



Procedure: C-A-OCF-004-CWS  
Revision: 05  
Revision Date: 03/15/04

## COLLIDER-ACCELERATOR DEPARTMENT

Title: Operational Control Form For C-A Cooling Water Systems

Author: M. Van Essendelft

Group: ESH&Q

### Approvals

Signature on File \_\_\_\_\_ Date: \_\_\_\_\_  
ESH&Q Division Head

Signature on File \_\_\_\_\_ Date: \_\_\_\_\_  
Collider-Accelerator Department Chairman

(Indicate additional signatures)

- |                                     |                                     |  |             |
|-------------------------------------|-------------------------------------|--|-------------|
| Y                                   | N                                   |  |             |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | FS Representative: _____                                     | Date: _____ |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Radiological Control Coordinator: _____                      | Date: _____ |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Chief ME: _____  | Date: _____ |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Chief EE: _____  | Date: _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Environmental/P2 Coordinator: _____ <i>Signature on File</i> | Date: _____ |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | QA Manager: _____  | Date: _____ |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Other: _____   | Date: _____ |

## BNL ENVIRONMENTAL MANAGEMENT SYSTEM OPERATIONAL CONTROLS FORM

<b>OPERATIONAL CONTROL FOR SIGNIFICANT ENVIRONMENTAL ASPECTS:</b> AGS-004-CWS	<b>COMPLETED BY:</b> <u>M. VAN ESSENDELFT</u> <b>DATE:</b> <u>MARCH 15, 2004</u>
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**1. Operation(s):** C-A Cooling Water Systems

- 2. Activity(ies):**
- Chemical storage
  - Chemical transfer / transport
  - Cooling tower blow-down to recharge basin
  - Radioactive waste generation
  - Radioactive atmospheric discharges
  - Water consumption

- 3. Operational Controls (technological, operational, procedural operating criteria):**
- Secondary containment
  - Hi / low level alarms
  - Leak detection systems
  - Weekly system monitoring by Drew Industrial Division of Ashland Chemical
  - Monthly effluent monitoring/reporting
  - Inspections of chemical storage/feed systems
  - [C-A OPM 2.19](#), Operator Response to "Make-up" Alarms
  - [C-A OPMs 8.16.1 through 8.16.8](#), LINAC Cooling Water System OPMs
  - [C-A OPM 8.20](#), Handling and Disposing of Hazardous Waste
  - [C-A OPM 8.20.2](#), Radioactive Waste Disposal
  - [C-A OPM 8.22](#), Handling and Disposal of Non-Hazardous and Recyclable Solid Waste
  - [C-A OPM 8.20.1](#), C-A Hazardous Waste Collection Station
  - [C-A OPM 8.18.1](#), General Water Treatment
  - [C-A OPM 8.18.1.a](#), Water Treatment Services Agreement with Drew Industrial Division of Ashland Chemical
  - [C-A OPM 8.18.4](#), RHIC Deionizer Handling Procedure
  - [C-A OPM 8.18.5](#), C-A Deionizer Resin Exchange Procedure
  - [C-A OPM 8.31.c](#), Deionizer Maintenance
  - [C-A OPM 8.31.e](#), Draining and Filling Systems Checklist
  - [C-A OPM 8.31.f](#), Water Transfer Checklist
  - [C-A OPM 10.2](#), Response To Tritiated Water Spills
  - [C-A OPM 10.1.d](#), Operator Response to C-A Water Spills

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<ul style="list-style-type: none"> <li>• <a href="#">C-A OPM 2.28</a>, C-A Procedure for Work Planning and Control for Operations</li> <li>• <a href="#">C-A OPM 1.14</a>, General requirements For Liquid and Outdoor Storage</li> <li>• Tier I program and self-evaluations</li> </ul>	
<b>4. Maintenance Plan(s):</b> <ul style="list-style-type: none"> <li>• PE annual cross-connection control plan (PE Maint. Mgmt. Center database)</li> <li>• C-A Water Systems Group inspection of chemical storage systems</li> <li>• Weekly analysis of cooling water specified in Drew Industrial contract</li> <li>• PE maintenance of chemical feed systems</li> </ul>	
<b>5. Actions to be Taken if Controls Fail:</b> <ul style="list-style-type: none"> <li>• See <a href="#">C-A OPM 3.0</a>, Local Emergency Plan for the C-A Department</li> <li>• Call spill response hotline – X2222 or 911</li> <li>• Adjust water chemical levels if found to be outside limits.</li> </ul>	
<b>6. Records:</b> <ul style="list-style-type: none"> <li>• Tier I Inspection records / Tracking Database</li> <li>• Operational Control Form</li> <li>• Process Assessment Form / Corrective Action, P2 Measures, and Assessment, Prevention &amp; Control Initiatives Tracking Database</li> <li>• C-A Family ATS documentation on completion of Environmental Management Program, Section 10 Tasks</li> <li>• ORPS report (for qualifying liquid spills only)</li> <li>• Weekly analytical results on cooling system water (Drew),</li> <li>• Monthly SPDES sampling and DMR (EWMSD)</li> <li>• Chemical distribution system maintenance records (PE)</li> <li>• C-A Water Systems Status of Equipment Log</li> <li>• Satellite Area inspections records</li> <li>• Tank inspection records</li> </ul>	

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**7. Responsibilities:** [(a) to ensure controls are in place; (b) to ensure controls keep working; (c) to take action when controls fail; (d) to create and keep records relative to operational controls]

Name	Responsibility
C-A Water Systems Tech Supervisor	Daily inspections of chemical storage systems Testing of hi/low level systems Testing leak detection systems Adjust chemical concentrations if limits exceeded Monthly inspection of storage tanks
EWMSD	Recharge basin monitoring
PE	Annual Cross Connection Control testing / maint.
Drew	Weekly water analysis, chemical control recommendations, recommendations for chemical feed station upgrades, evaluation of corrosion control results.
PE	Maintenance of chemical feed systems
C-A Waste Management Representative	Satellite Area inspections
Tier I Inspection Committee	Tier I Documentation

**8. Training:**

Name	Training	Date
C-A Water Systems Technical Supervisor	Haz. Waste Generator Rad. Waste Generator	NA
Drew Industrial techs	Contractor vendor orientation	NA
Building Staff	See also: <a href="#">EMS Training package</a> for this operation	NA