

<b>Brookhaven National Laboratory National Synchrotron Light Source</b>		<b>Number:</b> LS-PPS-0026	<b>Revision:</b> A
		<b>Effective:</b> 6/14/02	<b>Page 1 of 2</b>
<b>Subject: X-Ray Beamline Interlock Reach back Test</b>			
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\*Approval signatures on file with master copy.

[Revision/Periodic Review Log](#)

Test Reason:	Test Result:	<input type="checkbox"/> Passed	<input type="checkbox"/> Failed
	Test Type:	<input type="checkbox"/> Full	<input type="checkbox"/> Partial
Test Date:	Start Time:	Finish Time:	
Tester 1:	Assistant 1:		
Tester 2:	Assistant 2:		

**Preparation:**

- Inform the Control Room Operator that Interlock testing will commence. \_\_\_\_\_
- Verify that the X-Ray ring interlock is NOT secured. \_\_\_\_\_
- Post personnel at SR100, at the safety shutter solenoid (for method 2), and at the interlock logic box for the beamline. \_\_\_\_\_
- There are two methods that can used to perform this partial test for which only one method is needed. Select the method that is best appropriate for existing conditions. Method 1 utilizes the beamline hutch and the control panel is used to operate the Safety Shutter and Photon Shutter. Method 2 can be used when the first method is not feasible. The second method relies on the manual operation of the safety shutter air solenoid and is best suited when conditions for Method 1 cannot be met.

- Method 1: Beamline Operation Panel:** (Use with beamlines that have hutches)  
 Enable the beamline. Place holders on hutch door switches #1 & #2, place door latch device on hutch door, and interlock the hutch. Position assistant at SR100 to monitor & reset faults.

1. Open the Safety shutter and Photon Shutter (if equipped).

Remove holder from switch #2  
     RIB Trips at tested beamline  
     RIBX trips at SR100  
 Replace switch holder.  
     RIBX cannot be reset  
 Reset RIB  
     RIBX can be reset

Beamline Interlock			

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Remove holder from switch #1  
     RIA Trips at tested beamline  
     RIAX trips at SR100  
     The safety shutter closes  
     The photon shutter closes (if equipped)  
 Replace switch holder.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- |  |  |  |  |  |
|--|--|--|--|--|
| RIAX cannot be reset   |  |  |  |  |
| Reset RIA  |  |  |  |  |
| RIAX can be reset  |  |  |  |  |
| 3. Remove the holders from the switches. Remove the latch device from the door lock(s). Stand inside the hutch and open and close the door. All door switches operate freely and each makes a "click" when door is opened. |  |  |  |  |
| 4. Remove user interlock test jumper (if applicable).  |  |  |  |  |
| 5. Inform control room operator that test is complete.   |  |  |  |  |

**Method 2: Manual Operation of Safety shutter**

Beamline Interlock			

- |   |  |  |  |  |
|---|--|--|--|--|
| 1. Press the "manual activation button on the top of the safety shutter solenoid until the shutter moves off the closed position. Release the solenoid. |  |  |  |  |
| RIA trips on the correct/corresponding beamline   |  |  |  |  |
| RIB trips on the correct/corresponding beamline   |  |  |  |  |
| RIA trips at SR100  |  |  |  |  |
| RIB trips at SR100  |  |  |  |  |
| Neither RIA nor RIB can be reset at SR100.  |  |  |  |  |
| 2. Reset RIA at beamline  |  |  |  |  |
| RIA can be reset at SR100   |  |  |  |  |
| RIB cannot be reset at SR100**  |  |  |  |  |
| 3. Reset RIB at beamline  |  |  |  |  |
| RIB can be reset at SR100   |  |  |  |  |

\*\*Note: If the reset must be made at the front end disconnect box because the beamline logic is not in place or not functioning, then both RIA and RIB will reset together and response #2 in step 2 is not applicable.

4. Inform control room operator that test is complete.

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