Tandem Accelerator Operator Training Checklist

Trainee_________________________ Duke Unique ID__________________

Machine Protection Systems

_____ 1. Review the function and normal operating parameters of all water-cooling systems per the SOP.

_____ 2. Review the standard responses in the SOP to alarms:
   _____ (a) Chiller Alarm – Yellow Beacon and Bell, Restart Chiller per SOP (include identifying Chiller reset panel in the mechanical room);
   _____ (b) 50 degree chilled water system – Yellow Beacon and temperature readout alarm;
   _____ (c) ABPIS DI chilled water system alarm, yellow beacon and temperature readout alarm;
   _____ (d) 80-deg chilled water system: yellow beacon and temperature readout alarm; and
   _____ (e) Compressed air system: Yellow beacon and pressure readout alarm.

_____ 3. Review the accelerator charging system.

_____ 4. Review the nominal ranges for pressures in beam lines from source to target.

Personnel Safety Systems

_____ 1. Review location of all fixed radiation monitors.

_____ 2. Review of emergency shutdown procedures for subsystem failures, e.g., ion beam sources.

_____ 3. Review the locations of portable radiation survey instruments (both for neutrons and gamma-rays).


Accelerator Operation

_____ 1. Review procedures for transport of beam to the high-energy end of the tandem.

_____ 2. Review the procedures for securing the tandem bays and target rooms prior to introducing beam.

_____ 3. Review the safety interlock panel system and operation.

_____ 4. Review the standard announcement procedure for putting beam through the tandem.

_____ 5. Review the logging procedure for the accelerator controls and also the radiation levels; the trainee must be able to log the accelerator controls unsupervised.

Training Supervisor____________________ Date______________

TUNL Faculty________________________ Date______________