

Note:

Entry into Accelerator housing :

- a) All entry by Controlled Access
- b) Tunnel Hazards Training required
- c) Familiarity with SPEAR Tunnel Area Hazard Analysis (AHA) required
- d) SPEAR Lock Down Verification available for review

Work Authorization :

- a) Prior authorization to work on accelerator via area manager & line manager
- b) For Non-SSRL Workers - implement Interim Work Authorization Process

Integrated Safety Manament System :

|   |  |
|---|--|
| <p>Five functions</p> <ul style="list-style-type: none"> <li>Define the Scope of Work</li> <li>Analyze the hazards</li> <li>Develop and Implement Controls</li> <li>Perform the Work</li> <li>Feedback and Improve</li> </ul> | <p>Seven Guiding Principles</p> <ul style="list-style-type: none"> <li>Line Management Responsible for Safety</li> <li>Clear roles and responsibilities</li> <li>Competences Commensurate with Responsibilities</li> <li>Balanced Priorities</li> <li>Identification of Safety Standards and Requirements</li> <li>Hazard Controls Tailored to the Work Being Performed</li> <li>Operations Authorization</li> </ul> |
|---|--|

People responsible for ensuring implementation of ISMS

- a) Workers
- b) PIC - person in charge
- c) RLM - responsible line manager

# Accelerator Maintenance Day Tasks

4/7/2008

|        |             |    | PIC  | Shop | Task Person | Forms | (hr) |
|--------|-------------|----|--|------|-------------|-------|------|
| Access | Conditions: | 1. | SPEAR access: 6:30 to14:00                               |      |             |       |      |
| Access | Conditions: | 2. | SPEAR - Power Supply Checks - 2 hrs after power restored |      |             |       |      |
|        |             |    | - Clearing Magnet Cables install                         |      |             |       |      |
|        |             |    | may overlap into the checkouts                           |      |             |       |      |
|        |             |    | - Test Timing System - injection                         |      |             |       |      |
|        |             |    | into SPEAR ~ 30 min                                      |      |             |       |      |

|  |  |  | PIC | Shop | Task Person | Forms | (hr) |
|--|--|--|-----|------|-------------|-------|------|
|--|--|--|-----|------|-------------|-------|------|

# Accelerator Maintenance Day Tasks

4/7/2008

|           |                 |     |   | PIC      | Shop | Task Person                 | Forms | (hr) |
|-----------|-----------------|-----|---|----------|------|-----------------------------|-------|------|
| Access    | Conditions:     | 3.  | OUTAGES:  |          |      |                             |       |      |
| Access    | Conditions:     | 4.  | RSWCF Open:   |          |      |                             |       |      |
| Beamlines | BL13            | 5.  | Re-align the BPM on the M0 mirror tank. It needs to be moved up 2mm. It is on a 6 strut system and only needs to move vertically. | Rowen    | BLD  | LeCocq                      |       |      |
| Beamlines | PPS             | 6.  | Prepare BL4 PPS for activation - this may involve BL14 PPS wiring and/or system testing.  | Horton   | ESRD |                             |       |      |
| INJ       | Timing System   | 7.  | Reconfigure Booster Timing system   | Schmerge |      | Sebek and Schmerge, Allison |       | 1    |
| INJ       | Beam monitoring | 8.  | Install and commission 8 channel gain/phase detector chassis  | Wachter  | ESG  | Gierman, Wachter            |       | 4    |
| SPEAR     | Computer        | 9.  | Replace SSRL Network firewall box: 9-10am   | Prado    | CNG  |                             |       |      |
| SPEAR     | Mechanical      | 10. | Mechanical inspections  | Ernst    | MSG  | 1-tech                      |       | 1    |
| SPEAR     | Mechanical      | 11. | Start tubing 145D vacuum chamber circuits   | Ernst    | MSG  | 2-techs                     |       | 6    |
| SPEAR     | Mechanical      | 12. | Review clearing magnet crane setup  | Ernst    | MSG  | Ernst/DiMattia              |       | 2    |
| SPEAR     | Mechanical      | 13. | Semi annual Inspect/label all fall restraint "D" rings<br>(Access atop SPEAR shielding)   | Ernst    | MSG  | SLAC ES&H                   |       | 2    |
| SPEAR     | Mechanical      | 14. | Set in place BL-5 BOSIC, Install lead   | Ernst    | MSG  | 2-techs                     |       | 1    |
| SPEAR     | Beam            | 15. | Move the invar rod and length gauge from  | Ernst    | MSG  | 1-tech, Gassner             |       | 1    |
|           |                 |     |   | PIC      | Shop | Task Person                 | Forms | (hr) |

