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BROOKHAVEN NATIONAL LABORATORY

Memo

date: *June 17, 2005*

to: *A-C Experimental Safety Review Committee (ESRC)*

from: *Yousef Makdisi*

subject: *Minutes of the Review of the NASA D-line run*

Present: P. Cirnigliaro, A. Etkin, G. Greene, R. Karol, D. Lazarus, E. Lessard, Y. Makdisi, P. Sampson, J. Scott, M. Van Essendelft

The NASA experiment will be installed in the D-Line on the AGS floor. The experiment will utilize beams of carbon, iron, and silicon at energies of 3, 5, and 10 GeV and intensity varying between 10^3 and 10^4 ions per pulse impinging on varying targets two of which are water and a soil composition simulating the soil on the Moon and Mars.

The experiment will utilize the following types of instrumentation: scintillation counters viewed by phototubes, silicon strip detectors, and neutron counters fronted with charged veto counters. The neutron counters are liquid scintillators NE 213 similar to BC-510A (the MSDS indicates that xylene as the dominant material) housed in a cylindrical aluminum cell 5 in deep. The front face is 1/16 in Al and the back is ¼ in glass.

The following issues need to be addressed:

1) Disposal of the few liters of the irradiated water target will be the responsibility of C-AD (John DeBoer/Joel Scot)
2) A secondary containment is required under each neutron counter. (Phillips)
3) Oversee the installation and handling of the neutron counters to assure containment during repositioning. (Lazarus)
4) Lazarus will contact the experimenters to get a complete list of the targets to be used and assure responsibility for disposal upon completion of the experiment.
5) The detector stands are to be made from Unistrut with plywood as the flat surface and approved by Joe Levesque in an email to Makdisi dated June 13, 2005.
6) The experiment received dispensation from Jon Sandberg to allow cable runs outside cable trays. However, the layout should not form impediments to those traversing the area.
7) Provide schematics for home built electronics (silicon detectors). (Lazarus)
8) Etkin and Sandberg will inspect the power supplies to assure accepted National Laboratory certification.
9) An experiment emergency procedure and work plan will be developed. (Cirnigliaro)

cc:

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D. Lowenstein
J. Miller
P. Pile

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