

RPR 32A. PARTICLE ACCELERATOR SAFETY INSPECTION

Responsible user: _____ Group #: _____ Phone: _____

Location (Bldg. & Room) _____ Installation date: _____

Type and use _____ Manufacturer _____ Model _____ Serial No. _____

Open beam Control unit:

Enclosed beam

Inspection date: _____

FACILITY REQUIREMENTS

"CAUTION - X-RAY EQUIPMENT" (or equivalent) sign at entrance? **Yes No**

"NOTICE TO WORKERS" (DRC-04) posted conspicuously? **Yes No**

"CAUTION HIGH RADIATION AREA" posted? **Yes No**

CONTROL AND INTERLOCK SYSTEMS

Controls labelled? **Yes No**

Interlocked High Radiation Areas? **Yes No**

Scram or Emergency stop button? **Yes No**

WARNING DEVICES

Rotating or flashing warning light at entrances? **Yes No**

Audible warning 15 seconds prior to system activation? **Yes No**

OPERATING PROCEDURES

System secured from unauthorized use? **Yes No**

Warning and safety devices are tested quarterly? **Yes No**

Circuit diagrams available? **Yes No**

VENTILATION CONTROL

for research electron accelerators

Ozone concentration < 0.1 ppm (TLV) **Yes No**

RADIATION MONITORING

Continuous radiation monitoring in high radiation areas, independent of accelerator controls and interlock systems, with readout at the console? **Yes No**

Radiation monitors calibrated annually and after repairs? **Yes No**

RADIATION SURVEYS

Annual survey instrument calibration?	Yes	No
Was the last radiation survey/facility evaluation performed no more than 12 months ago?	Yes	No
Since the last radiation survey, have any of the following conditions occurred?		
Removal or disassembly of any component that normally stops the primary beam?	Yes	No
Exposure of more than 1,000 mrem per quarter to any finger dosimeter?	Yes	No

EQUIPMENT REQUIREMENTS

Signs and Labels

"CAUTION: HIGH INTENSITY X-RAY BEAM" - on source housing?	Yes	No
"CAUTION - RADIATION. THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED" - near switch used to turn on unit?	Yes	No

Warning Lights or Devices - All Units

"BEAM - ON" light - near any switch that energizes the system	Yes	No
On new equipment installed after November 1983 light shall be fail safe	Yes	No

OPERATING REQUIREMENTS

Are written operating procedures available to all users of x-ray equipment?	Yes	No
Has written approval been granted by the Radiation Safety Committee or the RSO for operation of the unit in a manner other than specified in the written procedure or for bypassing safety devices?	Yes	No

PERSONNEL REQUIREMENTS

Have all persons operating x-ray equipment received instruction and demonstrated adequate knowledge of:

Utah Rules (R313-44) and facility operating procedures;	Yes	No
radiation hazards associated with use of equipment;	Yes	No
significance of radiation warning and safety devices;	Yes	No
symptoms of acute localized exposure; and	Yes	No
procedure for reporting actual or suspected exposure?	Yes	No

Personnel Monitoring

Have personal monitoring devices (body or ring badges) been issued?	Yes	No
If "Yes", are they used in compliance with University requirements?	Yes	No

RADIATION SURVEY DATA

Radiation survey meter(s) available at facility:

Make/Model: _____ Ser. No.: _____ Calibration Date: _____

Make/Model: _____ Ser. No.: _____ Calibration Date: _____

Radiation survey meter(s) used for this survey, if different:

Make/Model: _____ Ser. No.: _____ Calibration Date: _____

Make/Model: _____ Ser. No.: _____ Calibration Date: _____

Survey results:

With machine operating at usual kVp and mA:

Maximum exposure rate within 30 cm from shield walls: _____ mR/hr

Is the dose rate less than 2.5 mrem/hr? **Yes No**

Maximum exposure rate at operator's position: _____ mR/hr

Is the dose rate less than 2.5 mrem/hr? **Yes No**

Surveyed By: _____

Upon completion, send this inspection report to:

Radiological Health Department, 322 RAB (Campus Address)