

ISSUES FROM MECH GROUP MEETING – APR 13/05

At the next MOWG meeting, a proposal for facilities upgrades will be presented. The following is a list of items that the daycrew has identified as good candidates for upgrades:

ITEMS FOR FACILITIES - “WISH-LIST” (Possible candidates for upcoming proposal)

- 1) Dome drive issues.
 - Sammie will get Tim information on costs for new dome wheels, guide wheels, and drives.
 - Tim will investigate costs for new spring plates and gear boxes.
 - Tim will investigate the cost for having a consultant (Steve Gunnels) look into refurbishment issues / procedures.
- 2) Upgrade some of the facilities ductwork.
 - There is additional ductwork that can be done in the machinery room, as well as replacement of the expandable duct that is currently being used for the mirror cooling.
- 3) Erosion mitigation.
 - We may need someone to determine if we need to construct retaining walls, or just deposit more truck loads of cinders.
- 4) Flooring tiles.
 - There are many places throughout the facility where the original flooring tiles are peeling up and need to be replaced.
- 5) Chopping Secondary replacement.
 - The electronics for the current chopping secondary are currently operational, but constitute a possible single point failure.
- 6) Control room humidification.
 - There is a need to purchase a humidifier for the control room. The original humidifier was removed, but never replaced.
- 7) Neslab replacement.
 - It may be the case that we could replace the current Neslab chillers with a larger single unit (possibly another Icewagon). The new unit could be backed up by current facility spare Icewagon.
- 8) Turbine air dryer installation.
 - Do we still want to install the turbine air dryer unit that was purchased for the primary mirror support system?

- 9) A new control system for the HVAC.
 - The current HVAC control system is somewhat of a “black box” with many of its functions having been removed / hard wired into place.
 - We would like to get a new control system purchased / installed.
- 10) Control room HVAC Upgrade.
 - Currently being supported by the original Trane compressor.
 - Need to replace the compressor, and possibly upgrade the entire circuit.
- 11) Air circulation upgrades.
 - Is the current use of the back door, tunnel, front door upgradeable to a more robust system?

ISSUES THAT REQUIRE IMMEDIATE ATTENTION
******* DO TO SAFETY CONCERNS *******

- 1) Deficiencies identified by crane inspector need to be attended to.
 - We have one cable and bearing left to install on our 5 ton crane.
 - Tim needs to contact Kenny Ikeda to determine what paperwork is needed and also to determine when we need to certify again (soon – 1 yr).
 - Sammy is looking into getting some additional work done on the ram.
- 2) The platform may need a safety rail installed. On OSHA visit, Ray Welsh mentioned that a safety rail or safety harnesses may be necessary when the platform is raised above the floor any higher than 4 feet.
 - Tim will contact Kenny Ikeda for details.
- 3) The method for removal of ice on the outer dome was discussed and identified as a safety issue.
 - Kent will incorporate this into the new shutter refurbishment design.
- 4) The check valve on the SPEX lifting cart needs to be removed / replaced.
 - When SPEX is raised to the MIM, if the check valve triggers, the operator needs put his arm through the “scissors” to release the valve.
 - Two “upgrade” kits have been ordered.

5) The fork lift needs to be adjusted so that it does not move so fast.

- We need to specify a new controller with a speed %. We swap out the old controller and get money back for it.
- Lars is following up on this.

6) The safety brakes on the shutter need to be replaced.

- We need to buy new ones.
- Maybe expensive enough to get in the refurbishment in the fall

**** Time for new crane inspection again soon?!?!

ITEMS FOR TIM LISTED IN ORDER OF PRIORITY

1) The MIM needs to be analyzed for the additional loads anticipated in the future.

- Done.
- A final report is being written by Tim.

2) The MIM truck rollers/rails need to be realigned.

- Done as each was removed for rewelding.

3) The stop locks for the instruments are jamming or are out of alignment. End plates need to be examined as well.

- Vern is designing new plates.

4) Moveable counterweights need to be fabricated and installed.

- Completed, and installed on April 14/05

5) An additional (spare) compressor needs to be purchased / repaired?

- Old compressors were inspected, and quotes are being written for service work.

6) A humidifier for the control room needs to be purchased.

- Sammy has sent Tim information on specs.
- Tim needs to specify unit and purchase.
- No additional progress to date.

7) Preventative maintenance needs to be planned and performed on the platform.

- Sammy has quotes from manufacturer for help from service technician at approximately \$1000/day (7 day min).
- Sammy to book service tech once he has all of the parts required.

7) Blue prints need to be consolidated, sorted, and copied.

- No progress to date.

ITEMS FOR DAY CREW / OUTSIDE HELP HIGHEST PRIORITY

1) Replace / repair the roof.

- We have third quote in hand now.
- George writing spec, and then will hand over to Sandra.

2) Refurbish shutter side panels and weather seals.

- Kent Fletcher looking after this.
- Prototype installation completed and successful.
- Remainder of materials being fabricated.

3) North pier wire wrap is starting to wear. Needs maintenance.

- Imai will look into this when time is available

4) The spare Ice Wagon chiller needs to be installed and tested in the machinery room.

- Pad made, and chiller installed.
- Manifold needs to be fabricated (has been started).

**ITEMS FOR DAY CREW / OUTSIDE HELP
MEDIUM PRIORITY**

1) All of the shutter wheels need to be greased.

- This job will be delayed until better weather (spring / summer).
- Will probably wait to do this as shutter refurb panels are being installed.

**ITEMS FOR DAY CREW / OUTSIDE HELP
LOWEST PRIORITY**

1) Access holes to the glycol system bleed valves need to be made in the mezzanine floor.

- Maury will do this if time available.

Additional items:

1) The new hoods for the machinery room have been installed as well as the new air filters. We need to add screens to help keep the filters in better.

2) Day crew suggested that we send an email to the tech group with a request that all mechanical issues (including preventative maintenance) be forwarded to Tim for submission into this list of items. That way, priorities can be attached to these items.

3) Tim to develop Web page that all of the mechanical documentation can be found on.