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C-A OPERATIONS PROCEDURES MANUAL

1.1 Authorization

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

E. Lessard

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1. **Authorization**

- 1.1 Safe operation and maintenance of the Collider-Accelerator Department's science and technology (S&T) machines, injection systems, and experimental areas are under the supervision of the Collider-Accelerator Department Chair, the Accelerator Division Head, the Experimental Support & Facilities (ES&F) Division Head, the on-duty Operations Coordinator, and the supervisory structure. See the [C-A Organization Chart](#).
- 1.2 Only authorized Department personnel shall operate the S&T machines. Direct daily supervision of shift operations is the responsibility of the on-duty Operations Coordinator. All Operators are authorized to shut down the S&T machines whenever an unsafe condition arises, or whenever they think that continued operation is not clearly safe. They are also authorized to take any other corrective safety- or environmental-protection-action as indicated in this manual. All scheduled operational-related maintenance shall be done with the authorization of the appropriate Divisional Maintenance/Work Coordinator, with the work-control authorizations prescribed in [OPM 2.28](#), "Enhanced Work Planning," and with the knowledge of the on-duty Operations Coordinator.
- 1.3 All operations shall have the appropriate authorization listed in the following sections. Current holders of positions are denoted in the [C-A Organization Chart](#).

2. **Department Chair Authorization**

- 2.1 This level of authorization may be executed by current holders of the following positions: Department Chair or, in his absence, by the Acting Department Chair.

3. **Associate Chair Authorization**

- 3.1 The Department Chair grants the authority to execute or delegate this level of authorization for their functional areas to current holders of the following position: Associate Chair for ESSHQ, Associate Chair for Accelerators, Associate Chair for Superconducting Accelerator R&D.

4. **Division Head Authorization**

- 4.1 The Department Chair grants the authority to execute or delegate this level of authorization for their programmatic areas to current holders of the following positions: Accelerator Division Head, Experimental Support & Facilities (ES&F) Division Head, Controls Division Head, ESSHQ Division Head. The Department Chair may appoint Acting Division Heads for these positions.
- 4.2 The Accelerator Division Head delegates the authority to execute this level of authorization to the Deputy Accelerator Division Head. The Accelerator Division head may appoint an Acting Deputy.

- 4.3 The Experimental Support & Facilities (ES&F) Division Head delegates this level of authorization to the Deputy ES&F Division Head. The Experimental Support & Facilities (ES&F) Division Head may appoint an Acting Deputy.
- 4.4 The Controls Division Head delegates this level of authorization to the Deputy Controls Division Head. The Controls Division Head may appoint an Acting Deputy.
- 4.5 The ESSHQ Division Head may appoint and delegate this level of authorization to an Acting ESSHQ Division Head.

5. Group Leader or Supervisor Authorization

- 5.1 Individuals with Department Chair authorization or Division Head authorization delegate Group Leader or Supervisor Authorization to those designated as "Group Leaders" and "Supervisors" for OPM related activities. Current authorized "Supervisors" and "Group Leaders" are indicated in the [C-A Organization Chart](#) with either a GL or TS designation.

6. Authorization to Operate Systems

- 6.1 All persons who manipulate the systems that control the Department's S&T machines must have authorization to operate the systems. Operators may be authorized to operate the systems only after appropriate training. Training requirements and training status are tracked by the Brookhaven Training Management System ([BTMS](#)).
- 6.2 Systems Specialists may operate their specific systems with the concurrence of the Operations Coordinator or, in the absence of shift operation, with the Supervisor authorization. Operator trainees or Operations Coordinator trainees shall operate the system only in the presence of and under the supervision of authorized Operators or Operations Coordinators, respectively.

7. S&T Machine Startup or Restart Authorization

- 7.1 The overall execution of the program is subject to Department Chair authorization. The startup of shift operations is subject to Associate Chair for Accelerators authorization. Within this overall authorization covering the execution of the program, the on-duty Operations Coordinator is authorized to start or restart operations at TVDG, LINAC, Booster, NSRL, AGS and RHIC in accordance with the procedures indicated in the [C-A Operations Procedures Manual](#).

8. Work Control Authorization

8.1 For the purpose of planning work, the Department Chair shall designate a C-A Work Control Manager and C-A Work Control Coordinators.

9. Maintenance Coordinator Authorization

9.1 All scheduled operationally related maintenance for each Division's work shall be done with the authorization of the Divisional Maintenance Coordinator or Acting Divisional Coordinator. Accelerator Division line authority is required to appoint the Accelerator Division Maintenance Coordinator or Acting Coordinator. ES&F Division line authority is required to appoint the ES&F Division Maintenance Coordinator or acting Coordinator.

