Proposal for Ground Safety Review Coordination at ISS Launch Sites

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Chairman, ISS GSRP at KSC

Introduction

- As the transportation of ISS payloads and cargo shifts from KSC to other launch sites, close coordination of ground safety review processes would be of benefit to all parties.
- The benefit would have the launch sites receiving consistent data that would require less effort to review while still meeting their needs.

Background

- Until recently, ground safety focus for the ISS program has been almost exclusively for pre-launch processing at KSC/post-landing processing at KSC/DFRC
- Each launch site, used by the ISS Program, has a ground safety review process
  - Ground safety viewed as local prerogative
- Up till now, ground processing has consisted of low risk/low hazard items; but this will not always be the case.

Issues

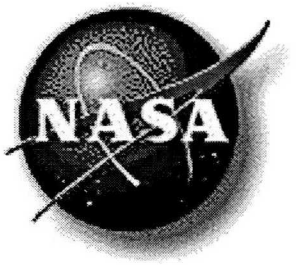
- Recent coordination issues associated with the ground safety review of ORU's to be processed at Tanegashima for HTV-2, illustrate that IP ground safety review processes are not well understood by the ISS community at large
  - Confusion for data providers (US only?)
- Lack of internal review process for data being submitted to launch sites can lead to inconsistent submittals
  - NCRs/HRs
- Majority of IP ground safety requirements are based upon old KHB 1700.7 (now KNPR 8715.3, Chapter 20)

Proposals

- Establish a ground safety working group as part of the MS&MAP
  - Search for efficiencies in requirements and data submittal processes
  - Document processes in NSTS 13830/SSP 30599
- Each launch site report out its payload ground safety status at the F2F (Monthly's as required)
  - Completions/due dates/NCRs/issues/changes
- Establish internal processes for review of ground safety submittals

