KSC SAFETY VARIANCE REQUEST

NASA Control Number
KSC- 2007 - 0023

1. Date of Request 08/01/2007	2. Duration (Not to Exceed 1 Year) From:08/3/07 To:08/2/08	3. Variance Type (Circle One) (Deviation) Waiver
4. Requesting Organization (Enter Company Name) United Space Alliance		5. Location of Variance KSC, LC-39
6. Document and Section (Unmet Requirement) KNPR 8715.3 (C-1) Attachment E, section 16.0		7. NASA Program (Select One) ☒ Shuttle ☐ Payloads ☐ ELV ☐ SE&T ☐ Institutional ☐ Space Station ☐ Other
8. Specify Mission Number: N/A		10. Safety Program (Select One) ☐ Explosives, Propellants & Pyrotechnics ☐ Lifting Devices & Equipment ☐ Lightning & Grounding ☒ Pressure Vessels/Systems (PV/S) ☐ N/A
9. Specify Mission/Project Name: PV/S Re-certification for Launch Landing Systems		
11. Will this activity expose NASA Personnel to Hazardous conditions? If YES, contact AFGE Local 513. ☐ Yes ☒ No		
12. Is Procedural Change Required? ☐ Yes ☒ No	13. Specify Procedure	

14. What is the specific requirement(s), which cannot be met (including document and section reference)?
The following NASA STD requirement is being waived as a direct result of being specifically referenced in the KNPR 8715.3 requirement.

NASA STD 8719.17

4.11 Certification and Recertification Process

4.11.2.3 PV/S shall be recertified on or before one-half the documented initial service life or one half the recertified remaining life.

KNPR 8715.3 (C-1) Attachment E, section 16.0 references the above requirement:

b. Recertification:

(1) Recertification is the procedure by which previously certified vessels or systems are recertified for use at a designated pressure through appropriate tests, inspections, examinations, and documentation. *Reference NASA-STD-8719.17 for full details concerning the recertification process* for in service pressure vessels and systems.

PV/S must be recertified at or before 20 yrs (1/2 of the 40 yr max certified life). PV/S Re-certification is the procedure by which previously certified vessels/systems are recertified for use, at a designated pressure, through the KSC PV/S inspection program. LC-39 has numerous systems that require recertification in the 2007/2008 timeframe (ref attached list). The last 20-year recertification for these systems was 1987/1988.

15. What is the rationale for not meeting the requirement(s), what other options were considered, and what was the rationale used to disposition/discard these options?
The time it took get the resources, with the skills required to complete the recertification task, on board (and up and running) exceeded the original schedule estimates. Alternate options were limited by the skills required to do the task and the schedule to complete the task.

16. Have any design features or procedural controls been eliminated or compromised which would affect the safe operation of the system/operation? None.

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17. What additional measures or controls have been taken to minimize risk to personnel, facilities or flight hardware, thus ensuring a safe operation in lieu of the requirement? To minimize the risk to personnel, facilities or flight hardware NASA PSM has requested USA operation engineering complete an independent system safety walkdown checklist (Reference attachments, for Template) to identify any possible safety issues prior to re-certification. System Design Safety factors and overpressure protections devices are maintained at an operational and safe state at all times, regardless of the expiring re-certification date. In-service Inspections for the systems are current, which verify system integrity and safety. The system safety walkdowns were used to validate Pad-A and MLP-1 pressure systems readiness, and will be used to validate the remaining systems, prior to full PV/S recertification.

18. How has the number of people exposed to the potential hazard been minimized?
Each system will submit a walkdown checklist verifying their system is safe for operation. Any system with an identified, personnel safety issue will be locked-out and the area secured until remedial action can take place.

19. How has the amount of hardware exposed to the hazard been minimized?
Each system will submit a walkdown checklist verifying their system is safe for operation.

20. What are the risks associated with failure to meet the requirement(s)? What are the risks associated with not approving this variance (i.e., is there an increased risk if the requirement must be met)? Because systems are inspected on a regular basis, (in-service inspection and regular preventive maintenance) there is minimal risk (Ref Risk Matrix) associated with a delay in re-certification. If the variance is not approved the systems will have to be tagged out until completion of re-certification. All operational systems utilizing the pressure vessels/systems would have to stop further activity.

