

Memo

date: November 29, 2004

to: Distribution

from: Andrew Ackerman

subject: Beam line equipment safety lists

In an effort to define what equipment is to be included on these new 'equipment safety lists' and to provide some example for our PRT management in assembling their own lists, we began with beam line X26A. A review of that line shows that our best way to proceed in creating these lists is to break the line into significant components and describe the potential hazards associated with each. The summary below lists the equipment found at X26A that we determined should be listed because the specifications for the power supplies associated with these devices exceeds the BNL electrical hazard range A. We found no other equipment with sufficient stored energy to present a concern and be included on these lists. With the italicized text resolved, the information included in the X26A example below is sufficient to identify the potential hazards on that line and satisfy the list requirement.

Keeping these lists current could be a challenge. We could require both an annual update and update when significant changes are made (new installation, new risk). The lists are to be kept at the beam lines, but it is not yet determined exactly how they will be used. We could ask that they be referenced in BLOSA training and that way assure that everyone knows of their existence and purpose. They will also serve to identify Lock Out/Tag Out (LOTO) requirements. The review of X26A suggests that we will need to expand the existing LOTO program to include some beam line operations.

In general, we expect power to the following equipment to exceed electrical hazard range A and so need to be included in the equipment safety lists:

- Ion chambers
- Ion gauges
- Solid state detectors
- Ion pump controllers

At X26A, we excluded the motor drivers as they do not exceed electrical hazard range A.

BNL electrical hazard range A is defined in ESH Standard 1.5.0 as:

“Ac and/or dc voltages less than or equal to 50 V; or
All ac sources with less than 10mA rms available current; or
All dc sources with less than 60mA available current; or
Sources limited to an instantaneous release of less than 10 J of energy.”

X26A Equipment Safety List

11/23/2004

Andrew Ackerman
John Aloï
Anthony Lanzirotti

Anthony Lanzirotti is the Local Contact for this beam line and is the 'Point of Contact' for the safe configuration of all the equipment listed here.

SLIT TANK

1 ion gauge controller; *power supply Identity & location description*
1 ion pump controller; *power supply Identity & location description*

MIRROR TANK

1 ion gauge controller; *power supply Identity & location description*
1 ion pump controller; *power supply Identity & location description*

MISCELLANEOUS ALONG BEAM LINE

2 ion chambers (*location description*); *power supply identity and location description*

IN HUTCH

1 ion chamber (*location description*); *power supply identity and location description*
1 solid state Ge detector (*location description*); *power supply identity and location description*

Distribution:

J. Aloï
M. Buckley
R. Casey
R. Chmiel
R. Church
S. Ehrlich
N. Gmur
E. Johnson
S. Hulbert
C.C. Kao
A. Kuczewski
T. Lanzirroti
T. McDonald
K. Warburton

* * *