COLLIDER-ACCELERATOR DEPARTMENT

Title: Environmental Management Program For g-2 Operations

Prepared by: D. Passarello
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		
☐	x	FS Representative:_____	Date:_____
☐	x	Radiological Control Coordinator:_____	Date:_____
☐	x	Chief ME:_____	Date:_____
☐	x	Chief EE:_____	Date:_____
x	☐	Environmental/P2 Coordinator:___*Signature on File*_____	Date:_____
☐	x	QA Manager:_____	Date:_____
☐	x	Other:_____	Date:_____

ENVIRONMENTAL MANAGEMENT PROGRAM g-2 Experiment, PEP ID# AGS-579-G2	**Completed by:** D. Passarello **Date:** December 14, 2001

1. **Significant Aspects:** (see table of "Criteria for Significant Aspects" for description of letter designation)
   - Radioactive Waste (a)
   - Atmospheric discharge (b)
   - Liquid discharge (b, c)
   - Soil activation (a)
   - Power Consumption (a)

2. Objective(s):

- Implement pollution prevention/waste minimization practices that eliminate, minimize or mitigate environmental impacts. (FY02 Critical Outcome/objective 3.2.2.1, FY02 ES&H Supporting Assessment Measures on Recycling of Solid Waste and Regulated Waste Management)
- Maintain compliance with applicable environmental protection requirements using the established Laboratory program to evaluate compliance. (FY02 ES&H Supporting Assessment Measure on Environmental Compliance).

3. Target(s):

- Submit pollution prevention projects, success stories or lesson learned for the C-A EMS program as specified in the pollution prevention performance measure.
- Minimize number of significant spills at C-A facilities to < 3.
- Track and trend waste generation rates to meet expected performance trends.
- Continue to evaluate Assessment, Prevention an Control opportunities identified in process evaluations

4. Environmental Performance Indicator(s):

- Tier I inspection results
- Number of SPDES Permit exceedences by C-A as reported by BNL ESD.
- P2 projects, success stories, and lessons learned that are submitted to BNL P2 Council.
- Number of significant spills at C-A facilities.
- Volume/weight of routine wastes sent to BNL Waste Management Division
- Downgradient-groundwater radionuclide-concentration trends.

5. Program Description:

Departmental self-assessment program, Tier I inspections, and annual compliance reviews by the C-A ESHQ Division ECR are designed to meet the Environmental Compliance and Safety and Health ES&H Supporting Assessment Measures in the FY02 Critical Outcomes, Objectives and Performances Measures. Submitting pollution prevention projects, success stories or lessons learned contribute towards achieving FY02 Critical

Outcome/objective 3.2.2.1. Tracking and trending waste generation and waste recycling as well as on time regulatory reporting contribute towards achieving the Regulated Waste Management and Safety and Health ES&H Supporting Assessment Measures in FY02 Critical Outcomes, Objectives and Performances Measures. The minimization of wastes, prevention of spills and meeting SPDES permit limits also helps satisfy the BNL Environmental, Safety, and Health critical outcome.

Through the implementation of C-A OPM 6.1.10, "ALARA Strategies For Tuning During Proton Operations" there is a reduction in unexpected soil activation, and periodic removal of g-2 cooling water maintains tritium concentrations at low levels such that the impact from any spills or other water losses will have a reduced environmental impact.

To ensure the continued effectiveness of soil caps, C-A Liaison Engineers have a documented soil cap maintenance program. In addition, groundwater monitoring conducted by the Environmental Services Division provides confirmatory data regarding cap effectiveness.

6. Potential Environmental Impact(s):

- Radioactive waste mismanagement could contaminate the environment and incur RCRA or local regulatory agency penalties.
- Improper discharges to recharge basins could result in a violation of the BNL SPDES permit.
- Unreported water losses or spills could lead to soil and/or groundwater contamination.
- Uncorrected beam losses could result in unanticipated soil activation and/or additional groundwater contamination

7. Legal and Other Requirements:

The following BNL SBMS subject areas apply:

- Storage and Transfer of Hazardous Material
- Liquid Effluents (SPDES Permit – Outfall 006)
- Radioactive Waste Management
- Spill Response

8. Operational Controls: See Operational Controls Form

9. Budget: C-A Operating Budget, (ESD groundwater sampling is backcharged to the C-A Department.)

10. Structure, Authorities, Responsibilities		
Tasks	**Person Responsible**	**Completion Dates**
Corrective Action: See Phase II corrective action tracking database	ECR	Completed, No new Corrective Actions in FY02
Pollution Prevention: See Phase II P2 tracking database	ECR	Completed, No new Pollution Preventions in FY02
Assessment, Prevention and Control: See Phase II APC tracking database	ECR	06/01/03