21. What is the likelihood of occurrence of a mishap with the identified controls in-place, and what are the consequences should the controls fail or a mishap occur? The Likelihood of a system failing due to an expired re-certification is low. Additional system safety walkdowns and normal periodic preventative maintenance procedures reduce the likelihood of system failure. The consequences of a credible failure of a pressure vessel and/or system could result in damage to ground and/or flight hardware or could lead to injury to personnel. Multiple failures would have to occur to exceed the system's inherit design safety features (Pressure relief valves, safety factors, etc,).

22. What is the plan for ensuring future compliance or partial compliance, thereby eliminating the need for future variances? The systems are currently in the process of recertification. Systems are currently being inspected, non-conformances identified and dispositioned to closure. All certifications will be completed by end of this variance duration.

23. Comments and/or Rationale for Disapproval:
NASA KSC S&MA Comment:

NASA STD 8719.17 is not levied in total on the Space Program Operations Contract (SPOC). However, KNPR 8715.3 Attachment E Section 16 references NASA STD 8719.17 section 4.11, requiring "half-life recertification" of pressure vessels/systems. Since the KNPR is a flow down of an agency requirement, we require a briefing to the Center Director and his approval.

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ORGANIZATION	Approval Level (Circle One)	SIGNATURE/DATE	MAIL CODE	PHONE
24. Initiator	Approval Yes No N/A	Ted Adams 8/8/07	USK-750	1-9254
GO Engr Dir	Approval Yes No N/A	Steve Robling	USK-321	1-3567
PV/S Rep	Approval Yes No N/A	Lee Friedell	USK-750	1-9264
Dir, GSS	Approval Yes No N/A	Larry Osterly WE Can for	USK-012	1-0584
Eng Tech Mgr, LO	Approval Yes No N/A	Brad McCain 8/8/07	USK-455	1-5862
Int. and Test Ops, Mgr	Approval Yes No N/A	Jeff McAlear Mark Paxton for	USK-217	1-7699
Safety Operations	Approval Yes No N/A	Don Clarkson FOR	USK-399	1-5883
Safety and Health FL, Mgr	Approval Yes No N/A	Don Paniale FOR	USK-142	1-6081
S&MA Mgr	Approval Yes No N/A	Jamie P McLean FOR	USK-291	1-1820
Other (Optional) USA Chief Eng	Approval Yes No N/A	John Cipolletti	USK-321	1-3522
25. NASA/KSC CE	YES		NASA-NE-O	1-3800
System Engineer	Concurrence Yes No N/A	Steve Schess	PH-F2	1-7003
Mechanical Div Chief	Concurrence Yes No N/A	Josephine Burnett R. Blackwelder for	NE-M-A	1-3258
Fluids/Liquid Prop Div Chief	Concurrence Yes No N/A	George Veaudry Carlos D. Estrada for	NE-F	1-3940
Pressure System Mgr	Concurrence Yes No N/A	Ray Norman Mickey Riddle for Ray Norman	TA-E3	1-6131
S&MA Div Chief	Concurrence Yes No N/A	Laura Maier	SA-B	1-7901
Chair, Ground Risk Review Panel (GRRP)	Concurrence Yes No N/A	John Branard	SA-G	7-2268
Other (Optional)	Concurrence Yes No N/A			
26. Project Director	Acceptance Yes No N/A	Rita Willcoxon	PH	7-4343
27. Director of S&MA	Concurrence Yes No N/A	Shannon Bartell FOR	SA	7-7390
28 Center Director	Acceptance Yes No N/A	William Parsons	AA	7-3333