10. Authorization to Classify, Remove or Approve Procedures in the OPM

10.1 Procedures require literal compliance since deviation could trigger consequences which result in breaking the safety envelope of the accelerator (see [OPM 2.5](#)), affect the safety of employees, visitors, contractors, or experimenters (users), have an adverse impact on the environment or on C-A operations. Exceptions to literal compliance require review and written approval by the appropriate safety committee.

10.1.1 The Department Chair or the Associate Chair for ESSHQ may authorize removal of procedures from the OPM when such procedures are deemed no longer applicable.

10.1.2 The Department Chair or the Associate Chair for ESSHQ is authorized to classify OPM procedures as safety-related.

10.1.3 The Department Chair or the Associate Chair for ESSHQ is authorized to designate the reviews and approvals required for OPM procedures.

11. Authorization to Approve Temporary Procedures or Other Non-OPM Procedures

11.1 The Department Chair or the Associate Chair for ESSHQ is authorized to designate the reviews and approvals required for temporary or other non-OPM procedures.

12. Department Chair, Division Head, Group Leader, ESH Committee Chair and Quality Assurance Sign-Off of Procedures

12.1 Sign-off (approval) by the Department Chair, the appropriate Division Head, the appropriate Group Leader, ESH Committee Chair and/or Quality Assurance Representative is required before procedures receive authorization.

12.1.1 The Department Chair or designate shall sign-off (approve) procedures requiring Department Chair authorization.

12.1.2 Division Heads shall sign-off (approve) procedures requiring Division Head authorization.

12.1.3 Group Leaders shall sign-off (approve) procedures requiring Group Leader authorization.

12.1.4 The Department Chair or the Associate Chair for ESSHQ shall decide when to assign a Committee Chair and a Quality Assurance Representative to sign-off (approve) a procedure.

13. Procedure Review Frequency

13.1 All C-A procedures shall be reviewed at least once every three years for technical consistency and for compliance with BNL's [SBMS Subject Areas](#).

14. Committees, Lists and Organization Chart Approval (Sign-Off)

14.1 Committee memberships shall be approved and documented by the Department Chair.

14.2 Department level organization charts shall be signed-off by the Department Chair.

14.3 Division level organization charts shall be signed-off by the appropriate Division head.

14.4 The ESSHQ Division head shall approve the list of [Local Emergency Coordinators](#).

14.5 The ESSHQ Division head shall approve the list of Building Managers. The [Building Manager List](#) contains the names of those designated as such, plus other building information.

14.6 The ESSHQ Associate Chair, and/or designee, and the ESSHQ Division Head for Safety, shall approve escorts into Primary Areas. The [Primary Area Escort List](#) contains a list of qualified escorts.

14.7 The ESSHQ Division Head shall maintain an organization listing to establish reporting relationships and to identify ESSHQ responsibilities (see [ESSHQ Division Organization Chart](#)).

15. Modification of Training Authorization

15.1 Authority to add, delete, or modify information in the training documentation ([BTMS](#)) is delegated to the C-A Training Manager, C-A ESSHQ Division Head, and C-A Associate Chair for ESSHQ.

16. Authorization to Approve QA Level Classifications

16.1 The Department Chair delegates the authority to execute or delegate the execution of this approval to current holder of the position of QA Manager.

17. Authorization to Approve Purchase Requisitions & ILRs for ESH or QA Compliance

17.1 The Department Chair delegates the authority to execute QA compliance approval to the QA Manager.

17.2 The Department Chair delegates the authority to execute ESH compliance approval to the ESSHQ Division Head and ESH Coordinators.

18. Authorization to Declare Systems as "Critical"

18.1 [C-A-OPM 1.5](#) permits the designation of "critical" circuits, e.g., those circuits which may need to be "worked hot" when there is a greater risk to overall life safety than would exist if the system was disabled.

18.1.1 C-A Department delegates the authority to define critical circuits to the Chief Electrical Engineer.

19. Authorization to Approve Procedures for Energized Circuit Work

19.1 The following positions are authorized to approve generic and specific permits and procedures for energized circuit work.

19.1.1 The Department Chair, Associate Chair for ESSHQ, ESSHQ Division Head and Chief Electrical Engineer.

20. Authorization to Approve Lock & Tag Checklists

20.1 Current holders of the following positions are authorized to approve Lock & Tag Checklists.

20.1.1 The Department Chair, Associate Chair for ESSHQ, ESSHQ Division Head, ESH Coordinator, Chief Electrical Engineer, Chief Mechanical Engineer, the on-duty Operations Coordinator and the Divisional Maintenance Work Coordinators.