Marine Science Outbrief - <i>Raytheon Polar Services</i> PI: Stan Jacobs, Deb Thiele Event#: O-215-N, B-280-N			Ph: 845-365-8326	Cruise #: NBP04-08	MPC: Newyear
			sjacobs@ldeo.columbia.edu		Date: 7 Dec 04
Yes X	No	Planning SIP process adequate?	The SIP submission was handled pri comment is applicable. However, Ma handicapped by having to conform to planning schedule. No planning mee probably unnecesary to have one sin similar cruises. Due to the circumsta been of limited use because of the ch	arine Operations s the McMurdo-ce eting was held for ace this was the th ances, a planning	seems to be ntric seasonal this cruise, but it was ird in a series of very meeting would have
	x	RSP helpful and timely?	The RSP was not particularly helpful RPSC. It is too constraining and doe changes in the working conditions of Having one RPSC person involved ir helps significantly. A responsive, flex comments above.	esn't readily allow ccur, as they did fo n planning and the	flexibility when major or this cruise. en sailing as MPC
Х		POC responsive?			
		Medical			
X		Kits sent out on time?	The medical process seemed to proc dealt directly with Dr. Shemenski dur US resident) had to jump through ho draw/screening portion of the proces time for the PI and POC to investigat used more productively on other crui	ing a visit to Denv ops to complete th s. The latter issue e and resolve, wh	ver, and another (non ne blood e required significant
X		Questions answered?	It's appreciated that RPSC was able administered to shipboard personnel Timaru. However, had they been off Christchurch prior to the cruise (as M of effort could have been saved.	during our refuell ered this service of	ing stopover in during their stay in

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Yes	No	Travel	
Х		TRW available and understandable?	Southbound travel proceeded relatively smoothly, though arrangements for self-ticketers was more difficult. The two day delay in the ship's sailing date and the change in operating conditions required many people to make last-minute changes to their travel. Given the circumstances, this was handled reasonably well.
X		Ticketing completed easily?	No clear guidelines exist for making changes to redeployment travel arrangments necessitated by the ship returning to port significantly ahead of schedule, a circumstance that the travelers had no control over. Does RPSC pay for change fees/reticketing? Is there a limit on what costs RPSC will cover? No one seemed to know.
			Two (self-ticketing) people reported missing their meet-and-assist contact at the Christchurch Airport upon arrival, leading to some confusion about where to go, what to do, etc.
X		Meet and assist service met requirements?	The Chief Scientist has not heard of any complaints regarding northward travel (as of 4 weeks after the cruise end date).
		Equipment Availability	
X		Requested equipment available?	ECW was not entirely appropriate or useful for shipboard use. Rubber boots (also known as sea boots or fireman's boots) should be issued to all cruise participants as they are more useful than bunny boots or FDX boots.
			The CDC runs a good, efficient, operation.
	X	Damaged?	Southbound cargo was all accounted for, received on time, and in good condition.
	X	Late?	The DI water system, especially the unit in the Aft Dry Lab, had problems throughout the cruise in working up to its full capability. Water purity was often markedly lower than 18 Mohms. It's unclear to what extent this affected the Nutrient Analysis, which used this water.
		ECW gear in good condition?	All Win98 computers need upgrading. Note: some computers specific to particular instruments are still running 98. Public access computers in the E-Lab have all been updated.
Х			The Forward Dry Lab color printer should be replaced. It is slow and sometimes unreliable.
			The XBT computer should be replaced because it frequently crashed, and assigned erroneous time stamps to several XBT casts. It's not clear where this computer receives its time feed.

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Yes	No	Lab Space	
X		Adequate? (electrical needs, bench space, water, etc.)	The grantee-provided Nutrient Analysis System was probably set up in the wrong place. It could have been placed in the Bio Lab along with the Oxygen Titrations. Note: it was the Nutrient Analysts' choice to set up where they did, despite recommendations from RPSC and others to set up elsewhere.
			All other lab spaces were adequate. Many lab spaces were unused.
			The floor in some lab spaces, notably the Hydro Lab, is bubbling and can pose a trip hazard.
X	Х	Remote Sensing support needs met? (QFax, Terascan, etc.)	The failure of the TeraScan system early in the cruise could have been catastrophic. Throughout the planning process the Chief Scientist stressed the importance of receiving frequent and timely remote sensing support given the planned study location and time of year. The part that was later determined to have failed on the NBP had also apparently failed at McMurdo sometime in the recent past. This should have raised flags that the part is subject to damage and spare or replacement parts should have been available aboard the vessel. The mid-cruise refuelling stop allowed us to receive the necessary replacement parts and the repairs and recovery of the system went well. However, without the fuel usage restrictions that were imposed days before the start of the cruise we would not have had such an opportunity and the project would have been severely impacted.
		Quality of Hotel Services	There were very few complaints about the hotel services. However:
X		Cabins clean and neat?	 the toilet in room 114 backed up frequently and "exploded" at least twice. The drains in rooms 115 and 119 were fequently problematic and backed up on a regular basis. The drain in room 311 clogged only once during the cruise.
X		Linens clean and in good condition?	The new furniture in the Chief Scientist's cabin are nice, but not necessarily appropriate for shipboard use. There are no drawers in the desk for file folders though it should be relatively simple to join two of the existing drawers into a file drawer. The bed is short, but was OK for this cruise. The electric room heaters interfere with the CCTV monitor in the room, producing so much snow on the screen that it's unreadable. The Chief Scientist's cabin should have a larger CCTV monitor; space is available. The fluorescent lights over the beds don't always work properly.
X		Food quality and variety was good?	The halogen "hockey puck" lights in the MPC's and Chief Scientist's cabin are not very robust and no spare bulbs are available. Thus, none of them currently work.
			The food was fine.
			Hotel Services comments continued on Overflow page.

