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C-A OPERATIONS PROCEDURES MANUAL

6.1.11 Transport Beam Tune Maintenance

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Hand Processed Changes

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Approved: _____ *Signature on File* _____
Collider-Accelerator Department Chairman Date

A. Etkin

6.1.11 Transport Beam Tune Maintenance

1. Purpose

- 1.1 Specifies the procedure to be employed by [Liaison Physicists](#) to periodically ensure that beam transports are operated within approved limits and with minimum loss and incidental radiation levels. This applies to primary and secondary beam transport.

2. Responsibilities

- 2.1 In order to evaluate beam status, the Physics Support Group Leader shall supervise liaison physicists in the performance of weekly beam line reviews, and the recording of those reviews in a beam line logbook.
- 2.2 The Facility Support Radiological Control Technicians (RCTs) shall, when requested, provide Liaison Physicist with copies of recorded pulsed beam radiation surveys.
- 2.2.1 The Facility Support Representative (FSR) shall ensure that C-A Liaison Physicists have received adequate training in the use of radiation survey meters, when required.
- 2.3 Beam Operators shall, when requested, provide liaison physicist with beam profile data and assist with beam tuning.

3. Prerequisites

None

4. Precautions

None

5. Procedure

- 5.1 Once a week the liaison physicist shall review the beam tune and ensure it is optimized for minimal beam loss.

Note:

Useful material for review for trends and/or anomalies includes radiation surveys, loss monitor records, chipmunk records and beam profiles.

- 5.2 If a mistuned beam was discovered but did not cause significantly higher levels in an occupied area, or significant activation, then the liaison physicist will ensure that the beam is retuned, and that Beam Operators are made aware of beam line changes.
- 5.3 If a mistuned beam was discovered that caused significantly higher levels in an occupied area, then the liaison physicist shall secure the beam and report this condition to the ESHQ Division Head, Radiation Safety Committee Chair, and the ALARA Committee Chair.
- 5.4 During running periods sign off the Transport Beam Tune Maintenance log in the Main Control Room.
 - 5.4.1 The Physics Support Group Leader shall set up and review this log periodically for compliance.

6. Documentation

- 6.1 Transport Beam Tune Maintenance Log.

7. References

- 7.1 [C-A-OPM 6.1.10, "ALARA Strategies for Tuning During Proton Operations"](#).

8. Attachments

None