PFR-222 Title: Overhead Crane Non-Functional during Shipping Container Lid Removal

Assembly : Crane, JPL Bldg 144 (Facility)	**SubAssembly : NA**	
Component : Crane	**Units Affected: NA**	**Units fixed: NA**
Originator: Bill Donakowski		
Organization: UCB	**Date: 21 August 2006**	
Phone: 510 642 9050	**Email : billd@ssl.berkeley.edu**	

Failure Occurred During (Check one √)

□ Functional test □ Qualification test □ S/C Integration □ Launch operations X Other (Moving Containers)

Environment when failure occurred:

x Ambient □ Vibration □ Shock □ Acoustic
□ Thermal □ Vacuum □ Thermal-Vacuum □ EMI/EMC
Other: RCS Pressure MEOP Testing

Problem Description

During the removal of a Probe Shipping Container lid from the base, the Crane ceased functioning with the container lid attached to the hook. This occurred at JPL, Building 144, at the TVAC area just prior to removal of the Probes following completing of TVAC testing. Note no Flight Hardware was in the area, the only items being moved was the lid from the transportation container base.

Analyses Performed to Determine Cause

Crane was shut off immediately and the area was roped off to preclude anyone from moving near the suspended load. JPL personnel contacted the crane repairman. He noted the electrified rail had taken a new position and was no longer hanging correctly from the structural clip, resulting in the shoe being able to slip away from the rail with a resulting loss in electrical contact. It was believed this happened due structural rail changes being made due to work on a tank in the vicinity.

Corrective Action/ Resolution

Using a wooden pole, the shoe was reset onto the rail which provided an electrical connection again to the crane. With the crane functional, the lid was lowered to the floor. It was clear the anomaly was a problem only in the area where the rail was unset; the rest of the rail was acceptable for use. Several runs were made on the track to verify the crane functioned properly in all other areas. Operations continued normally with the exception of avoiding this broken rail area. JPL Crane maintenance personnel were assigned to fix the crane at earliest opportunity. Note this anomaly had no affect on THEMIS Flight Hardware.

Acceptance:

MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____