InspectionReport

X-Ray & Radiology Room Safety Inspection Checklist

Site / Project		**Address**	
Inspector name		**Company**	
Date		**Time**	

Documentation aid only. Adapt this resource to the site, manufacturer instructions, and applicable local requirements. It does not replace a competent person, professional judgment, legal advice, or a required statutory form.

Inspection checklist

I. Shielding Integrity

☐	Verify wall shielding (lead equivalence) is intact and free from damage (cracks, holes) in accordance with room design specifications.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Inspect door shielding (lead equivalence) for proper fit and absence of gaps when closed. Confirm smooth operation and secure latching.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Examine window shielding (lead glass) for scratches, cracks, or discoloration that may compromise its effectiveness. Verify lead equivalence rating.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Assess ceiling and floor shielding for any signs of deterioration or modifications that could reduce radiation protection.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Confirm that all penetrations (pipes, conduits, cables) through shielded walls, floors, and ceilings are properly sealed with appropriate shielding materials.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Verify control booth shielding provides adequate protection for the operator, ensuring clear visibility and ergonomic design.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	If applicable, evaluate the maze design for compliance with radiation safety standards, ensuring adequate attenuation of scattered radiation.	☐ Pass	☐ Fail	☐ N/A	Notes:

Inspect viewing systems (mirrors, cameras) for clarity and proper positioning to maintain visual contact with the patient during procedures.	Pass	Fail	N/A	Notes:	
Review the latest shielding survey report to ensure compliance with regulatory limits and identify any areas requiring improvement.	Pass	Fail	N/A	Notes:	
Confirm that appropriate radiation warning signs are prominently displayed at the entrance to the X-Ray room, in compliance with regulatory requirements.	Pass	Fail	N/A	Notes:	

II. Equipment Safety Interlocks & Functionality

Inspect X-Ray tube housing for any signs of damage or leakage. Verify proper cooling system operation.	Pass	Fail	N/A	Notes:	
Verify collimator functionality, ensuring accurate beam limitation and alignment with the image receptor. Check light field congruence.	Pass	Fail	N/A	Notes:	
Test exposure switch functionality, confirming proper operation and safety interlocks to prevent unintended radiation exposure.	Pass	Fail	N/A	Notes:	
Confirm that warning lights (radiation on/off) are functioning correctly and clearly visible both inside and outside the X-Ray room.	Pass	Fail	N/A	Notes:	
Assess the stability and functionality of the X-Ray table, ensuring smooth movement and secure locking mechanisms.	Pass	Fail	N/A	Notes:	
Verify the functionality of the emergency stop button, ensuring immediate termination of radiation exposure in case of an emergency.	Pass	Fail	N/A	Notes:	
Inspect the image receptor (CR cassette, DR panel) for damage or artifacts that may affect image quality and diagnostic accuracy.	Pass	Fail	N/A	Notes:	
Review generator settings (kVp, mA, time) to ensure they are appropriate for the specific examination and patient size, minimizing radiation dose.	Pass	Fail	N/A	Notes:	
Verify that all X-Ray equipment is calibrated according to manufacturer's recommendations and regulatory requirements. Review calibration records.	Pass	Fail	N/A	Notes:	
Confirm proper beam alignment with the image receptor, minimizing unnecessary radiation exposure to the patient.	Pass	Fail	N/A	Notes:	

Evaluate the use of scatter reduction techniques (grids, collimation) to minimize radiation dose and improve image quality.	Pass	Fail	N/A	Notes:	

III. Personal Protective Equipment (PPE)

Inspect lead aprons for cracks, tears, or punctures using fluoroscopy or visual inspection. Document findings.	Pass	Fail	N/A	Notes:	
Inspect lead gloves for cracks, tears, or punctures using fluoroscopy or visual inspection. Document findings.	Pass	Fail	N/A	Notes:	
Inspect thyroid shields for cracks, tears, or punctures. Ensure proper fit and coverage.	Pass	Fail	N/A	Notes:	
If applicable, inspect protective eyewear (lead glasses) for scratches or damage that may impair vision or reduce radiation protection.	Pass	Fail	N/A	Notes:	
Verify that adequate quantities of appropriate PPE are readily available for all personnel entering the X-Ray room.	Pass	Fail	N/A	Notes:	
Ensure proper storage of PPE to prevent damage and maintain its effectiveness (e.g., hanging lead aprons on designated racks).	Pass	Fail	N/A	Notes:	
Confirm that all personnel who routinely work with radiation are wearing assigned dosimeters correctly and consistently.	Pass	Fail	N/A	Notes:	
Verify that dosimeters are exchanged and processed according to the established schedule (e.g., monthly, quarterly).	Pass	Fail	N/A	Notes:	
Review dosimeter records to identify any trends or anomalies in radiation exposure levels. Investigate any unusual readings.	Pass	Fail	N/A	Notes:	
Confirm that all personnel have received adequate training on the proper use, care, and storage of PPE.	Pass	Fail	N/A	Notes:	
Verify that female personnel have been informed of their right to declare a pregnancy and the associated radiation safety precautions.	Pass	Fail	N/A	Notes:	

IV. Administrative Controls & Documentation

Review the radiation safety program to ensure it is up-to-date and compliant with all applicable regulations and guidelines.	Pass	Fail	N/A	Notes:	

☐	Verify that a qualified Radiation Safety Officer (RSO) is designated and has the necessary authority and resources to implement the radiation safety program.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Confirm that written operating procedures are available for all X-Ray equipment and procedures, including safety precautions and emergency protocols.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Review training records to ensure that all personnel have received adequate training on radiation safety, equipment operation, and emergency procedures.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Verify that a system is in place for reporting and investigating radiation incidents, including near misses and equipment malfunctions.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Review audit records to ensure that regular audits are conducted to assess the effectiveness of the radiation safety program and identify areas for improvement.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	If applicable, verify that a system is in place for tracking and controlling radioactive materials (isotopes) used in the radiology department.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	If applicable, confirm that radioactive waste is properly segregated, stored, and disposed of in accordance with regulatory requirements.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Ensure that procedures are in place to control access to the X-Ray room and minimize radiation exposure to visitors.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Verify that appropriate shielding is used to protect patients from unnecessary radiation exposure during procedures.	☐ Pass	☐ Fail	☐ N/A	Notes:
☐	Assess the implementation of ALARA (As Low As Reasonably Achievable) principles in all aspects of the radiology department's operations.	☐ Pass	☐ Fail	☐ N/A	Notes:

Findings

#	Item	Location	Severity	Action required
1				
2				
3				
4				
5				
6				
7				
8				

Signature

Inspector signature _____ **Name** _____

Date _____