



ANNUAL CALIBRATION SUMMARY

State Form 46889 (R2 / 5-12)
 INDIANA STATE DEPARTMENT OF HEALTH
 MEDICAL RADIOLOGY SERVICES

Facility registration number		Name of facility	
Date of inspection (month, day, year)	Date of last inspection (month, day, year)	Check to add this machine <input type="checkbox"/>	Check to delete this machine <input type="checkbox"/>
Name of new owner (if applicable)			
Machine number	Machine design (use codes)	Location	Manufacturer (use codes)
Date of manufacture (month, year)	Model number	Serial number	

QUALITY MANAGEMENT PROGRAM

Submit the following departmental quality assurance documents if changes have been made to the documents submitted with the Initial Commissioning Survey:

- Treatment planning computer and dose calculated algorithm QA procedures
- Patient chart review policy and procedures
- Weekly output constancy check policy and procedure
- Monthly output spot check procedure

DOSIMETRY SYSTEM AT FACILITY

Manufacture of cylindrical chamber	Model of cylindrical chamber	Date of ADCL calibration (month, day, year)
Manufacture of parallel plate chamber	Model of parallel plate chamber	Date of N gas derivation (month, day, year)
Manufacture of electrometer	Model of electrometer	Date of ADCL calibration (month, day, year)
Date of aneroid barometer intercomparison (month, day, year)	Date of annual calibration completed (month, day, year)	
Calibration protocol	Frequency of constancy check performed on dosimetry system	

MECHANICAL PARAMETERS

	Satisfactory	Unsatisfactory	Tolerance *
Gantry Rotation Isocenter	<input type="checkbox"/>	<input type="checkbox"/>	
Collimator Rotation Isocenter	<input type="checkbox"/>	<input type="checkbox"/>	
Table (Couch) Rotation Isocenter	<input type="checkbox"/>	<input type="checkbox"/>	
Field Size Readouts	<input type="checkbox"/>	<input type="checkbox"/>	
Gantry Angle Readouts	<input type="checkbox"/>	<input type="checkbox"/>	
Collimator Angle Indicator	<input type="checkbox"/>	<input type="checkbox"/>	
Optical Distance Indicator (ODI) Accuracy and Linearity	<input type="checkbox"/>	<input type="checkbox"/>	
Light / Radiation Field Congruency	<input type="checkbox"/>	<input type="checkbox"/>	
Laser Alignment System Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	
Emergency Off Switches	Operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Door Interlock	Operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Dosimetry Interlocks **	Operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Safety Interlocks ***	Operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Audio Communications System	Operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Visual Monitor System	Operational?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

* The qualified radiation oncology physicist shall specify tolerance values based upon accelerator manufacture specifications and the most recent published standards. Corrective action is required for measured data that exceeds the stated tolerance.

** Energy (bending magnet current), flatness, symmetry, temperature and compensation, et cetera.

*** Target slide or scattering foil, dose chamber slide, dose rate, et cetera.

*The qualified radiation oncology physicist shall specify tolerance values based upon accelerator manufacture specifications and the most recent published standards. Corrective action is required for measured data that exceeds the stated tolerance.

PHOTON BEAM PARAMETERS				
				Tolerance *
Nominal Energy (MV)				
Ionization Ratio				
Flatness	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Symmetry	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Field Size Factors	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
PDD / TPR Values	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output / MU Reproducibility	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Monitor Chamber Linearity	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Wedge / Compensator Transmission Factors	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Tray / Custom Block Transmission Factors	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Open Field Isodose Lines (central axis)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Wedge Isodose Lines (central axis)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Independent Output Check (Date _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed
Constancy Check Device Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed

ELECTRON BEAM PARAMETERS				
				Tolerance *
Nominal Energy (MeV)				
Mean Incident Energy				
Flatness (Cone Size _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Symmetry	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output / MU Reproducibility	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Independent Output Check (Date _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed
Constancy Check Device Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed

ELECTRON BEAM PARAMETERS				
				Tolerance *
Nominal Energy (MeV)				
Mean Incident Energy				
Flatness (Cone Size _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Symmetry	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output / MU Reproducibility	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Independent Output Check (Date _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed
Constancy Check Device Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed

ELECTRON BEAM PARAMETERS				
				Tolerance *
Nominal Energy (MeV)				
Mean Incident Energy				
Flatness (Cone Size _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Symmetry	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output / MU Reproducibility	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Independent Output Check (Date _____)	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Output Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed
Constancy Check Device Calibration	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Performed

Signature of physicist	Date (month, day, year)
Printed name of physicist	Physicist number