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OPTICAL TECHNOLOGY DIVISION
OPTO-MECHANICAL DESIGN ENGINEERING

Memorandum ME59

TO: Distribution DATE: September 24, 1971
FROM: L.B. Molaskey ✓
SUBJECT: Trip Report - Recovery Hook Test Program - San Diego, California
20 - 21 September 1971

9-20-71 - Upon arrival on 20 September, I checked at the Naval Base at the office of Commander Mooney who is in charge of the operation in San Diego. I was directed to the dock where the Trieste was being outfitted.

At the dock I inspected the hook with Lt. Taylor and discussed the tests which had been performed earlier that day using a crane on the beach. The dummy load was lifted successfully from various orientations, i.e., nose down, laying on its side, etc. Apparently there were no operational problems with the design although it is reported to be somewhat heavier than calculated, 900 pounds versus 750 pounds. Some of this increased weight is due to the counterbalance weights which have been installed. This extra weight, however, is no problem.

No grease had been packed in the operating mechanism or latch assembly. I recommended that it be loaded and well lubricated prior to use at sea. I was surprised to find that the hook had been completely painted black (the paint was still wet during the test program). Lt. Taylor indicated that the black color was to reduce back-scatter from the lights when operating at sea and was changed from the white paint recommended on the drawings by the Trieste crew.

9-21-71 - I reported directly to the "compound" (Trieste dock and work area) and witnessed part of the rigging operation in preparation for loading the Trieste into the support ship, the White Sands. We then boarded the White Sands and inspected the shipping container. Although somewhat marked up and scratched from the flood ordeal it appears to be sound. All four casters are available but plans are to leave them off for now since the container is much easier to handle without casters aboard ship. They will be assembled, for check-out purposes, disassembled and will be maintained with the container.

Lt. Taylor and I had a briefing with the captain of the White Sands, who is also the captain of the Trieste, Commander Mal Bartels. We reviewed the plans commencing from now through the end of the recovery operation. Significant points brought out are:

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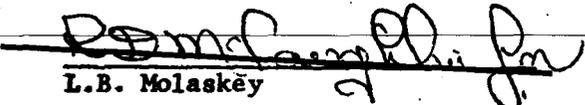
September 24, 1971

1. Cdr. Bartels was not aware of any plans to transfer the loaded shipping container from the White Sands to the Air Force ship on the site. He suggested that such an operation would be very difficult. I explained the need to maintain the payload at 40°F or to rush the unit to its destination. We agreed to check the status of the Air Force ship with [REDACTED] reported that there is some uncertainty as to the availability of the ship because it is scheduled to be coming out of dry dock on October 16th and that that schedule is somewhat flexible. It could slip. It was decided to pursue the cooling of the entire shipping container as previously planned.

We checked on possibly loading enough dry ice aboard the White Sands to take care of the operation, but found it was impossible to maintain the dry ice long enough. Air drop at the site was also suggested but rejected for various reasons. The current plan is to make regular ice aboard the White Sands. The Navy, therefore, is investigating the availability of a machine capable of making 400 - 500 pounds of ice per day. The plan is to put the shipping container into a big wooden box and keep it packed with ice.

2. After dark recovery of the payload is again being questioned. It appears that the way the load is suspended below the Trieste causes a hazard for the divers. Also the depth of the unit below the surface, when Trieste is at the surface has again been modified. This time they say 35 to 40 feet. The light levels at this depth, of course, are too high for extended periods of exposure. It looks like our original idea of the curtain would have solved the problem. As it is we are planning to make a simple shroud that can be tied around the payload at the 35 - 40 foot depth. I plan to sketch up such a device and give it to Cdr. Mooney in the morning.

The remainder of this week's schedule and the plans for next week are about the same. The Trieste, aboard the White Sands, will be towed out to the test range, leaving Friday afternoon. The practice dive is scheduled for Monday and/or Tuesday, the 27th and 28th.


L.B. Molasky

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