**SpinQuest Control Room Communication**

*Revised: 8/20/20 -- R.Tesarek*

This document is for communication between the SpinQuest Room (SQCR) and the Fermilab Main Control Room (MCR).

Reasons for Communication between SQCR and MCR

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| **SQCR -> MCR** | **MCR -> SQCR** |
| * Shifter check-in including location
* Request to enable/disable beam
* Request for upstream beam tuning
* Request intensity change
* Change in state of NM3S and/or NM4AN
* Request controlled access
* Change in access status (controlled/supervised)

 | * Inform experiment of unrequested change in beam conditions
* Inform experiment of unscheduled beam down time over an hour
* Inform of anything out of the ordinary
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SQCR Shifter Check-in Procedure

* Phone MCR with new shift personnel and location (if relevant).

SQCR Request for Beam Procedure

* Obtain beam plans from SpinQuest Run Coordinator.
* Phone MCR with request for beam noting state of NM3S, NM4AN and beam intensity.
* Check that state of NM3S and NM4AN agrees with plans, phone MCR if difference than plans.
* Note request for beam and when beam returns in the SpinQuest e-log.

SQCR Request to Disable Beam Procedure

* Obtain beam plans from SpinQuest Run Coordinator.
* Phone MCR with request to disable beam to experiment.
* Turn off or check that state of NM3S and NM4AN currents are zero.
* Note request to disable beam in the SpinQuest e-log.

SQCR Procedure for Requesting Beam Tuning

* Phone MCR with request for beam tuning.
* Note request for beam tuning in the SpinQuest e-log.
* MCR should phone SQCR when tuning complete.
* Note completion and effect of beam tuning in the SpinQuest e-log.

SQCR Procedure for Requesting Beam Intensity Change

* Obtain beam plans from SpinQuest Run Coordinator.
* Phone MCR with request for beam intensity change.
* Note request for beam intensity change in the SpinQuest e-log.

SQCR/MCR Procedure for Requesting Change in State for NM3S and/or NM4AN

* Obtain beam plans from SpinQuest Run Coordinator.
* Phone MCR with request for change of NM3S and/or NM4AN state.
* Make state changes to NM3S and/or NM4AN.
* Note request for change of NM3S and/or NM4AN state in the SpinQuest e-log.

SQCR Procedure for Requesting Controlled Access to NM3/NM4

* Note in SpinQuest e-log the conditions that require access to NM3/NM4 and personnel who will be making the access and approximate duration of access.
* Obtain approval to make access from the SpinQuest Run Coordinator.
* Phone MCR with access request and duration and place note in SpinQuest e-log.
* Set currents to zero for NM3S and NM4AN.
* If making an access to NM3, SpinQuest personnel obtain NM3 keys from the MCR.
* MCR phones SQCR that critical devices are disabled.
* Make controlled access using standard controlled access procedure.

NOTE: Accessing NM3, may require keys for both and NM3 and NM4.

* When access is complete, phone MCR to return keys to key tree (and MCR for NM3 keys).
* Note in SpinQuest e-log all work performed during access.

SQCR Procedure for Requesting Change Enclosure Status from Controlled to Supervised Access

* The SpinQuest Run Coordinator phones MCR with request to change either NM3, NM4 or both enclosures from controlled access to supervised access.
* The SpinQuest Run Coordinator arranges with rad safety and MCR to survey the relevant enclosure(s).
* Set currents to zero for NM3S and NM4AN.
* MCR disables critical devices
* MCR phones SQCR that critical devices are disabled and SpinQuest may break interlocks and proceed with access.
* Note in the SpinQuest e-log the change in access state for the relevant enclosures.

SQCR Procedure for requesting change enclosure status from supervised to controlled access

* The SpinQuest Run Coordinator phones MCR with request to change either NM3, NM4 or both enclosures from supervised to controlled access.
* MCR personnel perform search and secure of the relevant enclosure(s).
* MCR personnel inform SQCR on completion of search and secure.
* SpinQuest personnel note in the SpinQuest e-log the change in access state for the relevant enclosures.
* If beam is to be requested, SQCR phones MCR with the request and the state of NM3S and NM4AN magnets and beam intensity.

MCR Procedure for Extenuating Situations

* Contact the SQCR with extenuating situation information
* If applicable: turn off beam switch. Disable CDS and associated power supplies.