

*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 kept on file in the C-A ESHQ Training Office, Bldg. 911A.*

C-A OPERATIONS PROCEDURES MANUAL

8.16.3 C-A Cooling Systems Operating Guidelines

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Hand Processed Changes

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

L. Vogt

8.16.3 C-A Cooling Systems Operating Guidelines

1. Purpose

To provide general operating instruction to the Water Systems technicians for the operation of C-A cooling systems.

2. Responsibilities

Water Systems technicians start and stop these systems.

3. Prerequisites

3.1 All personnel involved in working on any electrical system or equipment in the C-A shall be familiar with BNL ES&H Standards 1.5.0, 1.5.1 and 1.5.2. C-A will provide on-site/work specific training to individuals in the electrical safety aspects of their job functions and assignments.

3.2 Startup - Request permission from affected personnel, CAS, MCR.

3.3 Verify that secondary cooling is on.

3.4 Shutdown - Request permission from affected personnel or groups.

3.5 Qualified and trained Water Systems technician.

4. Precautions

4.1 Do not operate pumps without water, or with valves closed, (equipment and personnel damage possible due to steam entrapment).

4.2 Systems with PLC Control have Automatic Restart, (LOTO required for any work on equipment).

5. Procedure

5.1 Verify that water level is within operating level.

5.2 Open suction and discharge valves on selected pump.

5.3 Ensure circuit breaker is off.

5.4 LOTO or lock breaker.

5.5 Roll pump shaft by hand.

- 5.6 Remove LOTO or lock from breaker.
- 5.7 Reduce set point on pressure controller, if applicable, to 25 - 50 psi.
- 5.8 Turn on circuit breaker for selected pump.
- 5.9 Start pump in hand at local start/stop station, or In Auto with reset at plc Rack.
- 5.10 Increase set point on pressure controller, if applicable, to system supply pressure set point.
- 5.11 Verify system parameters are within range for proper operation.
- 5.12 Observe pump operation and restore alarms, if applicable.
- 5.13 For shutdown, turn off pump, close suction and discharge valves, and secure alarms, if applicable.
- 5.14 Inform Water Group Watch of change of equipment status.

6. Documentation

None

7. References

None

8. Attachments

None