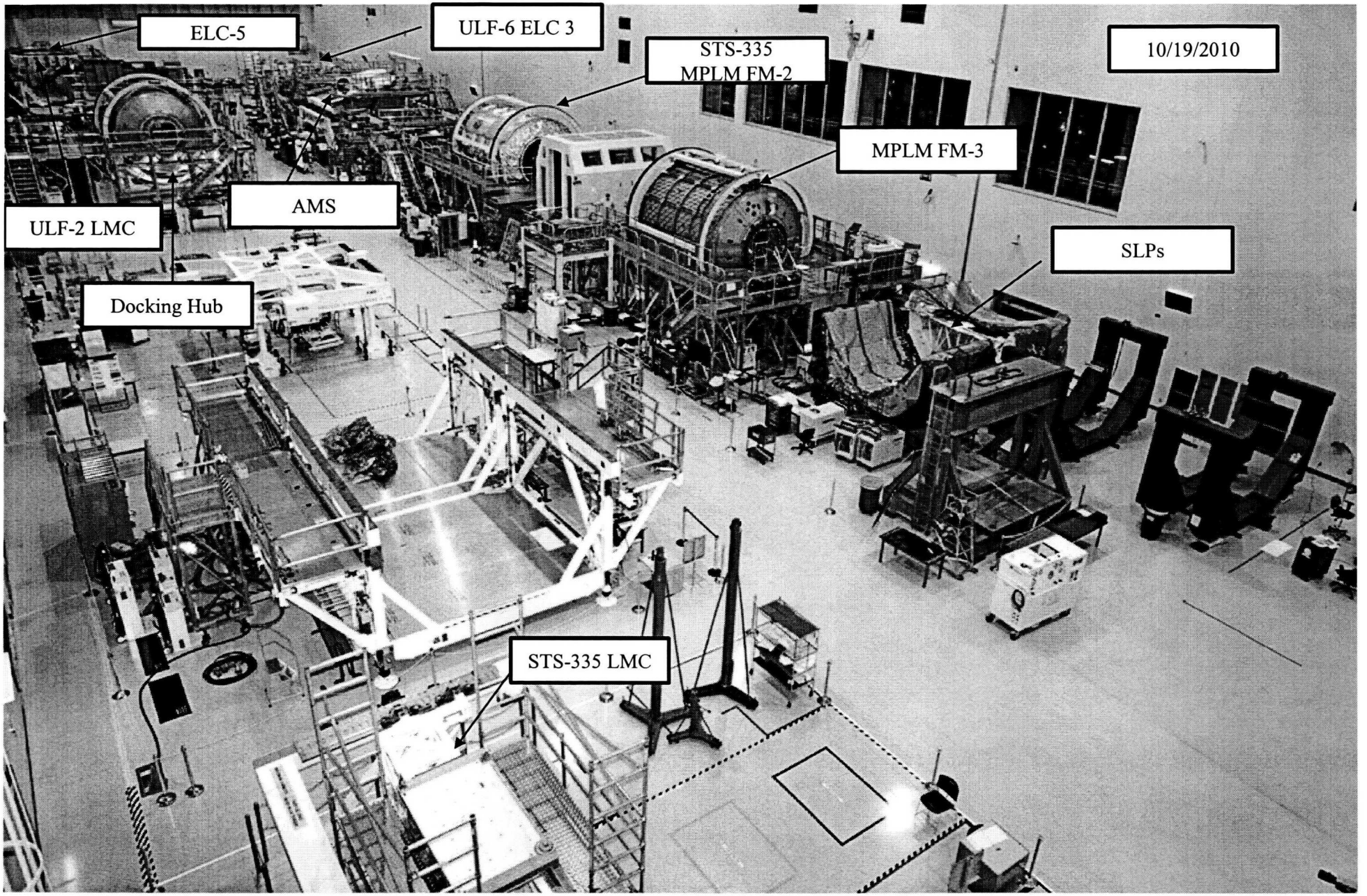
COPV TIM

- A TIM is planned to be held at KSC on 7/8/9 December
- Topics include:
  - Status of the 1993 NASA/USAF Policy Letter
  - Viability of 1.1 Pressure Test
  - Metal Liner Testing
  - Moving towards common requirements
    - Flight and Ground
  - CPV/CPS/Hybrid requirements



ISS/STS Ground Status @ KSC

Paul Kirkpatrick
NASA/KSC Safety


ELC-5
ULF-6 ELC 3
STS-335
MPLM FM-2
10/19/2010
MPLM FM-3
AMS
ULF-2 LMC
SLPs
Docking Hub
STS-335 LMC

Space Shuttle Status

- Discovery (OV-103)
  - Location – On-Orbit/KSC (OPF3)
  - Last Mission – STS-133/ULF5 (PMM)
  - Next Mission – Museum (Smithsonian)

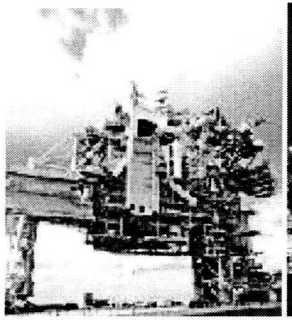
Space Shuttle Status

- Endeavor (OV-105)
  - Location – OPF Bay 2
  - Last Mission – STS-130/20A (Node3/Cupola)
  - Next Mission – STS-134/ULF6 (AMS)
    - Rescue for STS-133
  - Scheduled Launch Date – 26 FEB 2011 ~1600 EST
- Atlantis (OV-104)
  - Location – OPF Bay 1
  - Last Mission – STS-132/ULF4
  - Next Mission – STS-135/ULF6
    - Rescue for STS-134
  - Scheduled Launch Date – 28 JUN 2011 ~1530 EDT

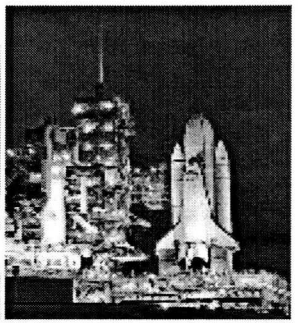
KSC Flight Hardware Quicklook/STS Mainline Facilities

NASA: C. Ford , PH-O
USA : R. Gillette, MFM
Contact: S. Wierszalowski, USA 1-8701
SEP 24, 2010

Launch Pad 39-B

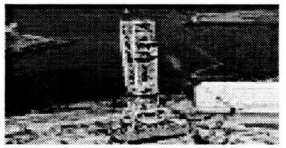


Launch Pad 39-A



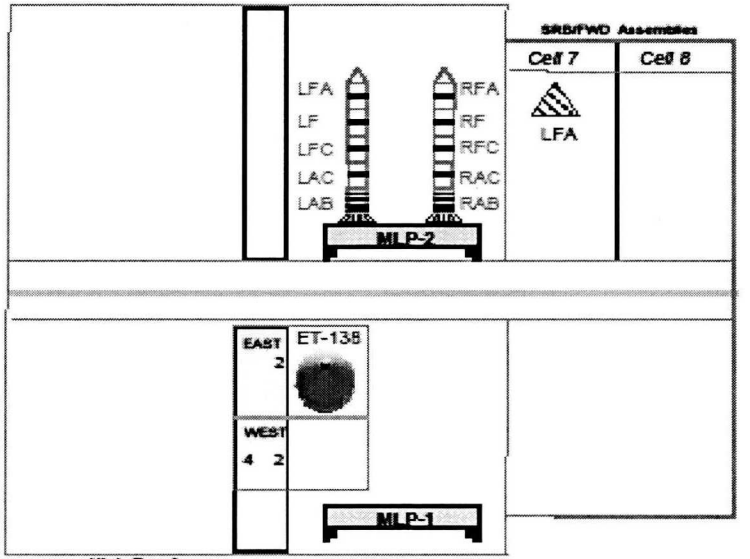
STS-133 OV-103
Launch 11-1-10
MLP-3

Refurb/Parksite (East)



Refurb/Parksite (West)
New MLP

VEHICLE ASSEMBLY BUILDING



Crawler Transporter Maintenance Bldg.

