

SSRL Radiation Safety Work Control Form *(see instructions on pg-3)*

Rev. May 2014

Area: _____ Form #: _____ Date: _____

Preliminary Applicability Screen:

(a) Will closing the beam line injection stoppers mitigate the radiological hazards introduced by the proposed work? Yes No

(b) Can the closed state of the beam line injection stoppers be assured during the proposed work (ie., work does NOT involve injection stoppers or associated HPS)? Yes No

If the answers to both questions are yes, the work can be performed safely under an SSRL RSWCF. **If the answer to either question is no, then the work must be performed under a SPEAR3 RSWCF.**

Section 1: Description of work to be done, including date and time. *(Person Responsible completes section)*

Section 2a: Requirements before releasing & starting the work *(Person Responsible completes section)*

Section 2b: Requirements to close RSWCF after the work is completed

(Person Responsible completes section including needed verifications/checkouts and designates section 5 signoffs)

Section 3: Pre-work Approvals *(Preliminary applicability screen, description of work (section 1), hazard controls (section 2a), RSWCF closure requirements (section 2b), and signoff requirements (section 5).)*

Person Responsible (name/signature/date)

Area Manager (name/signature/date) (Harrington, Johnson, Pianetta, Rabedeau, or Van Campen)

SSRL Safety Office (name/signature/date)

Radiation Physics (name/signature/date)

Section 4: Open RSWCF and release* work (*This work release applies to radiological hazard and RSS configuration control activities only. The full task described in section 1 may involve other dependencies before the work is fully released as described in pre-job briefings, SOP, etc.)

Section 2a requirements are complete and work is released*: _____
Duty Operator (name/signature/date)

Verify with Duty Operator hazard controls and work release*: _____
Person Doing Work (name/signature/date)

SPEAR3 Accelerator Operator informed of the open RSWCF number and effected area (DO)

Section 5: Work Completion and RSWCF Closure

Signoff completion of work per section 1: _____
Person Responsible (name/signature/date)

Signoff RSWCF closure requirements per section 2b (Person responsible checks req. signatures)

- Person Responsible _____
- BCS/HPS/PPS (certification/functional check) _____
- Radiation Physicist _____
- Duty Operator _____
- Other (specify) _____

Section 6: Signoff RSWCF closure indicating area readiness for beam operation

SSRL Safety Office (name/signature/date)

Duty Operator (name/signature/date)

SPEAR3 Accelerator Operator informed of RSWCF closure (DO)

SSRL Radiation Safety Work Control Procedure

The following procedure is used for controlling all work (**) involving the SSRL radiation safety systems which include: Shielding, including exclusion barriers, the Personnel Protection System (PPS and HPS), and the Beam Containment System (BCS).

Procedure

1. The Person Responsible for the work completes the **Preliminary Applicability Screen, Section 1, Section 2a, Section 2b**, and designates the **Section 5** signoffs. The Person Responsible should seek guidance from the Area Manager, SSRL Safety Officer, and/or Radiation Physicist as necessary to complete these sections. The Person Responsible then signs off the **Pre-Work Approval, Section 3**.
2. The RSWCF is then routed to one of the designated Area Managers for **Pre-Work Approval** per **Section 3**. The Area Manager examines the work description of **Section 1** and verifies the **Preliminary Applicability Screen**. Next Area Manager verifies the appropriateness of the hazard controls of **Section 2a**, the RSWCF closure conditions of **Section 2b**, and the designated **Section 5** signoffs.
3. The RSWCF is next routed to the SSO and then RP who perform the same checks as listed in item 2.
4. Upon completion of the **Pre-Work Approval** the Duty Operator executes the hazard controls listed in **Section 2a**, enters the form number and date, and releases the work per **Section 4**. The Person Doing the Work verifies the hazard controls and work release with the DO. Finally the DO places the form in the RSWCF Logbook located at the DO station above BL1 and informs the SPEAR3 Accelerator Operator of the open SSRL RSWCF.
5. After completion of the work the Person Responsible signs off the work completion in **Section 5**. Next the RSWCF closure requirements listed in **Section 2b** are signed off per the check offs listed in **Section 5**.
6. After the completion of the work and before operation of the facility, the Duty Operator reviews the open RSWCF to ensure that the necessary checkouts and signoffs have taken place for the area and beam lines into which the beam is to be operated.

The Duty Operator and the SSO then sign **Section 6** of the form acknowledging that all checkouts and signoffs have been completed, before restarting the facility. The Duty Operator shall inform the SPEAR3 Accelerator Operator of the RSWCF closure.

Off-Hours Procedure

7. If it is necessary to perform work on radiation safety systems outside normal working hours, when it may not be possible to obtain signatures from some of the key personnel listed in **Section 3**, the following abbreviated procedure may be used (SSO or RP approval by phone or email required to open and close form).
 - 7.1. In the absence of the Person Responsible, the Duty Operator may complete **Section 1**. To complete **Section 2**, the Duty Operator shall consult with the SSO and/or Radiation Physicist.
 - 7.2. The Duty Operator may sign for the Person Responsible in Section 3 while in the absence of one of the listed Area Managers, the Program Manager may sign for the Area Manager. If a Radiation Physicist cannot be reached, the responsibility for the **Section 3** approval may be assumed by the SSO, and vice versa. If the work to be performed is a direct repair or replacement to restore the normal function of the safety system, the work may be started prior to contact being made with the SSO or Radiation Physicist. For work on any beam line which meets the **Preliminary Applicability Screen**, the beam line shall be keyed off-line at the BLxx-0 HPS chassis and the online/offline key tagged with RSWCF number and locked in the SSRL key safe. **If the work does not meet the conditions of the Preliminary Applicability Screen, then a SPEAR3 RSWCF must be opened.**
 - 7.3. Section 4 is executed as described in item 4 above.
 - 7.4. To complete **Sections 5 and 6**, the Duty Operator shall consult with the SSO and indicate approval and any conditions. If the SSO cannot be reached, the responsibility for the SSO approval may be assumed by the Radiation Physicist. Upon completion of **Section 6** the Duty Operator shall return the closed and signed original to the RSWCF Logbook at the SSRL Duty Operator station above BL1.

** Work is here defined as any activity which can interrupt or change the functionality of the system, other than the operation of normal controls, switches, and so forth, and excluding system checks or calibrations.