SSRL Electronic Radiation Safety Work Control Form Instructions

The following procedure is used for controlling all work (**) involving the SSRL radiation safety systems which include shielding, 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** and then uses the "Submit" button to create a blank form. **If the work does not meet** either one of the conditions, then a SPEAR3 RSWCF must be opened and thus no new SSRL RSWCF will be created.
- 2. The Person Responsible for the work completes the 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 (SSO), and/or Radiation Physicist (RP) as necessary to complete these sections. The Person Responsible then uses the "Apply Changes" button on the form to create the form and establish a form number. The beamline responsible engineer for this area is automatically sent an informational email stating that this RSWCF was created.
- 3. The system then creates Section 3, Pre-Work Approval and sends an email to the RP officer (and the Person Responsible) who is responsible for approving the form after making any changes she/he sees fit to make. Specifically, the SSRL RP officer examines the work description of Section 1 and verifies the Preliminary Applicability Screen. Next, he/she verifies the appropriateness of the hazard controls of Section 2a, the RSWCF closure conditions of Section 2b, and the designated Section 5 signoffs. Finally, the RP officer name is selected in the drop-down menu next to their title and the "Apply Changes" button is activated in this section for signoff acceptance.
- 4. The RSWCF is next routed by email message to the SSO and then the Area Manager who perform the same checks as listed in item 2. If the SSO or Area Manager make any changes to the form, it is routed back to the RP Officer for approval and the sequence of approvals is started again.
- 5. Upon completion of the Pre-Work Approval the Duty Operator (DO) confirms that the form will not be dropped by consulting with the Person Responsible, then executes the hazard controls listed in Section 2a and releases the work per Section 4. The Person Responsible assigns a Person Doing the Work. The Person Doing the Work verifies the hazard controls and work release with the DO and approves the form. The work is now released for activity and an automated email is sent to SPEAR operations and the beamline responsible engineer indicating that the form is open and work is released.
- 6. 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. Emails are then sent to those responsible for signing off individual requirements of Section 5.

After the completion of the work and before operation of the facility, the DO and SSO review 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.

Note that if **Section 5** dictates that a beamline should be keyed online for a radiation survey, the beamline can only be keyed online after DO confirms that all other signoffs in Section 5 are completed. RPFO (Radiation Physics Field Operations) must notify the DO immediately when the survey is complete and the DO should key the BL offline pending

further RSWCF approvals in Section 5 and Section 6. This prevents the beamline from being operated while the RSWCF is still open except when the survey is performed.

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. An automated email is sent to SPEAR operations and the beamline responsible engineer indicating that this RSWCF is closed.

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 or his/her backup. 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 5 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 her/his backup.
- ** 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.