

**SPALLATION NEUTRON SOURCE**

MANAGED BY UT-BATTELLE  
FOR THE U.S. DEPARTMENT OF ENERGY  
701 SCARBORO ROAD, OAK RIDGE, TN 37831-8218



Date: 2004-02-12

**Electrical Safety Committee Memorandum**

Committee members:

David Anderson – RF, Ron Battle – Target, John Crandall - Vacuum, Bill Stone –Controls, Scott Fisher – Electrical / Power Supply, Paul Gibson – Ion Source, Paul Holik – Electrical (chairman), Don Richied – Cryogenics

From: Paul Holik

Subject: Electrical Equipment Approval

The SNS project is facing the issue mandated by OSHA and DOE requirements for installation of new electrical equipment.

The requirement mandating that electrical equipment be approved is set forth at OSHA 29 CFR 1910.303a, and OSHA 29 CFR 1910.303b requires that approved equipment be used in conformance with its approval.

OSHA Standard Interpretation and Compliance Letters read the following:

“Custom made equipment which is designed, fabricated for, and intended for use by a particular customer does not have to be approved if it is determined to be safe for its intended use by its manufacturer. The determination must be made on basis of test data that the employer keeps and makes available to the Assistant Secretary of Labor for OSHA.”

DOE handbook – DOE-HDBK-1092-98 article 2.5 describes approval of electrical equipment and first sentence states the following: All electrical equipment, components, and conductors shall be approved for their intended uses, as follows: etc.

Conclusion of this mandate reads: A non listed, non labeled, noncertified component may be used if it is of a kind that no Nationally Recognized Test Laboratory (NRTL) covers, and then it shall be tested or inspected by the local authority responsible for enforcing the Code. E.g.: The custom made equipment should be built in accordance with a design approved by Authority Having Jurisdiction (AHJ).

The SNS management should appoint AHJ who, in case of equipment approval, should be the cognizant chief engineer of the particular equipment. This person then should lead the effort of documenting the equipment approval.

Standard procedure for NRTL nonlisted equipment should be developed and it could be as follows:

Equipment identification

Examination for safety (OSHA 29 CFR 1910 S and NEC)

Classification by type, size, voltage, current, stored energy and specific use

Approved as safe for intended use – label, test, certify.

Document

Once Approved and Documented for intended use, the designated cognizant engineer, group electrical safety officer, department safety officer and system team leader (Operations or/and group leader) should sign off the documented approval.

Department Safety Officer should then maintain these Electrical records along with other pertinent safety records for the equipment.

PSH/psh