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CONTINUATION SHEET

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29. Requestor (Name/Org Code/Phone No)	30. Date of Request	31.
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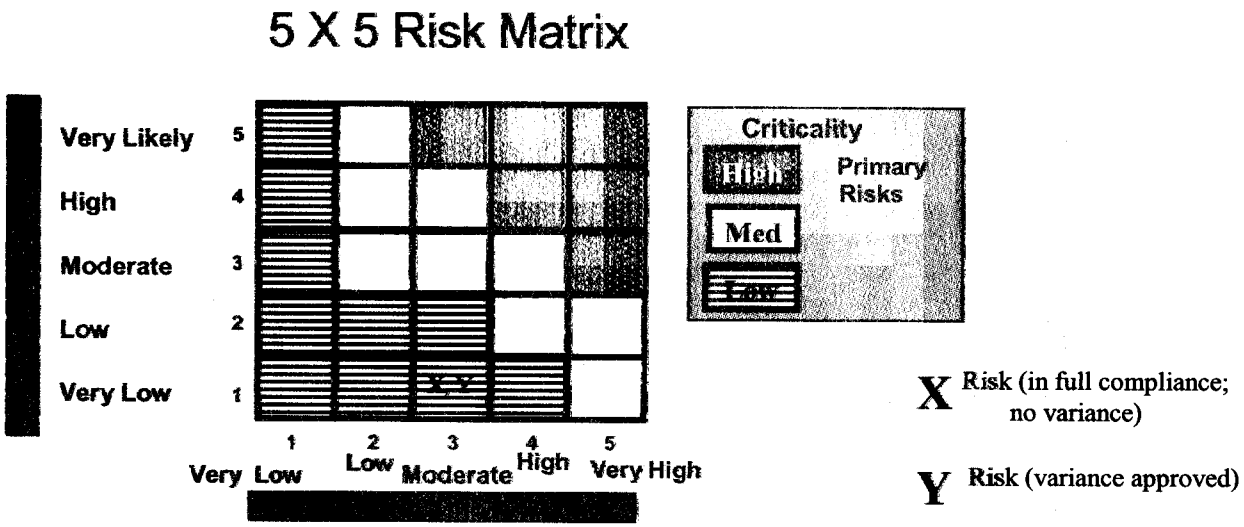
32. Risk Matrix



33. Additional information provided for Block Number 32, Risk Matrix, Date: 07/31/2007

Risk assessment is based on a failure of a system due to expiration of re-certification.

The Likelihood of a system failing due to an expired re-certification is very low. System safety walkdowns, normal PV/S in-service inspections and normal system periodic preventative maintenance procedures have reduced the likelihood of a system failure. Systems with completed pre-certification safety-walkdowns have been identified on the attached pressure system list (identified as SWC in the system field); others will be tracked separately.

The Consequence of a system failing due to an expired re-certification is Moderate. System Design Safety factors and overpressure protections devices are maintained at an operational and safe state at all times, regardless of expiring re-certification date.

