

AVOID VERBAL ORDERS

TO: Distribution September 27, 1999

FROM: EC-F1/M. Glenn

SUBJECT: 9/23/99 Meeting Minutes and "MORE"

A meeting to discuss lifting equipment issues was held on September 23, 1999, from 9:00 am to 10:00 am in the Operations Support Building, Room 5308.

Meeting attendees were as follows:

Name, Organization/function

Art Shutt, Dynacs
Jody Fuller, Boeing GSE Safety
Paul Kruse, USA Crane Operations
William Little, Boeing Safety
John Wyckoff, Boeing Reliability
Mario Relvini, Boeing Design
Mark Wollam, USA ETM
Gary Hopkins, USA Design
Lou Lemire, USA MPS/SSME
Mike Mullins, USA ET/GSE Engr
Tom Goodenow, Boeing/Rocketdyne Safety
Ray Champion, USA/SRM Engr
Larry Jones, NASA/PK-J
Brad Lytle, NASA/MM-J2
Andy Warren, NASA/PK-J
Malcolm Glenn, NASA/EC-F1
Brian Graf, NASA/NN-J1
Pete Wagner, USA OSH/PLM
Bill Carew, NASA PK-J
Bill Bayesa, Boeing Fac Sys CDE
Chuck Freed, USA Safety Ops
Michael Yue, Boeing KSC
Armando Oliu, NASA/NN-K4
Jack Barnette, USA SRE
Terry Parnell, BNA RE

Meeting agenda items were as follows:

1. Lifting Devices and Equipment (LDE) Committee

2. NASA Safety Standard for Lifting Devices and Equipment, NSS/GO-1740.9 status
3. Recent lifting incidents
4. Non-load test structural slings
5. Navy Crane Center
6. Programmable Logic Controllers (PLC)

Details of the meeting agenda items and some other items of interest are as follows:

1. LDE Committee. As a result of a NASA Headquarters audit, it was recommended KSC appoint a LDE Manager and establish a LDE Committee. I have been appointed the LDE Manager. I envision the LDE Manager as a point of contact, in particular, regarding NSS/GO-1740.9, and as a means of sharing information. The 9/23/99 meeting was a meeting of the LDE Committee. It is intended the Committee be a means of reviewing and sharing information regarding lifting and handling. I do not intend to hold regularly scheduled meetings. If there is something the Committee needs to meet for, let me know. I will also try to share information with the Committee electronically. LDE Manager and LDE Committee functions may evolve over time. Also, let me know if you think there is something I can assist with or need to know about.
2. NSS/GO-1740.9 status. The current revision is B, dated November 1991, and there is a page change package dated 3/93 affecting 16 pages. The significant change in the 3/93 package was to expand the operational test requirements in paragraph 702c.

There were NSS/GO-1740.9 changes agreed to at the June 1993 NASA Lifting Devices and Equipment Safety Conference held at KSC, primarily to include load measuring devices in Chapter 6. These changes have not been released/incorporated in NSS/GO-1740.9. KSC recently sent a draft of page changes to NASA Headquarters that incorporated the changes agreed to at the June 1993 Lifting Conference. NASA Headquarters told me in a telephone conversation several weeks ago it is intended to send out a draft of the changes agreed to at the June 1993 Lifting Conference for agency comment.

3. Recent lifting incidents. I sent out some email summarizing some recent lifting incidents, three at KSC and one at Huntington Beach.
4. Non-load test structural slings. KSC submitted a safety variance to NASA Headquarters in March 1999, requesting the word "structural" be deleted from NSS/GO-1740.9, paragraph 802c, to be able to designate slings, not just structural slings; e.g., shackles, rings, wire rope, as non-load test slings. NASA Headquarters has not responded to the safety variance but indicated it

intends to include the safety variance in the draft changes to NSS/GO-1740.9 previously mentioned.

5. The Crane Corner. The Navy Crane Center publishes the “The Crane Corner” which provides good information on lifting. The Crane Corner is available on the web at the Navy Crane Center URL:

<http://ncc.navfac.navy.mil>

6. Programmable Logic Controllers (PLC). As a result of the Launch and Landing Level III Configuration Control/SFOC Risk Review Board held on January 28, 1999, where a crane PLC was identified as a single failure point, an action was assigned to develop a Centerwide design standard for the use of PLCs in critical applications. A Centerwide team, chaired by Brad Lytle has been established to develop a uniform approach for the application of PLCs at KSC. Brad reviewed status at the meeting.
7. GIDEP. Brad Lytle summarized a GIDEP notice on Yale chain hoists at the meeting. The GIDEP notice is attached to the email with the meeting minutes.
8. Mobile Aerial Platforms. The proposed chapter to NSS/GO-1740.9 on mobile aerial platforms is still a proposed chapter.
9. Hook Loading. The text of a letter I sent out dated February 22, 1999, is below for your information:

Paragraph 504a of the NASA Safety Standard for Lifting Devices and Equipment, NSS/GO-1740.9, states:

“Loads shall be centered in the base (bowl saddle) of the hook; to avoid point loading.”

Point loading refers to the point or tip of the hook. The intent of this requirement is to attach the load in the hook bowl saddle and not the tip of the hook.

It is desired to have a good fit between the load and the hook; however, it is understood that even with the load attached in the hook bowl saddle, the load may not perfectly match the circumference of the hook. For example, there could be a gap between a hydra-set eye and the hook.

Again, the intent of NSS/GO-1740.9, paragraph 504a, is that the load be attached in the hook bowl saddle.

10. Requirements for load testing lifting lugs/attach hardware affixed to shipping containers/boxes/load being lifted. The text of a letter I sent out dated February 13, 1998, follows for your information:

The NASA Safety Standard for Lifting Devices and Equipment, NSS/GO-1740.9, includes requirements for lifting equipment such as slings, cranes and hoists, but not the load being lifted. Lifting lugs affixed to and not disassembled from a shipping container/box are part of the load being lifted. Load testing requirements in NSS/GO-1740.9 do not currently cover lifting lugs permanently affixed to shipping containers/boxes.

However, there may be design, OMRSD or other similar documentation that addresses load testing requirements for lifting lugs/attach hardware.

A proposal by NASA KSC Design to add lifting interface requirements; e.g., lifting lugs, to NSS/GO-1740.9, was presented at the June 1993 intercenter lifting conference held at KSC, but the proposal was not adopted. A future change to NSS/GO-1740.9 to include lifting interfaces is possible.

Contact me if you have any questions or need assistance with something.
Thanks.

Original signed by
Malcolm Glenn