Note:

Entry into Accelerator housing:

a) All entry by Controlled Access
b) Valid Job Hazard and Mitigation Analysis (JHAM) required
c) Tunnel Hazards Training required
d) Review of SPEAR Tunnel Area Hazard Analysis (AHA)
e) Review of SPEAR Lock Down and Verification
f) Review of planned work to identify if Lock and Tag required

Work Authorization:

a) Prior authorization and completed Job JHAM and AHA processes are required to work on accelerator systems.
b) For Non-SSRL Workers at SSRL - implement Interim Work Authorization Process

Planning for Safety on the Job:

a) Apply Integrated Safety and Environmental Management System

Other:

a) Gray entry doors to SPEAR housing to be kept closed - to preserve temperature stability of Accelerator

Accelerator Maintenance Day Tasks

6/11/2007

			Proj. Mngr	Shop	Task Person	Forms	(hr)
Access	Conditions:	☐ 1. SPEAR access: 6:30 to14:00 ☐ 2. SPEAR - Power Supply Checks - 2 hrs after power restored ☐ 3. OUTAGES: ☐ 4. RSWCF Open:					
Beamlines	BL10-2	☐ 5. 1. 10-2 MPS slit. (Ron or Bart, Alex, Horton)	Johnson	Experime			

| | | | Proj. Mngr | Shop | Task Person | Forms | (hr) |

				Proj. Mngr	Shop	Task Person	Forms	(hr)
					ntal Support			
Beamlines	BL12-2	☐	6. BL12-2 M0 mirror thermal shroud temperature control thermistor replacement and temperature probe placement	Harrington	BLD	Graeme Card, Renato Avelar		1.5
Beamlines	BL7-2	☐	7. 7-2 m0 LCW heater system cables pull	Johnson		(Valery, BLE?)		
Beamlines	BL9	☐	8. 2. BL9 injection stopper. (Horton, Neal)	Johnson				
Beamlines	Vacuum	☐	9. Beamline Walkthru---------- Bach/Spector .5 hrs. BL9 Inj.Stopper. Cycle observations------ Bach/Neal et. al 1 hr. Out of Alcove: 9S-IG2 Cable troubleshoot---------- Pak/Nalls/Neal 1 hr. 12-IG1 Troubleshoot---------- Pak/Nalls/Neal 1 hr.					
INJ/SPEAR	Vacuum	☐	10. In Alcove: Injector Booster Walkthru----------Nalls .5 hrs. SPEAR Walkthru----------Pak .5 hrs.					
LINAC	Photo Cathode	☐	11. Project: - remove FC/screen in Alpha Chamber (blocking laser beam)	Schmerge	Vacuum	Nalls, et al		

Proj. Mngr	Shop	Task Person	Forms	(hr)

	Proj. Mngr	Shop	Task Person	Forms	(hr)

Start time 5am:

Step 1 (3 to 4 hours)
Vent - three linac sections plus the GTL to be vented (the gun has a valve and will not be vented).
Remove FC/screen

Step 2: (11 to 15 hours)
Pumpdown ~6 hour range to pumpdown to an acceptable vacuum pressure (< 1 10^-7 Torr) to turn on the RF.

At the start of the last run after extensive waveguide modifications and installation of a new alpha magnet chamber the vacuum pressure in the linac reduced to 1 10^-6 Torr after 30 minutes of pumping and 1 10^-7 Torr after 15 hours. Normal operating pressure is 2 10^-8 Torr. We would expect the recovery to be faster this time. I estimate another 1 hour to process the linac before beam is established in the injector. Thus the total downtime estimate is approximately 11 hours. Obviously anytime the vacuum system is opened there are risks that could significantly increase that estimate. In the

	Proj. Mngr	Shop	Task Person	Forms	(hr)

				Proj. Mngr	Shop	Task Person	Forms	(hr)
			past we have vented the linac during the run on several occasions and have recovered with minimal impact to operations.					
SPEAR	Mechanical	☐ 12.	Remove metering valves and install calibrated flow tubes on beam line 9 FE LCW circuits	Ernst	MSG	3-MSG tech		6
		☐ 13.	Mechanical Inspections			2-MSG tech		1
SPEAR	Power Supplies	☐ 14.	Replace 09S-QD1-PS No Access	Rafael	ESG			2
SPEAR	RF	☐ 15.	Troubleshoot small phase jumps in some spear RF measurements. Test 1: Remove an inspection panel in the waveguide, inspect the air side of the cavity window to insure that there are no signs of past arcing. 1 hour. The impact on restart is that we will need to re-pressurize the waveguide with dry air. This should be done in another 30 minutes or so, so that if we perform the inspection in the morning, the system should be ready before the 2pm end of access. Test 2: Replaceme module in the RF control system. All of this work is done outside of the ring. If	Sebek				

Proj. Mngr Shop Task Person Forms (hr)

		Proj. Mngr	Shop	Task Person	Forms	(hr)
	a spare is available, a module will be replaced with a spare, which will be calibrated in place. The calibration will take place after the new module is installed. The RF system does not need to be on. This procedure takes about 30 minutes. We may not know until Monday if a spare module is available.					