Attachments

Cert Expiration Date	Report Number	Base Line	Location	System
04-08-07	KSCL-1792D-0252	999.03	K7-563	FLD CLNG REDUC PANEL SN23, CRCA K7-563 (SWC)
04-24-07	KSCL-1792D-0109	006.00	J7-337	ET H2 VENT UMB ACC ARM, LC-39B
04-24-07	KSCL-1792D-0110	006.01	J7-337	LOA ORBITER ACCESS ARM, LC-39B
05-01-07	KSCL-1792D-0106	072.30	K6-894	AMMONIA SERVICING STATION, OPF
05-08-07	KSCL-1792D-0112	006.02	J7-337	ET GOX VENT ARM SYSTEM, LC-39B
05-08-07	KSCL-1792D-0113	006.05	J8-1708	LOA HYD. SUP. CHAR. SYS. , LC-39A (SWC)
05-15-07	KSCL-1792D-0143	999.19	K7-516	INTERIM TEST PANEL, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0147	999.14	K7-516	HYDRO PANEL & TEST BENCH, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0274	999.18	K7-516	LOW PRES TST CELL CONSOLE, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0275	999.20	K7-516	PORT PRES. RED PANEL SN03, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0276	999.16	K7-516	HI PRES. TST CELL CONSOLE, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0278	999.25	K7-516	PRES. REDUCING PANEL SN14, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0279	999.27	K7-516	PRES. REDUCING PANEL SN16, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0280	999.28	K7-516	PRES. REDUCING PANEL SN17, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0282	999.12	K7-516	GAS MIXING PANEL, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0283	999.21	K7-516	PRES. REDUCING PANEL SN04, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0284	999.22	K7-516	PRES. REDUCING PANEL SN05, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0285	999.23	K7-516	REGULATOR PANEL SN07, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0286	999.24	K7-516	REGULATOR PANEL SN09, CRCA K7-516 (SWC)
05-15-07	KSCL-1792D-0322	000.01	K7-516	REGULATING PANEL SN15, CRCA K7-516 (SWC)
05-18-07	KSCL-1792D-0123	999.05	K7-516	BAIR SAMPLING PURGE PANEL, CRCA K7-516 (SWC)
05-18-07	KSCL-1792D-0129	011.00	J7-337	FCSS LO2/GO2 SYSTEM, LC-39B
05-19-07	KSCL-1792D-0124	999.06	K7-516	GHE SAMPLING PURGE PANEL, CRCA K7-516 (SWC)
05-19-07	KSCL-1792D-0125	999.07	K7-516	GN2 SAMPLING PURGE PANEL, CRCA K7-516 (SWC)
05-19-07	KSCL-1792D-0126	999.08	K7-516	GO2 SAMPLING PURGE PANEL, CRCA K7-516 (SWC)
05-28-07	KSCL-1792D-0132	035.00	K6-848	ECLSS FREON COOLANT SYS. , VAB
05-28-07	KSCL-1792D-0133	060.00	K6-894	ECLSS FREON COOLANT SYS. , OPF
06-01-07	KSCL-1792D-0212	072.33	K6-894	ECLSS LEAK CHECK, VAB-OPF
06-04-07	KSCL-1792D-0134	018.00	J8-1708	ECLSS FREON COOLANT SYS. , PAD 39-A (SWC)
06-05-07	KSCL-1792D-0137	018.00	J7-337	ECLSS FREON COOLANT SYS. , LC-39B
06-05-07	KSCL-1792D-0138	018.00	K6-546	ECLSS FREON COOLANT SYS. , MLP-1 (SWC)
06-05-07	KSCL-1792D-0139	018.00	K6-546	ECLSS FREON COOLANT SYS. , MLP-2
06-05-07	KSCL-1792D-0144	072.82	K6-894	HYD SUPPORT SYS. PORTABLE, MLP/OPF (SWC)
06-08-07	KSCL-1792D-0251	999.02	K7-563	FLD CLNG REDUC PANEL SN22, CRCA K7-563 (SWC)
06-09-07	KSCL-1792D-0250	999.01	K7-563	FLD CLNG REDUC PANEL SN21, CRCA K7-563 (SWC)
06-12-07	KSCL-1792D-0243	315.55	K6-743	SRM TRANSPORTER, #2 (SWC)
06-16-07	KSCL-1792D-0253	999.04	K7-563	FLD CLNG REDUC PANEL SN24, CRCA K7-563 (SWC)
06-17-07	KSCL-1792D-0111	006.05	J7-337	LOA HYD. SUP. CHAR. SYS. , LC-39B
06-23-07	KSCL-1792D-0107	059.00	K6-894	ECLSS GO2/GN2 SYSTEM, OPF 1 & 2
06-23-07	KSCL-1792D-0114	017.00	J8-1708	ECLSS GO2/GN2 SYSTEM, LC-39A (SWC)
06-29-07	KSCL-1792D-0256	999.11	K7-516	BAIR PRES. REDUCING PANEL, CRCA K7-516, ROOM 118 (SWC)
06-30-07	KSCL-1792D-0239	299.48	K6-848	SRB SEGMENT LIFT BEAM, VAB
07-02-07	KSCL-1792D-0184	028.01	K6-848	MLP/SRB HOLDDOWN POST HYD, VAB
07-02-07	KSCL-1792D-0222	072.62	J6-2377	SLF LAND GEAR HYD. SERV., VAB, MBMR
07-03-07	KSCL-1792D-0156	006.00	J8-1708	ET GH2 VENT ARM HYD. SYS. LC-39A (SWC)
07-03-07	KSCL-1792D-0157	006.01	J8-1708	ORBITER ACCESS ARM HYD., LC-39A (SWC)
07-03-07	KSCL-1792D-0158	006.02	J8-1708	ET GOX VENT ARM SYSTEM, LC-39A (SWC)
07-06-07	KSCL-1792D-0155	004.00	J7-337	ENVIR. CONTR SYS. PURGING, LC-39B
07-09-07	KSCL-1792D-0117	031.00	K6-848	MPS VAA LH2 SYSTEM, VAB
07-09-07	KSCL-1792D-0141	011.00	K6-546	FCSS LO2/GO2, MLP-2
07-09-07	KSCL-1792D-0198	061.00	K6-894	SSME GHE/GN2 GRND SUPPORT, OPF-1 & 2
07-13-07	KSCL-1792D-0215	072.39	K6-894	HYD. WATER SPRAY BOILER, OPF
07-15-07	KSCL-1792D-0238	287.00	K6-894	ORB. MAIN ACCESS PLATFORM, OPF
07-22-07	KSCL-1792D-0154	004.00	J8-1708	ENVIR. CONTR SYS. PURGING, LC-39A (SWC)
07-22-07	KSCL-1792D-0229	160.50	TRM-008	GHE AMBIENT BOTTLE FILL SYS, SLF
07-23-07	KSCL-1792D-0105	011.00	J8-1708	FCSS LO2/GO2 SYSTEM, LC 39A (SWC)
07-28-07	KSCL-1792D-0115	017.00	J7-337	ECLSS GO2/GN2 SYSTEM, LC-39B
07-28-07	KSCL-1792D-0161	007.00	J8-1708	FACILITY WATER GN2 CNTRLS, PAD & MLP-1
07-30-07	KSCL-1792D-0162	007.00	J7-337	FACILITY WATER GN2 CNTRLS, LC-39B, MLP'S 2,3
08-05-07	KSCL-1792D-0102	010.00	K6-546	FCSS GH2 SUB-SYSTEM, MLP-1 (SWC)

