SEMI-ANNUAL INTERNAL AUDIT FOR ANALYTICAL X-RAY

DATE: _____

DETAILS	YES	NO	N/A
1. Is an RSO and ARSO appointed in writing and qualified per section II of the RAD -10?	☐	☐	☐
2. Have equipment operators been trained in:			
a. Radiation hazards associated with this equipment?	☐	☐	☐
b. The operating and emergency procedures, including identification of abnormal operating conditions?	☐	☐	☐
c. Sources of radiation in areas they may frequent?	☐	☐	☐
d. Potential hazards associated with radiation sources in areas they may enter?	☐	☐	☐
e. Use and meaning of radiation warning signs and barriers?	☐	☐	☐
f. Procedures to avoid and reduce exposures?	☐	☐	☐
g. Personnel dosimetry requirements?	☐	☐	☐
3. Are training records maintained as required?	☐	☐	☐
4. Are all lights, indicators and user controls clearly labeled?	☐	☐	☐
5. Is a standard radiation warning sign permanently affixed to the external surface of the unit with a label stating “CAUTION-PRODUCES X-RAYS WHEN ON” or words to that effect?	☐	☐	☐
6. Is the control panel equipped with a removable key operated power switch or is the control panel computer controlled, which is password protected?	☐	☐	☐
7. Have Standard Operating Procedures (SOP) been established, explained, and copies given to each operator and a copy located at the control console?	☐	☐	☐
8. Is a utilization log maintained?	☐	☐	☐
9. Is the RSO notified when repair or alignment operations are to be undertaken?	☐	☐	☐
10. Are operations suspended and the RSO notified when any unusual operating conditions (high beam current, dark current or extra bright beam) or suspected deficiencies are noted?	☐	☐	☐
11. Is the room where the equipment is located posted with a sign “Caution, X-Ray Equipment?”	☐	☐	☐
12. Were measurements made during the survey with the unit operating at a voltage and beam current that yields the highest output?	☐	☐	☐
Did the radiation survey include the viewing column area, high voltage power supply, lens column, penetrations into the column, control console, and electron beam target area?	☐	☐	☐
13. Was an ion chamber, IM-231A (or B)/PD or equivalent, used to quantify radiation levels?	☐	☐	☐
14. Do records indicate any event has occurred requiring notifications of incidents?	☐	☐	☐
15. Are radiation surveys performed on electron microscopes:			
a. Upon installation?	☐	☐	☐
b. Semi-annually?	☐	☐	☐
c. Immediately after repair or maintenance?	☐	☐	☐
d. After shock, earthquake, etc or suspected deficiency?	☐	☐	☐
e. Whenever equipment is modified?	☐	☐	☐
f. Whenever major beam realignment is in progress?	☐	☐	☐
16. Are radiation levels less than 0.5 millirem per hour at 5 cm?	☐	☐	☐
17. Are semi-annual radiation surveys maintained for three years?	☐	☐	☐
Are situational surveys maintained indefinitely?	☐	☐	☐

_____ _____

AUDITOR NAME *(print or type)* SIGNATURE AND DATE

_____ _____

RADIATION SAFETY OFFICER NAME *(print or type)* SIGNATURE AND DATE

All fields are required

Complete all required fields and mark unused optional fields with N/A.

FRCSE 5104/19 (3-2012)