

ANALYTICAL X-RAY MACHINE APPLICATION CHECKLIST

Responsible user: _____ Phone: _____

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

<u>Type and use</u> <input type="checkbox"/> Open beam <input type="checkbox"/> Fully enclosed [CX] <input type="checkbox"/> Diffraction [XD] <input type="checkbox"/> Fluorescence [XF] Accessory equipment (powder cameras, goniometers, etc.)	<u>Manufacturer</u> <u>Model</u> <u>Serial No.</u> Control unit: _____ Number of ports available: _____ In use: _____ Target material _____ Max. kVp _____ Max. mA _____ Application date _____
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FACILITY REQUIREMENTS

“CAUTION – X-RAY EQUIPMENT” (or equivalent) sign at entrance?	Yes	No
“NOTICE TO WORKERS” (NRC form 3) posted conspicuously?	Yes	No

X-RAY EQUIPMENT REQUIREMENTS

Safety Devices

Required on open beam units – a device that prevents any portion of the body from entering the primary beam, or a device that terminates the beam if obstructed. Yes No

IF “NO”, has exemption been filed? Yes No

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

“X-RAY ON” light – near any switch that energizes and near any x-ray port. Yes No

The warning light(s) **shall** be fail-safe. Yes No

Additional warning devices required for open beam units

X-RAY TUBE STATUS, “ON/OFF” – located near the radiation source housing, and at or near the port, if the primary beam is controlled in this manner. Yes No

Shutter Status “OPEN/CLOSED” – located near each port on the radiation source housing, if the primary beam is controlled in this manner. Yes No

All warning devices must be fail safe. Yes No

Ports and Shutters

Unused ports on radiation source housing **shall** be secured in the “closed” position in a manner that will prevent casual opening, i.e. without the use of tools. Yes No

On equipment installed after November 1983, open beam units **shall** have ports equipped with a shutter that cannot be opened unless a local component has been connected. Yes No

OPERATING REQUIREMENTS

Are written operating procedures available to all users of x-ray equipment? Yes No

ANALYTICAL X-RAY MACHINE APPLICATION CHECKLIST (cont'd)

PERSONNEL REQUIREMENTS

Have all persons operating x-ray equipment received both Institutional Analytical X-Ray and on-the-job instruction and demonstrate adequate knowledge of:

radiation hazards associated with use of equipment;	Yes	No
significance of radiation warning and safety devices;	Yes	No
operating procedures;	Yes	No
symptoms of acute localized exposure;	Yes	No
procedure for reporting actual or suspected exposure?	Yes	No

Personal Monitoring

For open-beam systems, have personal monitoring devices (ring badges) been issued? Yes No

If "Yes", are they used in compliance with University requirements? Yes No

RADIATION SURVEY EQUIPMENT

Radiation survey meter(s) available at facility:

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

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Upon completion, send this application checklist to:

Technical Safety Office
Box 8106