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08-05-07	KSCL-1792D-0142	010.00	K6-546	FCSS LH2/GH2, MLP-2
08-05-07	KSCL-1792D-0233	234.00	J8-1708	MID-BODY UMBILICAL UNIT, LC-39A (SWC)
08-08-07	KSCL-1792D-0263	999.13	K7-516	HYD. TEST FACILITY, CRCA K7-563 (SWC)
08-08-07	KSCL-1792D-0277	000.01	K7-516	FLOW TST CNSOLE/PRES. REG, CRCA K7-516 (SWC)
08-11-07	KSCL-1792D-0221	072.61	SLF	ECLSS FREON COOLANT SYS. , SLF
08-12-07	KSCL-1792D-0234	234.00	J7-337	MID-BODY UMBILICAL UNIT, LC-39B
08-13-07	KSCL-1792D-0226	072.83	K6-546	OME TRICKLE PURGE, MLP-1
08-18-07	KSCL-1792D-0204	072.12	J8-1708	HYD. WATER SPRAY BOILER, LC39A
08-18-07	KSCL-1792D-0205	072.12	J7-337	HYD. WATER SPRAY BOILER, LC-39B
08-18-07	KSCL-1792D-0225	072.80	K6-546	SRB HYDRAZINE SERVICE SYS, MLP-1
08-18-07	KSCL-1792D-0240	302.00	K6-546	SSME ACCESS PLATFORMS, MLP-1
08-18-07	KSCL-1792D-0241	302.00	K6-546	SSME ACCESS PLATFORMS, MLP-2
08-19-07	KSCL-1792D-0103	011.00	MLP-1	FCSS GO2 SUB-SYSTEM, MLP-1 (SWC)
08-19-07	KSCL-1792D-0160	072.61	DFRF	ECLSS FREON COOLANT SYS. , DFRF
08-19-07	KSCL-1792D-0236	252.00	J7-337	PL HANDLING EQUIPMENT, LC-39B
08-20-07	KSCL-1792D-0220	072.43	K6-894	ECLSS FLIGHT FREON 21 SYS, OPF-1&2
08-21-07	KSCL-1792D-0193	053.00	K6-894	FCSS LH2/GH2, OPF - 1 & 2
08-22-07	KSCL-1792D-0235	252.00	J8-1708	PL HANDLING EQUIP HYD/GN2, LC39A
08-24-07	KSCL-1792D-0178	020.00	K6-546	SSME GRND SUPPORT GN2/GHE, MLP-1
08-30-07	KSCL-1792D-0176	016.00	K6-546	SRB HYDRAULIC SUPP. SYS. , MLP-1
08-30-07	KSCL-1792D-0244	331.00	K6-546	HYDRAULIC AND PNEUMATIC, CRAWLER TRANS # 1
08-30-07	KSCL-1792D-0245	331.01	K6-546	HYDRAULIC AND PNEUMATIC, CRAWLER TRANS #2
08-31-07	KSCL-1792D-0203	072.11	J7-337	CABIN INTEGRITY CHECKOUT, LC-39B
08-31-07	KSCL-1792D-0224	072.80	K6-546	SRB HYDRAZINE SERVICE SYS, MLP-2
09-01-07	KSCL-1792D-0185	029.00	K6-848	STE MONITOR PANEL, VAB/MLP 1&2
09-01-07	KSCL-1792D-0202	072.11	J8-1708	CABIN INTEGRITY CHECKOUT, LC-39A (UNDER PAD A)
09-01-07	KSCL-1792D-0230	162.00	J8-1708	SRB SIDE FLAME DEFLECTOR, LC39A
09-01-07	KSCL-1792D-0231	162.00	J7-337	SRB SIDE FLAME DEFLECTOR, LC-39B
09-02-07	KSCL-1792D-0173	013.00	J8-1708	HYPERGOL OXIDIZER SYSTEM, LC-39A
09-02-07	KSCL-1792D-0186	033.00	K6-848	ET CELL CHECKOUT SYSTEM, VAB
09-03-07	KSCL-1792D-0210	072.31	K6-894	ECLSS COOLANT WATER SERV., OPF-1 & 2