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|-------|-----------------|-----|--|------------------|------|----------------------|-------|------|
|       | Stability       |     | 8S to 9S (downstream)  |                  |      |                      |       |      |
|       | Mechanical      | 16. | LION cable lead, BL9 ratchet wall area   |                  |      | 2-techs              |       | 2    |
| SPEAR | Power Supply    | 17. | Intall 3 Clearing Magnet Power Supply Racks B118-8, 9 and 10.  | Rafael           | ESG  |                      |       |      |
|       |                 |     | Install Cables for clearing Magnet in G4, G5 and G7.   |                  |      |                      |       |      |
| SPEAR | Power Supply    | 18. | Install Cables for clearing Magnet in G4, G5 and G7.   | Rafael           | ESG  | PCD                  |       | 8    |
| SPEAR | PPS             | 19. | BSOIC relocation - move BSOIC S23 from Booster wall near BTS shielding wall to SPEAR roof over the beam abort dump. We have the necessary extension cable for the signal cable and are working on obtaining the necessary 110 V AC extension cord.   | Horton, Schmerge |      | Horton, RP (Morris)  |       |      |
|       |                 |     | This BSOIC will remain in the new location for at least the remainder of the 2008 run.   |                  |      |                      |       |      |
| SPEAR | Top-Off Phase 1 | 20. | Installation of two BSOICs inside the SPEAR tunnel near BL5 for top-off Phase I tests These BSOICs will be left inside the ring sitting in the aisle near BL5 ID and ratchet wall. We will cover them with 3/8" Pb and connect a signal cable. BSOICs will be moved prior to each AP Phase I test to the area near the beamline under test at that particular time. BSOICs will be left inside | Schmerge         |      | Schmerge, MSG and RP |       | 1    |
|       |                 |     |  |                  |      |                      |       |      |
|       |                 |     |  | PIC              | Shop | Task Person          | Forms | (hr) |

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|-------|-----------------|-----|---|--------|--------|---------------|-------|------|
|       |                 |     | the ring between AP periods. These BSOCs are not interlocked and are used for diagnostic purposes only.   |        |        |               |       |      |
| SPEAR | Top-Off Phase 1 | 21. | Installation of two cables for BSOCs through penetration near BL5<br>Installation of cables for diagnostic BSOCs installed in item 2. No RSWCF is necessary but fire blocking in the penetration will likely will be removed prior to installation and reinstalled after installation.  | Rafael | ESG    | ED&M          |       | 2    |
| SPEAR | RF              | 22. | Task Name : Connect SPEAR3 Klystron Vacuum reading to an Allen-Bradley channel<br><br>The Spear3 RF "Klystron Vacuum" is not connected to the A-B (Allen-Bradley) system.<br>The maximum voltage of -100 mV from the Vaclon pump controller will be connected to an A-B channel through a cross-connect block. Therefore there is no safety issues concerning the job.<br><br>I will test the data path and get the connections made.<br>No support personnel needed. | Park   | ESG    | Park, Allison |       |      |
| SPEAR | Vacuum          | 23. | SPEAR walk thru   | Nalls  | Vacuum | Pak           |       |      |
| SPEAR | Vacuum          | 24. | 17G-IG-BL04 check out   | Nalls  | Vacuum | Pak           |       |      |
|       |                 |     |   | PIC    | Shop   | Task Person   | Forms | (hr) |

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|-------|--------|-----|--|-------|--------|-------------|-------|------|
| SPEAR | Vacuum | 25. | 03G-IG-TSP2 re-terminate both ends of long line collector cable. | Nalls | Vacuum | Pak         |       |      |
| SPEAR | Vacuum | 26. | 12S-IG1 and 16G-IG-TSP2 check with local controllers at IG       | Nalls | Vacuum | Pak         |       |      |
| SPEAR | Vacuum | 27. | Fire the TSP's on the BL13 M0 and M1 mirror systems              | Nalls | Vacuum |             |       |      |

PIC Shop Task Person Forms (hr)