

*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

14.9.1 Operational Control Form for RHIC Cooling Water Systems

Text Pages 2 through 5

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: _____ *Signature on File* _____
 Collider-Accelerator Department Chairman Date

M. Van Essendelft

**BNL ENVIRONMENTAL MANAGEMENT SYSTEM
OPERATIONAL CONTROLS FORM**

OPERATIONAL CONTROL FOR SIGNIFICANT ENVIRONMENTAL ASPECTS: _____	COMPLETED BY: <u> M. VAN ESSENDELFT</u> DATE: <u> MAY 21, 2008</u>
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<p>1. Operation(s): RHIC Cooling Water Systems (RHIC-523 + 528-CWS)</p>
<p>2. Activity(ies):</p> <ul style="list-style-type: none"> • Cross connection control for water make-up • Chemical storage • Chemical transfer/transport • Chemical dispensing • Waste resin storage • Waste resin disposal • Waste characterization • Cooling system blow-down to recharge basin • Cooling system maintenance • Water consumption • Radioactive waste generation • Radioactive atmospheric discharges
<p>3. Operational Controls (technological, operational, procedural operating criteria):</p> <ul style="list-style-type: none"> • Secondary containment • Hi/low level detection systems • Leak detection systems • Weekly system monitoring by Drew Industrial Division of Ashland Chemical • Monthly effluent monitoring/reporting • Inspections of chemical storage/feed systems • Tier I program and self-evaluations • Chemical Management System (For chemicals other than water treatment) • Labeled containers for recycling solder/solder tailings • The following operational procedures: <ul style="list-style-type: none"> 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 8.18.5, C-A Deionizer Resin Exchange Procedure C-A OPM 8.31.c, Deionizer Maintenance

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

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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 Technical 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
EWMSD Radioactive Air Emissions Subject Matter Expert	Submit annual NESHAPs report to EPA
EWMSD Liquid Effluent Subject Matter Expert	Review liquid discharges for release authorization
PE	Annual Cross Connection Control testing / maint. Maintenance of chemical feed systems
Drew	Weekly water analysis, chemical control recommendations, recommendations for chemical feed station upgrades, evaluation of corrosion control results.
Tier I Inspection Committee	Tier I Documentation
C-A Waste Management Representative	Inspect Satellite Areas, interface with C-A Environmental Coordinator to process C-A waste for characterization and pick-up
C-A Environmental Compliance Representative	Submit liquid effluent evaluations to appropriate Subject Matter Expert for new or modified effluents

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8. Training:		
Name	Training	Date
C-A Water Systems Technical Supervisor	Haz. Waste Generator Rad. Waste Generator	N/A
Drew Industrial techs	Contractor vendor orientation	N/A
Building Staff	See the EMS Training package for this operation	N/A