worth the effort. The TeraScan can be very useful in producing images. It's most helpful when several good passes per day are available. The effort and expense of replacing this aging system is well worth it in terms of saved ship time, safety, and general productivity of science projects, and both the Captain and Chief Scientist strongly advocate for this.

More than two pingers should be available. They are useful not only for CTD operations, but Smith-Mac sediment grabs and other applications.

Hotel Services

Yes Cabins clean and neat?

Comments:

The ship is comfortable. Any plumbing issues were dealt with immediately.

Yes Linens clean and in good condition?

Comments:

Linens were in decent shape. Mattresses were OK. Having two pillows issued to each person was nice.

Yes Food quality and variety was good?

Comments:

The food variety and quality was good during the first ~2 weeks of the cruise but declined thereafter. Dinners seemed to be higher quality than lunches. The desserts were always good.

Research Objectives

No All accomplished? If not, please explain (weather, ice, equipment, personnel, etc.)

Comments:

As mentioned above, mooring deployments were denied despite no indications of a change in policy prior to the cruise. Research objectives necessarily evolve from the time of proposal submission to completion of the fieldwork. Defining research objectives is a moving target, but PIs are satisfied with the results of this cruise.

There was some reluctance on RPSC's part to shorten the port call at McMurdo. All cruise preparations seemed to be in place, and this would have been an opportunity to gain extra science time. However, the ship departed on schedule.

Future Cruises	
Yes	If returning for another cruise, are there any additional equipment or support needs your group anticipates?
Comments: More clarity on potential restrictions on cruise activities (i.e. mooring deployment). Quicker response from NSF on pending proposals. At this time it's not known whether a proposed cruise in 2 years will be approved.	
Yes	Anything you would like to see changed?
Comments: Fire drills could be made more effective by relying less on rote response and quick appearance in the 03 Conference Room, and more on presentations on various safety topics or enactments of emergency situations. Better explanation of grantees' role in emergency response plans would be appreciated.	

Personnel Issues/Concerns	
Yes	ECO
Comments: Leslie Odom was a new winch operator on this cruise and needs more experience to become comfortable with CTD casts. CTD launch/recovery operations were sometimes painfully slow to watch. This may have implications for safety of equipment and personnel during rough weather.	
Yes	RPSC
Comments: RPSC seemed to be overstaffed for this cruise, but it was not a full ship and this did not cause any loss of science berthing. However, it's recognized that this cruise was being used as a training opportunity for several new techs. This "overstaffing" led to an unexpected level of involvement by the ETs in the CTD casts; the science party was qualified and expecting to perform this duty and having extra people hanging around the CTD console may have been distracting. The chain of communication seemed too long when a problem or improvement was suggested - the word had to pass through several people before anything was done. Grantees should be more involved in Baltic Room operations (launch and recovery) during CTD casts.	

Other Issues	
Yes	Diving, Zodiac, E-mail support, interaction with stations, etc.?

Other Issues

Comments:

Baltic Room/CTD Operations could be improved in several ways. There should be more video displays so that the winch operator can see the starboard camera view as well as the winch display, for example. Alternately, winch control could be transferred to the Aft Control Room which is more comfortable for participants and removes them from potentially dangerous situations if the wire were to part under tension. An intercom could be installed between the Baltic Room and Aft Control so that radios would not be necessary for this portion of the operation.

The tensiometer on the waterfall winch did not appear to work properly during this cruise. This may have been because the relatively light load placed on it did not exceed the sensitivity threshold. It may also be due to loose wiring, improperly installed hardware, or out-of-calibration sensors. This should be investigated further as a safety issue.

There is liquid glycol stored in a corner of the 03 Conference Room. It is used in maintaining the lifeboats, which are accessed from this level. Should they be more securely stored?

Having RPSC purchase consumable supplies may be wasteful in several areas. First, many universities get educational discounts with vendors that Raytheon, as a for-profit company cannot. Secondly, it is burdensome in time and effort to properly transcribe all required info into Polar Ice. Thirdly, when grantees request supplies through RPSC they are not held accountable for overestimation. If they had control over procurements through their grant there would be a greater incentive for economy. Finally, the extra shipment time for items to be received at Port Hueneme, sent to the home institution, then back via Port Hueneme to the cruise adds significant lead time burdens. Sometimes the overall Antarctic program may benefit from economies of scale in making large purchases but individual cruises usually require small quantities, spread out throughout the year. We cannot rely on a once-a-year resupply delivery to sustain our needs.

Most oceanographic research vessels report their weather observations to NOAA, GTS, or other data repository for use in prediction models. Apparently the NBP used to do this but the necessary software was inadvertently deleted. Weather forecasts provided by SPAWARS during this cruise received mixed reviews. They were good to predict large-scale trends, but the details of sea state and air temperature often lagged behind the conditions we reported to them daily via the sitreps. Did Bruce Felix attend a workshop on voluntary met reporting from vessels?

The borrowed CTD camera worked reasonably well. In hindsight things could have been done differently but given the equipment and limitations on documentation the ETs did a good job.

The CTD bottom approach using a display near the CTD console worked much better during this cruise than the EPC plotters which require a game of telephone to relay information across the lab. Bow thruster noise and using DP station-keeping during CTD casts did not cause a problem in hearing the CTD pinger.

Stian Alesandrini devised a mini-Kasten coring device that doubled as a sediment sampling tool and CTD bottom contact trigger weight. This was a great addition to the science program and allowed many more small-volume samples to be collected than would otherwise have been the case.

See additional page for further comments.

Additional comments from NBP07-02 cruise outbrief.

Meeting participants: Stan Jacobs (Chief Scientist and PI for O-274-N), Bruce Huber (PI for O-399-N), Captain Mike Watson, Chief Engineer Johnny Pierce, MPC Karl Newyear

Refresher training on various science activities such as ping-editing and ice observations might be useful. It would provide feedback to participants after they had undergone some of the hands-on experiential learning that is often necessary to become proficient.