CT#1

Pad A Gate

CT#2

Jay Jay Siding

LMF

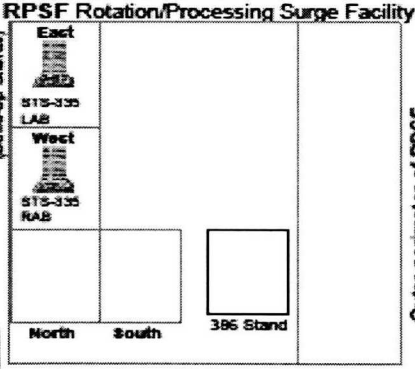
SUSPECT SIDING

RPSF SURGE 1

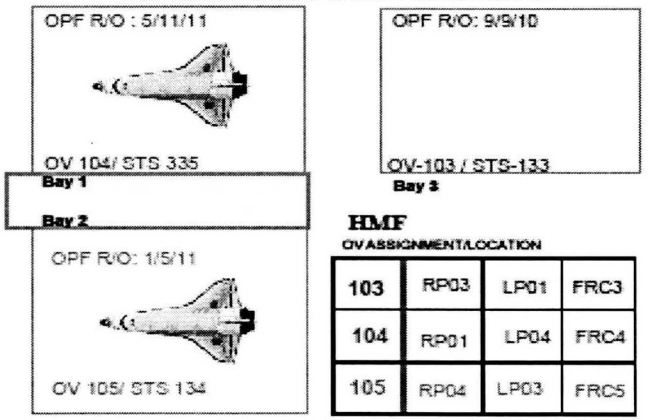
RPSF SURGE 2

MDD / SLF

RPSF Rotation/Processing Surge Facility



ORBITER PROCESSING FACILITIES



Legend

- STS-133/OV-103 Flt HW
  ET-137/ MLP-3 / VAB HB3 / PAD A
  RSRM 112-SRB BI-144
- STS-134/OV-105 Flt HW
  ET-122 / MLP-2 / VAB HB-1-3 / PAD A
  RSRM 113-SRB BI-145
- STS-335/OV-104 Flt HW
  ET-138/ MLP-3 / VAB HB-1 / PAD A
  RSRM 114 -SRB BI-146
- Railcars

STS Assignments

OV-103/STS-133: Discovery - OPF-3
OV-105/STS-134: Endeavor - OPF-2
OV-104/STS-335: Atlantic - OPF-1

HMF

OV ASSIGNMENT/LOCATION

103	RP03	LP01	FRC3
104	RP01	LP04	FRC4
105	RP04	LP03	FRC5

Test Cell Installed Storage/E

Space Shuttle Program (SSP) Manifest

NASA Official: John Coggeshall
LSA Project Lead: Gunter K. Gibson
Chart updated: 16-September-2010

CY2010 | CY2011
FY2010 | FY2011

103
Discovery
128 (17A)
8/28/09
MPLM (P)
LMC

131 (19A)
4/5
MPLM(P)
LMC

133 (ULF5)
11/1
(11+1)
2 EVAs
~4:30 pm (Eastern)
ELC4
PMM
ET-137

104
Atlantis
129 (ULF3)
11/16/09
ELC1
ELC2

132 (ULF4)
5/14
ICC-VLD
MRM1

335
6/28
(12+0)
1 EVA
~3:30 pm (Eastern)
MPLM (P)
LMC
ET-138

105
Endeavour
130 (20A)
2/08/10
Cupola
Node3

134 (ULF6)
2/26
(12+1)
3 EVAs
~4:00 pm (Eastern)
ELC3
AMS-2
ET-122

Flight Rate:
Launch Pads: Complex
Beta Exceedance

FY-4/CY-4: May | Jun | Jul | Aug | Sept
FY-3/CY-2: Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul

8 β 23 | 1 β 1 | 6 β 17 | 1 β 18

24S 40P | 25S ATV2 | HTV2 | 41P | 26S | 42P | 27S | 43P

8 27 | 14 16 | 20 28 | 30 | 27 | 25 30 | 21 | 28