

TRAINEE INDUSTRIAL RADIOGRAPHER (TIR) PRACTICAL ASSESSMENT

GAMMA RADIOGRAPHY

Candidate:	(Print full name)	(Signature)			ID:
SPBNDT Affiliate No:		RT Level 3 providing Assessment			
1. Radiation Protection	(6 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Has Direct reading dosimeter (DRD), audible dosimeter, dosimeter issued by licensed dosimetry service, and radiation survey meter in possession					As per Directorate Radiation Control (DRC) Regulations the IR must show that they are knowledgeable of and have the ability to properly operate all instruments and equipment
Turned on alarming dosimeter and survey meter before starting					
Ensure power level of batteries are sufficient for operation					
Equipment checked for valid calibration dates					
DRD was zeroed prior to start or ensure a minimum of 2 mSv (200 mR) total dose range					
Continuity/Function check for radiation detection equipment					
2. Inventory Control	(4 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Proper sign out of the exposure device					Demonstrate the importance of accurate documentation control and record keeping
Proper survey and recording for surface dose rates on the exposure device. «2 mSv/hr)					
Use of all required daily records required by Authority Holder					
Ensure that emergency equipment is available and in working condition					
3. Prepare Work Area	(5 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Initiates Job hazard assessment of work area					Demonstrate safety and security when preparing work area
Broken or deficient equipment is quarantined (may be done orally)					
Posts sufficient # of signs and barriers to prevent entry into area					
Evacuate persons from the controlled area					
All equipment has been safely placed to prevent any incidents					
4. Device	(11 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Cable Drive Device					
Use of survey meter during equipment assembly for operation					The Trainee Industrial Radiographer (TIR) must demonstrate a good basic understanding of the devices used.
Equipment checks prior to operation					
<ul style="list-style-type: none"> Device checks - Company contact labels (name/phone #), source radiation label, fasteners, shipping plug/safety, and cover protective covers. 					

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<ul style="list-style-type: none"> Remote control checks- handle, fittings, protective covers and inspect the length for cuts, dents, or damage 				<p>They must be able to take accurate radiation measurements during setup and conduct all the necessary equipment checks.</p>
<ul style="list-style-type: none"> Remote control drive cable checks - free movement, flex test, visual check for fraying, kinks, or corrosion 				
<ul style="list-style-type: none"> Head hose/guide tube - Checks fittings, connectors, threads, source stop and length of conduit for dents, cuts, damage or debris that may affect safe operation 				
<ul style="list-style-type: none"> Source assembly (go/no go gauge-if applicable) 				
Collimator and/or effective use of shielding used				
Demonstrates ability to connect the remote controls, the guide tube, collimator and device together to prepare for an operation.				<p>Failure to conduct these required checks could result in a serious unplanned event.</p>
Knowledge of use of transportation over pack and use				
Knowledge of emergency equipment requirements				
5. Operation (10 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Proper use of survey meter				<p>This is the most important part of the work process. The TIR must demonstrate proper control of the high-risk source and device to ensure safety and security at all times. Demonstration of barrier calculations and erection of the barrier is necessary.</p>
Unlock and safely connect the exposure device and associated equipment in the correct order according to the manufacturer's specification.				
Exposing the source				
Verify barrier dose rates and radiation warning sign positions on first exposure using the survey meter				
Retract source				
Observation of survey meter and alarming dosimeter during source movement				
Observation of proper operation and location of source position indicator (cable drive only)				
After each attempt to move the sealed source assembly to the shielded position within the exposure device, use a radiation survey meter to ensure that the source assembly has returned to the safe shielded position				
Verify that operational procedures are followed				
Implementation of ALARA and basic radiation protection principles				
6. Post Exposure (8 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Survey post exposure				
Ensure the safety lock indicates that the source is locked and in safe position (may not be applicable for some devices)				
Disassemble the equipment in the correct order according to the manufacturer's specifications				

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Install retaining plug and/or port cover/cap				The TIR must show how to secure the device and verify the safety of the worksite in the proper order.
Secure and lock the exposure device, properly store with protective covers and caps				
Final site survey sweep				
Removal of posted radiation warning signs and barriers				
Sign exposure device back in to secure storage area				
7. Record Keeping (6 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Documented sign out device (dates/locations of use)				Maintaining accurate records is a regulatory requirement. The TIR must show proper recording of all radiation readings as well as the results of equipment checks.
Documented survey reading on surface of device				
Documented all equipment checks required by Authority Holder				
PAR - push/pull length & flex test, spring length (end coiled over) & kinks				
DRD readings				
Trainee supervisor consent form				
8. Emergency Preparedness (oral examination) (6 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Recognize an emergency situation				The TIR must explain how to identify different emergency or dangerous occurrences and describe the process for mitigation.
Knowledge of required emergency equipment and location				
Knowledge of location emergency procedures				
Knowledge of initial emergency steps				
Proper use of Long Handled Tongs and shielding material				
Knowledge of correct contact information				
9. Transportation (if applicable) (5 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Verifies the device is locked and secured				The TIR must show knowledge of transport requirements including all package, signage and security measures
All requirements for the appropriate shipping document have been met				
Type A or Type B package requirements are met.				
Proper labelling/placarding with the radiation symbol, UN#, contact information.				
Properly placed within the vehicle for transport.				
10. Security (2 Points)	Pass (√)	Fail (x)	Assessor Initials	Expectations
Candidate was in control of device at all times throughout operations				
Verifies that when not in use the device was locked and secured inside two (2) levels of locked enclosure and that there is immediate response to an alarm in the event of an attempted intrusion.				

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Result					
Allocated 1 point for every ✓ Total Score	(out of XX points)		$\div XX \times 100 =$	%	
Total Score with Transportation	(out of XX points)		$\div XX \times 100 =$	%	
Result (≥ 90%is required)		Pass	Fail		
Authorized Assessor					
Assessors Name (Print)		Title		RT Level 3 SPBNDT No.	
Company Name		Tel.		Email	
Assessors Signature		Tel.		Date	
Candidates Signature		Tel.		Date	
(Circle one) Yes Candidate has demonstrated the skills and attitude to safely operate a gamma exposure device. No Candidate does not demonstrate the skills and attitude to safely operate a gamma exposure device.					
Remedial Practical Instructions:					