09-03-07	KSCL-1792D-0218	072.83	K6-546	OME TRICKLE PURGE, MLP-2
09-04-07	KSCL-1792D-0177	016.00	K6-546	SRB HYDRAULIC SUPP. SYS. , MLP-2
09-09-07	KSCL-1792D-0246	701.11	K6-848	ET/SRB MATING & INST. KIT, VAB
09-14-07	KSCL-1792D-0296	463.10	K7-516	GH2 K-BOTTLE/MANIFOLD SYS, WILTECH FACILITY K7-516
09-14-07	KSCL-1792D-0298	463.10	K7-516	GH2/GN2 K-BTL/MANFOLD SYS, WILTECH FACILITY K7-516
09-15-07	KSCL-1792D-0175	015.00	K6-546	ORBITER HYDRAULIC SUPPORT, MLP-2
09-15-07	KSCL-1792D-0259	015.00	K6-546	ORBITER HYDRAULIC SUPPORT, MLP-1
09-16-07	KSCL-1792D-0179	020.00	K6-546	SSME GRND SUPPORT GN2/GHE, MLP-2
09-18-07	KSCL-1792D-0297	463.10	K7-516	GHE K-BOTTLE/MANIFOLD SYS, WILTECH FACILITY K7-516
09-22-07	KSCL-1792D-0159	160.50	SLS #1	AMBIENT BTL FILL SYS. GHE, SLS1, DFRF, EDWARDS AF
09-22-07	KSCL-1792D-0167	009.00	K6-546	MPS LO2 SYSTEM, MLP-1
09-22-07	KSCL-1792D-0168	009.00	K6-546	MPS LO2 SYSTEM, MLP-2
09-22-07	KSCL-1792D-0170	009.00	J7-182	MPS LO2 SYSTEM, LC-39B
09-22-07	KSCL-1792D-0281	072.41	K6-894 HI-BAY 1	HYDRAZINE SERVICING SYS. , OPF
09-24-07	KSCL-1792D-0174	013.00	J7-337	HYPERGOL OXIDIZER SYSTEM, LC-39B
09-25-07	KSCL-1792D-0169	009.00	J8-1503	MPS LO2 SYSTEM, LC-39A
09-28-07	KSCL-1792D-0217	072.03	SLS #1	OXIDIZER DESERVICING SYS. DFRF
09-30-07	KSCL-1792D-0100	010.00	J8-1708	FCSS LH2/GH2 SYSTEM, LC 39A
09-30-07	KSCL-1792D-0131	001.00	J8-1708	FACILITY GN2 SYSTEM, LC-39A
09-30-07	KSCL-1792D-0136	072.79	K6-546	FACILITY GN2 SYSTEM, MLP-1
09-30-07	KSCL-1792D-0150	002.00	J8-1708	FACILITY GHE SYSTEM, LC-39A
09-30-07	KSCL-1792D-0195	055.00	K6-894	ORBITER HYDRAULIC SUPPORT, OPF
10-09-07	KSCL-1792D-0130	010.00	J7-337	FCSS LH2/GH2 SYSTEM, LC-39B
10-09-07	KSCL-1792D-0709	072.14	J8-1708	APU HYDRA. SERV. & STOR. , LC-39A&B
10-14-07	KSCL-1792D-0299	999.29	K7-516	FIELD CLNG PNEU TEST PANL, CRCA K7-516
10-16-07	KSCL-1792D-0152	003.00	J8-1462	GH2/GO2 STORAGE AND DISTRIBUTION SYSTEM, LC-39A
10-16-07	KSCL-1792D-0153	003.00	J7-337	GH2/GO2 STORAGE AND DISTRIBUTION SYSTEM, LC-39B
10-19-07	KSCL-1792D-0237	254.00	J8-1708	ENG.TRNS.PLTFRM BRAKE SYS, LC39A
10-21-07	KSCL-1792D-0119	001.50	K6-546	GN2/GHE/AIR PL PURGE SYS. MLP-1
10-21-07	KSCL-1792D-0120	001.50	K6-546	GN2/GHE/AIR PL PURGE SYS. MLP-2
10-21-07	KSCL-1792D-0135	072.79	K6-546	FACILITY GN2 SYSTEM, MLP-2

