

MEMORANDUM

To: Distribution
From: Thomas Folkers
Date: June 1, 2000
Subject: SMT Mechanical Inspection

Yesterday I , along with the help of the 12 Meter telescope mechanic George Tietz, performed a 'first cut' mechanical inspection of the SMT site. I present our findings in the attached list.

I also list a few safety items, but a more detailed safety inspection will be performed in the near future.

/tf



Enclosures:

Distribution:

Tom Wilson
Dave Ashby
Harold Butner
Michael Dumke
Robert Esterline
Paul Gensheimer
Susan Lake
Doug Officer
Ferdinand Patt
Bill Peters
Jason Ruhl
Bob Stupak
Baltasar Vila Vilaro

Maintenance Issues at the SMT

- It appears that the main building wheels need an alignment check. It looks like when the dome is rotated in the counter-clockwise direction the building drifts toward wheel #2. Yet, if rotated in the clockwise direction it slides toward wheel #4. This probable indicates wheel #2 or 4 is turned out.
- There is a real lack of grease fittings on most bearings and pins. It looks like only the door hinges have fittings. None of the hydraulic cylinders that open the doors can be greased. Neither can the lateral thrust wheels that hold the building centered. The main building wheels can be greased.
- The lateral thrust wheels are literally peeling metal from the vertical track. It appears that the load at the contact point of the wheel is too great. There needs to be some thought given to correcting this or an alternative design presented. This problem may get better once the main wheels are aligned. We also cleaned the thrust wheels completely so we can inspect them again come summer shutdown and evaluate how much track material has been collected at each wheel.
- We need to install some type of 'roof vent' to evacuate the hot air at the top of the building.
- It is unclear if the azimuth and elevation drive motors have brushes and if they need inspection.
- The upper door seals at the hinge area appear to be falling apart and need replacing.
- At the top of the building, where the doors come in contact with the building, bolts that hold the lightning wiring are poking holes in the rubber seals.
- The yellow, lift up section of the carousel appears to be dragging the floor.

Safety Issues Found

- Found a few lights bulbs exposed without safety guards. One in the pier and two at the building drive motor level.
- Found the cover off of the intercom master electronics box in the pier. There where bare 110V wires exposed. Placed cover back on.
- On the latter leading to the top of the building, there is a screw sticking out on the right side handrail that could poke someone. This will be taken care of on the next maintenance day.
- Through out the building, several fluorescent lights are weak or completely out.
- The emergency light installation needs to be completed in the stairwell.
- There appears to be other places emergency lights should be installed.
- The pier storage area need a clean up.
- The counter weight cables at the cable wrap had the ends poking out at about chest level. Could very well poke the eye out of someone working in there.
- The safety lock-out switch at the roof access door appears not to work.