Vendor:		Auditor:	Date:	
1.	Routine Schedule	d Audit		
		Annual		
	b.	Semi-annual		
	с.	Other		
2.	Product driven Au	dit		
	a.	Product received by the Prime Vendor tha	t does not meet specification requirements.	
	b.	Product that was installed or was being installed	stalled the does not meet specification requirements.	
	с.	Product has failed in service and investiga	tions show it did not meet specification requirements.	
What sp	pecification is the A	udit being performed to?		
3.	Governing Specifi	ication: Mark the appropriate specification	1	
		MIL-STD-2132		
		NAVSEA 250-1500-01 (Welds)		
		MIL-STD-271 (F)		
		T9074-AS-GIB-010/271 ACN1		
		T9074-AS-GIB-010/271 Revision 1		
	f.	Other		
4.	Program Type: M	ark the appropriate program type		
		Level I / SubSafe		
		Nuclear Plant Material		
		Fly by Wire Ships Control System		
		Navy Propulsion Program		
		Naval Nuclear Propulsion Program		
		Deep Submergence Systems / Scope of Ce	ertification Program	
	Ũ	Aircraft Launch and Recovery		
	h.	Other		
5.	Does the vendor h	ave an NDT Examiner?		
		In house		
		Contracted		
		Certified in the method		
		Available for the Audit		
	e.	No Examiner		
6.	-	tion program administration code or speci	fication complaint?	
		Level III Approved written practice		
	b.	Approved procedures	_	
		i. Level III	Ц	
		ii. Prime contractor		
		iii. Clearly specifies inspection requi		
		iv. Clearly specifies acceptance crite		
		v. Qualified to find known defects		

	c.	Approved technique sheet	
		i. Level III	
		ii. Prime contractor	
		iii. Clearly specifies inspection requirements	
		iv. Clearly specifies acceptance criteria	
	d.		
		i. Level III	
		ii. Prime contractor	
		iii. Clearly specifies inspection requirements	
		iv. Clearly specifies acceptance criteria	
	e.		
	C.	i. Is there a current eye examination	
		ii. Certifications are current	
		—	
	c .	iv. Educational history	
	f.	Workmanship standards i. Available	
		ii. Controlled	
7.	Are material cor	ntrols in place?	
	a.		
	b.		
	с.	Traceable	
	d.		
8.	Are records main	intained to confirm that all required inspection processes were performed?	
	a.	Description and unique identification of item being inspected	
	b.	Approved procedure identification	
	с.	Acceptance standard used	
	d.	Date of inspection	
	e.	Signatures of inspectors	
	f.	Disposition (accept / reject) of the item inspected	
	g.	Retention (Where and how long)	
9.	1. Technie	ical Concerns: List the technical concerns associated with the method.	
	a.	<u>Pre-Weld Fit-up and Dimensional</u> : Pre-weld dimensions and fit-up attribute applicable.	es should be verified when
	b.		
		integrity of the weld joint and higher level NDT methods such as MT, PT,	UT and RT.
	с.	Weld size (minimum and maximum): Specified weld sizes are based upon	engineering, design and service
		requirements. Weld size verification is an important attribute to ensure the	
		component can meet its intended purpose.	6
			······································
	d.	<u>Acceptance Criteria</u> : Acceptance criteria can vary depending on joint design higher level NDT requirements (PT, MT, UT, RT). Inspection procedure ar	
		available to inspector at workstation	1
	e.		-
		inspector has adequate and detailed direction to evaluate any weld or applic	cable surface.

	f. <u>Inadequate Technique</u> : Inspector technique and methodology when performing visual weld inspection, especially measuring and dimensional verification of weld size and discontinuity size, are critical. Proper use of lighting is an important and helpful component of the inspection to enhance identification of surface discontinuities. Shadow formation caused by ridges and crevices are more readily visible and identifiable with proper flashlight angulation.				
10.	Known	Process 1	Problems: List the known process problems		
		a.	Required inspection tools available		
		b.	Inspection tools calibrated (when required)		
		c.	Is the lighting adequate (is there a procedure requirement?)		
Checkli	ist Instruc	ctions: Be	specific and ask follow-up questions as appropriate.		
	a.	-	ndition that is considered to be non-compliant must be specifically docur Specification	nented as to what the deficiency is.	
			Page		
			Paragraph		
		1V.	Detailed description of what was observed		
	b. Document comments or observations on the checklist at each checkpoint or the comment section, as needed, no matter if the checkpoint is satisfactory or unsatisfactory.			comment section, as needed, no	
	c.	Comme	nts on any checkpoint may be positive, as well as negative.		
	 If it is observed that an attribute requires additional attention but does not invalidate the inspection, mark the Needs Improvement (NI) column and provide a recommendation in the comments area. 			_	
<u>Review</u> site.	v all findi	ings with	the vendor to be sure there is no confusion as to what the findings a	re before you leave the vendor	
<u>sitt.</u>					
	Inspecto	r Name:			
	Inspector Name: Procedure: VPAR Approval:				
	Part examined:				
Admini	istrative	Attribut	es		
1.	Is the in	nspector c	ertified in the technique in which they are being audited? 3 year cert, 71 ACN1) or 1 year (271R1) currency.	Sat Unsat NI N/A	
1a.			dition to annual currency, has at least 1 TPE been performed within 2 fication/re-certification date?	Sat 🗌 Unsat 🗌 NI 🗌 N/A 🗌	