Cert Expiration Date	Report Number	Base Line	Location	System
10-23-07	KSCL-1792D-0171	012.00	J8-1708	HYPERGOL FUEL SYSTEM MMH, LC-39A
10-23-07	KSCL-1792D-0172	012.00	J7-337	HYPERGOL FUEL SYSTEM MMH, LC-39B
10-23-07	KSCL-1792D-0180	025.00	K7-853	FACILITY GN2 HI PRESSURE, VAA HI PRES GAS STG
10-23-07	KSCL-1792D-0181	026.00	K7-853	FACILITY GHE HI PRESSURE, VAA HI PRES GAS STG
10-23-07	KSCL-1792D-0196	056.00	K6-894	HYPERGOL MMH SAFING, OPF-1 & 2
10-23-07	KSCL-1792D-0206	072.13	J8-1708	APU HYDRAZINE SERVICING, LC39A
10-23-07	KSCL-1792D-0207	072.13	J7-337	APU HYDRAZINE SERVICING, LC-39B
10-28-07	KSCL-1792D-0163	008.00	K6-546	MPS LH2 SYSTEM, MLP-1
10-28-07	KSCL-1792D-0164	008.00	K6-546	MPS LH2 SYSTEM, MLP-2
10-28-07	KSCL-1792D-0165	008.00	J8-1708	MPS LH2 SYSTEM, LC-39A
10-28-07	KSCL-1792D-0166	008.00	J7-337	MPS LH2 SYSTEM, LC-39B
10-28-07	KSCL-1792D-0187	040.00	M7-1410, M7-961, M7-1212	FACILITY GN2 SYSTEM, HMF
10-28-07	KSCL-1792D-0188	041.00	M7-1410, M7-961, M7-1212	FACILITY GHE SYSTEM, HMF
10-28-07	KSCL-1792D-0619	008.00	MLP-3	MPS LH2 SYSTEM, MLP-3
10-30-07	KSCL-1792D-0189	042.00	M7-961	APS FUEL SERV. SYS-L.H, WEST TEST CELL HMFM7-9
10-30-07	KSCL-1792D-0227	072.02	SLS #1	FUEL DESERVICING SYSTEM, DFRF
10-30-07	KSCL-1792D-0300	044.00	M7-961	APS MMH SERVICING SYS. RH, HMF
11-03-07	KSCL-1792D-0148	254.00	J7-337	ENGINE TRANSPORT PLATFORM, LC-39B
11-03-07	KSCL-1792D-0260	072.06	SLS #1	FUEL CELL/MPS DESERVICING, SLS, CLS, DFRF, WHITE SAND
11-10-07	KSCL-1792D-0223	072.63	TRM-008	PRSD & MPS SAFING VENT, SLF
11-12-07	KSCL-1792D-0146	072.78	K6-546	FACILITY GHE SYSTEM, MLP-2
11-13-07	KSCL-1792D-0194	054.00	K6-894	FCSS LO2/GO2, OPF - 1 & 2
11-13-07	KSCL-1792D-0294	046.00	M7-1212	FRCS MMH SERVICING SYSTEM, HMF
01-15-08	KSCL-1792D-0262	072.09	SLS #1	SSME PURGE GN2/GHE SYSTEM, DFRF
01-21-08	KSCL-1792D-0232	200.01	K6-848	PORTABLE REGULATOR PANEL, VAB MBMR
01-21-08	KSCL-1792D-0301	045.00	M7-961	APS N204 SERV. SYSTEM RH, HMF
01-25-08	KSCL-1792D-0151	002.00	J7-337	FACILITY GHE SYSTEM, LC-39B
01-25-08	KSCL-1792D-0191	050.00	K6-894	FACILITY GN2, OPF
01-25-08	KSCL-1792D-0192	051.00	K6-894	FACILITY GHE, OPF
01-25-08	KSCL-1792D-0295	047.00	M7-1212	FRCS N204 SERVICING SYS. , HMF
02-03-08	KSCL-1792D-0145	002.00	K6-546	FACILITY GHE SYSTEM, MLP-1
02-19-08	KSCL-1792D-0140	001.00	J7-337	FACILITY GN2 SYSTEM, LC-39B
04-04-08	KSCL-1792D-0190	043.00	M7-961	APS OXIDIZER SERV SYS-L.H, HMF (WEST TEST CELL)
04-04-08	KSCL-1792D-0197	057.00	K6-894	HYPERGOL N2O4 SAFING, OPF-1 & 2
10-09-08	KSCL-1792D-0121	072.14	J8-1708	APU Hydra. Serv. Sys. Stor. Fac. Pad-A
10-09-08	KSCL-1792D-0122	072.14	J7-337	APU Hydra. Serv. Sys. Stor. Fac. Pad-B

