If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are available by contacting the ESSHQ Procedures Coordinator, Bldg. 911A

C-A OPERATIONS PROCEDURES MANUAL

16.1.1 FES Beam Cap Inspections

(F&ES Support Group Procedure A.14.0)

Note: This document was formerly a C-A Group Procedure. The content of the group procedure was reviewed by the Technical Supervisor. All approvals and/or issue dates of the original group procedure are maintained for present use.

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

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

F. Kobasiuk

F&ES Support Group Procedure A.14.0
Original Issue Date: 03/27/06
Revision 00

16.1.1 FES Beam Cap Inspections

1. Purpose

1.1 To detail the procedure to be utilized by the C-A Liaison Engineers for the periodic inspection of the Beam Caps in the C-A Accelerator Complex.

2. Responsibilities

2.1 The Cognizant Liaison Engineer shall conduct the inspection.

3. Prerequisites

None

4. Precautions

4.1 Access to many beam caps requires the transiting of grassy areas which can be infested with ticks. Appropriate precautions should be taken.

4.2 Follow access procedures for these areas.

5. Procedure

5.1 Beam caps shall be inspected at the start-up and conclusion of each running period, which is typically twice per year. In no case shall inspection of all caps be less frequent than annually. Sufficient time should be allowed before operations to allow for repairs. A written procedure shall be used to conduct inspections. A record of inspection shall be maintained in accordance with internal operating procedures.

5.2 The following items shall be inspected and they shall be specifically listed in internal operating procedures:

5.2.1 For Gunite or Concrete caps:

- Check for full penetration cracks in Gunite or concrete.
- Check sealed areas for penetrations such as fence posts or sheet piling.
- Check for areas of excessive ponding of rain water.
- Check for trees and woody shrubs whose roots can damage the cap.

5.2.2 For surface waterproof membrane caps:

- Check for tears, holes, cracks, etc. which could compromise the waterproof integrity of the membrane.
- Check that membrane is properly secured against wind damage.
- Check for areas of excessive ponding of rain water.
- Check for trees and woody shrubs whose roots can damage the cap.

5.2.3 For below grade membrane caps:

- Check for soil erosion which could expose and damage the buried membrane.

- Check for trees and woody shrubs whose roots can damage the membrane

5.3 If repair is required, complete all repairs prior to running period.

5.4 A record of each inspection shall be recorded by an entry into the Facilities and Experimental Support Group – Beam Cap Inspection Log.

6. Documentation

6.1 Beam Cap Inspection Log records

7. References

None

8. Attachments

8.1 List of beam Caps with Cognizant Liaison Engineer

Attachment No. A.14.0

Beam Cap List

Description	Location	Type	Liaison Engineer
LINAC	Over LINAC at BLIP "Y"	Concrete Cap	A. Pendzick
AGS	Over E-20 Ring Area	Concrete Cap	A. Pendzick
AGS Beam Dump	Over J-10 Ring Area	Gunite	A. Pendzick
Booster Beam Dump	Over B-6 Beam Dump	Concrete Cap	D. Phillips
NSRL Beam Line	Over NSRL Beam Line	Below Grade Membrane	D. Phillips
g-2	Over g-2 and U-Line	Gunite	C. Pearson
FEB Dump	Over U-Line Stop	Below Grade Membrane and Gunite	D. Phillips
ATR Dump	Over ATR Dump	Below Grade Membrane	D. Phillips
7 O'Clock Collimator	Over RHIC Sector 7	Below Grade Membrane	C. Pearson
9 O'Clock Collimator	Over RHIC Sector 8	Below Grade Membrane	C. Pearson
10 O'Clock Kicker and Beam Dump	Over RHIC Sector 9	Below Grade Membrane	D. Phillips
10 O'Clock Kicker and Beam Dump	Over RHIC Sector 10	Below Grade Membrane	D. Phillips