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2.	Does the Level III regularly perform surveillances and technical performance evaluations for all inspection personnel?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
2a.	Is surveillance/TPE sufficient to assure satisfactory performance of the inspectors being observed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
3.	Has the inspector received a J1 eye exam and is it current?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
3a.	If vision correction is required, were corrective lenses worn during inspection?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
4.	Is the Level III certified and is certification current? Is the Level III subcontracted or in-house?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
4a.	Is the Level III available for the audit?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
5.	Did the inspector have the most current procedure/technique at the examination site and refer to it during the examination?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
6.	Is the NDT procedure qualified, and approved/signed by the Examiner?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
ба.	Is the procedure certified to comply with TP 271 (if applicable)?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
6b.	Does the procedure qualification prove that discontinuities of a size near the threshold of acceptance/rejection can be reliably detected and evaluated?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
6с.	For new procedures qualified to TP 271 R1, are the discontinuities of a size near the threshold of acceptance/rejection criteria?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
7.	Is the procedure/technique in accordance with the specifications called out for in the contract and meet all applicable inspection requirements?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
8.	For castings (if applicable), is an approved Radiographic Shooting Sketch (RSS) being utilized?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
9.	For castings (if applicable), does the RSS contain all required information as required by the applicable specification?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
10.	Does the contract/work order clearly define the inspection requirements, required quality level, etc?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌

10a.	Is the extent of coverage clearly defined; e.g. 60/360 degrees, 100%, etc.?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
11.	If applicable, does the Level III Examiner perform regular overviews of the inspector by performing reinspections of previously accepted hardware? (NSTR-99 only)	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
12.	Are there any corrective actions previously issued for the method/technique being observed, that will impact this inspection and, if applicable, have the changes in the response been implemented?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
13.	Are the product and materials used to perform the tests controlled and traceable throughout the process?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
Pre-Ex	xposure Attributes		
14.	Were all good safety practices (including radiological) being followed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
15.	Have the film cassettes been inspected for damage/light leaks?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
16.	Have the intensifying screens been inspected for cleanliness/damage?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
16a.	Have the correct intensifying screens been selected for the job?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
17.	Has the film been properly handled during loading?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
18.	Has the proper type film and size been selected for the part?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
19.	Was the film being used within the expiration date or if it is out of date, has it been tested to extend the expiration date?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
20.	Are the safe lights being properly utilized during film loading?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
21.	Was the unexposed (green) film properly stored in a cool, dry environment away from radiation?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
22.	Has the weld joint/part been properly identified?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
23.	Has the surface of the weld/part been properly prepared for inspection?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌

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24.	Is the inspection performed in the final surface and heat treat condition unless otherwise allowed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
24a.	If inspection is performed prior to final machining, does the inspection account for the finish machined condition per specification requirements?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
25.	Has the correct technique been selected for radiography of the part; i.e. single-wall exposure/single-wall view, double-wall exposure/single-wall view, double-wall exposure/double-wall view.	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
26.	Have the location markers been properly arranged that it is evident the required inspection coverage has been obtained?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
27.	Are the location markers being maintained on the part to permit coordination with their images on the film?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
28.	Does the part layout include a positive reference system (e.g. flow arrows, component reference marking, etc.) so that the layout can be duplicated after removing the location markers?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
29.	Has the correct penetrameter size been selected?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
29a.	Is the penetrameter properly identified with lead numbers or engraved strips?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
29b.	For NSTP 271 applications and for casting and forgings thickness that exceeds the nominal thickness of the finished piece, is the penetrameter size based on a thickness which is not greater than 20 percent more than the nominal thickness of the finished piece, or 1/4", whichever is greater?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
30.	Is the penetrameter being used checked for dimensional accuracy and is there a record of this verification; e.g. certification certificate, etc?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
31.	Is the penetrameter of the correct material type/group (or lower) number?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
32.	Has the correct number of penetrameters per the inspection specification been utilized?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
33.	Is the penetrameter properly placed and oriented on the part?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌

34.	Has the proper shim material/thickness been selected and is the material type marked on the shim?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
35.	Does the shim exceed the penetrameter on all sides (or at least one side as applicable to the specification)?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
36.	If utilized, did the radiographer demonstrate satisfactory placement of any slotted shims or root contour comparator shims utilized in the radiographic technique?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
37.	If utilized, is the separate block material correct and has it been properly placed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
38.	Has the lead letter "B" been properly placed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
39.	Has the film cassette been properly placed as close as possible to the part being radiographed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
40.	Has the back filter been properly placed?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
41.	Is the film identification correct?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
42.	Are the energies being utilized within the allowed kV range for the thickness of the part (per NSTP 271, these are recommended voltages)? (i.e. X-Ray voltages, Gamma radioisotope selection)	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
43.	Is the minimum calculated source-to-film-distance (SFD) being maintained?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
44.	If a film gap exists, has the SFD been properly increased to account for that film gap?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
45.	If applicable, has the SFD been properly increased to account for radioisotope sizes greater than 1/8"?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
46.	Was the direction of the radiation beam central to the area being examined?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
Post-Exposure Darkroom/Film Viewing Facility Attributes				
47.	Is the automatic film processor being regularly maintained?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
48.	Is the film being properly handled during film development?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	
49.	Are the safe lights being properly utilized during film development?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌	