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Yes	No	Personnel Review	
		ECO	RPSC staffing (8 total) seemed appropriate for this cruise. The ETs were particularly good.
			Everyone aboard (RPSC and ECO) were friendly and accomodating, as usual for this ship.
			Sometimes the smoke and music on the bridge were annoying, but it's recognized that this is the Mates' work environment and not a laboratory.
		RSPC	
		Safe Practices Please give us your feedback about safety	Some of the safety requirements seem excessive. For example, requiring personnel in the Baltic Room to wear tag lines often led to more of a trip hazard than the benefit they provided, especially in calm seas.
		onboard this USAP vessel. Please give as much detail as possible.	Sometimes additional safety guidelines should be instituted or stressed. For example, personnel in the Baltic Room were often seen standing directly underneath the CTD wire while it was under significant tension.
			Fire and boat drills could use some improvement. Too much emphasis is placed on a fast response, but preparedness and bringing the appropriate equipment/supplies is not reinforced. People should be required to bring items necessary for survival in the lifeboats or on the ice for an extended period of time such as communications gear, food, etc. On one occasion, the Chief Scientist intentionally neglected to bring his life vest (which is of questionable usefulness anyway and may even present another hazard in polar waters) to a drill and no one noticed. Instead, he brought extra clothing which would likely have been more useful than a life vest in a real emergency. The point is that fast but not necessarily appropriate response to alarms is required. The exercise has become focused on who has and has not signed the logbook. Many RPSC staff and even some grantees have been trained in STCW, firefighting, emergency medical response, etc., but yet are "quarantined" in the 03 Conference Room during drills or real alarms when they could be assisting the ship's crew instead.
			Thiele's (B-280-N) group requested safety talks be done at weekly drills.

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		Research Objectives	
	X	All accomplished? If not, please explain (weather, ice, equipment, personnel).	The extraordinary (and overly conservative) restrictions on fuel usage cut the productive science time on this cruise from the originally planned ~6 weeks to ~2 weeks. This cruise suffered from a series of reschedulings and shifts in time of year since it was originally funded. Lots of attention was paid to various logistical considerations at the expense of scientific priority. However, these reschedulings also resulted in an extra year of mooring data to be collected, compared to what had been proposed.
			Positioning the ship in ice, as for a CTD station, was often painfully slow. In some cases it took upwards of 45 minutes to set the ship up for a one hour CTD cast. This led to us completing fewer CTD stations in our limited science time than could have been done otherwise.
			The science group responsible for the Vertical Microstructure Profiler (VMP) did not use all the time allocated to them by the Chief Scientist.
			The first leg of the cruise, near the Mertz Glacier, was productive but in hindsight could have been done better. Some calculated risks were taken with respect to possible ice conditions and the timing of our refeulling stop that didn't pay off as well as hoped. A large storm as we approached our primary study area in the Ross Sea was particularly damaging to the science plan.
		Future Cruises	
		If returning for another cruise, are there any additional equipment or support needs your group anticipates?	Cruises always seem to end early, returning to port ahead of schedule and at higher than necessary speed due to overly conservative fuel estimates at the cost of science time. Our final northward transit in open water was extraordinarily smooth, however, so it took less time than anticipated.
X		Anything you would like to see changed?	Can the DAS display screens be customized for the science group aboard at the time? For instance, it would be nice to have the ship's speed visible on the weather channel. One format doesn't fit all purposes, so being able to combine the variables important to the science being done onto one screen would be beneficial.
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Yes	No	Other Issues Diving, Zodiac, E-mail support, interactions with stations, etc.	Several people experienced problems with the configuration of their email systems. This led to lost messages and delayed communication at a time when important cruise decisions needed to be made.
			The email quota limitations are problematic for people needing to to business at home such as proposals, paper submissions, student advising, etc. RPSC and ECO crew have separate business and personal accounts, but yet the scientists are expected to handle everything through their personal account. Professional obligations do not stop for scientists just because they're at sea. A "one size fits all" approach in which students and PIs are given the same allocation doesn't work well.
			It's unclear whether the effort to produce daily sitreps and weekly reports is warranted. The majority of responses to these email messages are out-of- office notifications, so it doesn't seem that many people are paying attention to them.
			The Timaru refuelling stop went well, from the scientists' perspective. Might this port be considered for future operations?
			Although the necessity of a mid-cruise refuelling is debatable, people aboard did what they could to make the best of the situation when fuel restrictions were imposed.
			Retrograde cargo has yet to be received at the home institution, so it's impossible to comment on this topic (sample integrity, timely delivery, etc.) The cargo is being sent from Port Hueneme via Yellow Freight collect which can be a hardship because it requires the home institution to cut a check and have it available when the truck driver arrives. Often they do not receive sufficient advance notice to accomplish this, especially over holidays. If the check is not ready then the truck driver returns everything, including samples, to a warehouse somewhere until a check can be guaranteed on site. The Chief Scientist's home institution has an account with Yellow and receives a discounted rate so this issue could have been avoided and money saved by direct billing to this account. This has been done in the past, but may not have been passed on when Lee DeGalan retired.

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Additional Comments/Overflow:

Hotel Services, con't:

It's recommended to get plastic covers to place over the pastries and desserts that are left on the countertop to keep them from drying out so quickly.

Most of the dry cereals available in the galley were past the expiration date posted on the box.