PV/S SAFETY WALKDOWN VISUAL INSPECTION CHECK LIST (extracted from KSCL-1792D-0705)

SYSTEM NAME: _____
WAC/TPS NO.: _____ PROGRAM MODEL/SERIAL NUMBER: _____
STATION SET: _____ BASELINE: _____ MEDIA: _____

INSPECTION REQUIREMENT	YES/NO	REMARKS
Pressure Vessels:		
1. Is the MAWP shown on the vessel greater than or equal to the System Operating Pressure given on the SMS? (See its ident tag, plate, or stamping.)		
2. For uninsulated vessels, are vessel welds free of cracks and corrosion?		
3. For painted vessels, is there any evidence of deterioration or flaws?		
4. For unpainted and uninsulated vessels, is there any evidence of deterioration, flaws, or corrosion?		
Components:		
1. Is there any evidence of damage to or leaking from the components?		
2. Are all calibrations (transducers, relief valves, flowmeters, pressure switches and gages) current?		
Tubing and Piping:		
1. Are there any conspicuous cracks, defects, or flaws in the assemblies or their welds?		
2. Are there any signs of corrosion or leaking?		
3. For pipe and tube supports: a.) Are there any conspicuous cracks, defects, or flaws in the supports or their welds? b.) Are there any signs of corrosion?		
Flex Hoses:		
1. For flex hoses with operating pressures above 150 PSIG, are they anchored every six (6) feet and provided with end constraints?		
2. Is the flex hoses's outer surface free of corrosion, deterioration, deformation, flattened areas, or cut braid?		

Systems Engineer: _____