50.	Were the film viewing facilities and dark room clean and constructed to exclude objectionable lighting?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
51.	Was the film viewer in good working order with variable intensity controls?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
52.	Did the film viewer have adequate cooling fans to prevent warping of the film after one minute of continuous contact at the viewing port?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
53.	Per the requirements of ASTM E1079, are the densitometers in good working condition and calibrated within 90 days, and is there a record of this calibration?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
54.	Was the aperture of the densitometer being used not greater than 2mm in diameter?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
55.	Was there a density strip being used to verify accuracy of the densitometer within ±0.05 density units of the density strip readings?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
55a.	Is the densitometer verification conducted prior to each shift and is there a record of this verification check?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
56.	Is the calibrated density strip still current and within 4 years of its package being opened, and is it properly documented?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
57.	Did the inspector demonstrate proper use of the densitometer?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
58.	If applicable, are any reference radiographs and/or workmanship samples being properly maintained?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
59.	Were the rules, overlays, etc. used for taking measurements on the film properly calibrated?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
Post-E 60.	xposure Radiographic Technique Verification Attributes Did the inspector verify the correct radiographic technique was utilized?		
00.	Did the hispector verify the correct radiographic technique was utilized?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
61.	Is the film free from blemishes, processing marks, and other artifacts that may interfere with interpretation?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
62.	Are all acceptable film blemishes, processing marks, and artifacts identified and dispositioned on the radiographic report?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌

63.	Was it evident on the film that backscatter controls used during radiography were effective (e.g. lead letter 'B' images)? For darker images of the lead letter 'B' on a lighter background, does it interfere with the film evaluation?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
64.	Was the part properly identified on the film?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
65.	Was it evident on the film through the proper use of location marker placement that complete inspection coverage was obtained?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
66.	Was it evident location markers were properly positioned in relation to the edge of the weld? (not applicable for castings)	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
67.	Did the inspector verify the correct penetrameter size and material group was utilized for all film?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
68.	Was the required radiographic quality level obtained?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
69.	Was the overall film density in the area of interest within requirements?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
70.	Regarding penetrameter/shim densities, was the density over the required penetrameter T-hole not greater than 15% more than the lightest density in the area of interest? For castings and forgings per NSTP 271, does the density over the required T-hole vary more than plus 30% to minus 15% more than the lightest density in the area of interest?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
71.	Did the inspector verify the shim exceeds the penetrameter on all sides (or at least one side as applicable to the specification)?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
72.	Was the penetrameter/shim location verified to be properly located in relation to the edge of the weld? (not applicable for castings)	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
Post-E	xposure Film Interpretation Attributes		
74.	For welds, did the inspector demonstrate satisfactory knowledge and application of the acceptance criteria?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
75.	For castings, did the inspector demonstrate satisfactory knowledge and application of the applicable reference radiographs?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
76.	If applicable, did the inspector demonstrate satisfactory application of any workmanship samples being used?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌

77.	RT - NONDESTRUCTIVE TESTING (ISO 4.9) If applicable, did inspector demonstrate satisfactory knowledge in the application of		
//.	any slotted shims or root contour comparator shims utilized in the radiographic technique?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
78.	Did the inspector evaluate the entire inspection area imaged on the film?		
70.	Did the hispector evaluate the entire hispection area maged on the mini-	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
79.	Did the inspector properly address and adjudicate any inadvertent radiography imaged on the film (e.g. adjacent weld joints, base material indications, etc)?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
80.	If applicable, did the inspector verify any surface conditions noted by checking the surface of the part?	Sat 🗌	Unsat NI N/A
81.	Are all welding and/or casting discontinuities imaged on the film recorded on the radiographic report?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
82.	Did the inspector satisfactorily disposition all welding and/or casting discontinuities imaged on the film?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
83.	Did the inspector demonstrate adequate use of measuring instruments in sizing discontinuities?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
Radio	ographic Inspection Report Attributes		
84.	Did radiographic inspection personnel correctly complete the radiographic inspection record as required by the procedure?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
85.	Does the inspection record contain all the required information applicable to the specification as called out in the contract? (i.e. MIL-STD 2132, NSTP 271, NS 250-1500-1)	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
86.	Does the inspection report include a sketch, drawing, or reference to a technique or equivalent record to show the radiographic set-up utilized to produce each radiograph?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌
87.	Was a report filled out correctly and with all the information and signatures required by the procedure, applicable specification and with proper disposition/recording of the discontinuities?	Sat 🗌	Unsat 🗌 NI 🗌 N/A 🗌

Concerns/Comments