

EVALUATION RESEARCH CORPORATION

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COMANCHE PEAK RESPONSE TEAM  
QUALITY INSTRUCTION FOR ISSUE-SPECIFIC ACTION PLAN VII.c

INSTRUCTION NO: QI-031

REVISION: 2

EFFECTIVE DATE: 02/21/86

REINSPECTION OF CONTAINMENT LINER AND TANK

STAINLESS STEEL LINER

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## 1.0 PURPOSE

This instruction provides the methods and accept/reject criteria for the performance of reinspection of the Containment Liners and Tank Stainless Steel Liners.

## 2.0 APPLICABILITY

This quality instruction applies to the requirements of Action Plan VII.c in the reinspection of the safety-related attributes of containment and tank stainless steel liners. It applies to the samples selected from the liner population in Units 1 and 2 which has been QC accepted.

## 3.0 REFERENCES

- 3.1 Memorandum QA/QC-RT-293 to A. A. Patterson, providing basis for inspection requirements, including specific sources for attributes and exclusions.
- 3.2 CPP-009, "Performance of Reinspections and Documentation Reviews."

## 4.0 GENERAL

Reinspections are performed and documented in accordance with established CPRT instructions. This instruction establishes the attributes and accept/reject criteria for the reinspection of the containment and tank stainless steel liners. Reference 3.2 addresses the method to perform and document the reinspection.

### 4.1 Responsibilities

#### 4.1.1 QA/QC Discipline Engineers

The QA/QC Discipline Engineers prepare the Quality Instruction delineating reinspection requirements and attributes.

#### 4.1.2 QA/QC Inspectors

QA/QC Inspectors perform reinspection/verification in accordance with this inspection procedure and record results and deviations.

4.0 GENERAL (Cont'd)

4.1 Policy

Activities performed under this procedure shall conform to the policies contained in the latest Comanche Peak Response Team Program Plan and Issue-Specific Action Plan VII.c.

5.0 INSTRUCTION

Using the information below, perform the reinspections on the items in this population and document the results on the checklist (Attachment 6.1):

5.1 Containment Liner Reinspection

A 1 Base Material Local Contours

The containment liner base material located 10 feet either side of the sample weld, excluding penetrations, embedment plates, beam seats, and overlay plates, is to be reinspected for local contour deviations. The liner plate located within 10 feet around either penetrations, embedments, beam seats, and overlay plates is to be reinspected for local contour deviations, if the sample is a weld of either of the four items mentioned above.

The measurements are to be taken at areas of local contour deviations and at intervals sufficient to verify the base material meets the following:

The following local contour deviations are to be verified:

- a. A maximum 1-inch gap between the cylindrical liner or dome shell plate and a 6 feet long template curved to the required radius placed against the surface of the shell within a single plate section and not closer than 12 inches to a welded seam.
- b. A maximum 1 1/2 inch gap when the 6 feet long template above is placed across one or more welded seam in the cylindrical liner or the dome shell plate.
- c. A maximum 3/8 inch gap when a 15 inch long template curved to the required radius is placed horizontally and slid along the surface of the liner shell plate and not closer than 12 inches to the weld seam.

5.0 INSTRUCTION (Cont'd)

A 1 Base Material Local Contours (Cont'd)

- d. A maximum 3/4 inch deviation from a 10 foot straight edge (tolerance 10', -2", +0") placed in the vertical direction of the cylindrical liner between the horizontal weld seams.

NOTE: In measuring local contour deviations, with a 6 feet template or the 10 feet straight edge, a balance shall be maintained such that the designed contour of the plates is followed. The above devices shall not be held against the liners in such a manner which could result in biased readings.

A 2 Weld Seam Offset

The sample weld seam will be reinspected to verify that the maximum allowable offset in the final weld joints meet the following:

- a. For 3/8 inch plate the maximum offset shall be equal to or less than 3/32 inch.
- b. For 1/2 inch plate the maximum offset shall be equal to or less than 1/8 inch.
- c. For offsets within in the allowable tolerances the offset faired surface over the width of the finished weld shall be at least 3-to-1 taper.

A 3 Weld Seam Surface

The sample weld seam surface will be reinspected to verify the following:

- a. The weld seam surface shall be free from coarse ripples or grooves, overlap and abrupt ridges or valleys so that proper interpretation of radiographic and other nondestructive examinations could have been performed.
- b. Verify that undercut does not exceed 1/32-inch.
- c. The surface of the reinforcement of all butt welded joints may be flush with the base material or may have uniform crowns. Verify that the height of the reinforcement on each face of the seam does not exceed 3/32-inch.

5.0 INSPECTION (Cont'd)

A 3 Weld Seam Surface (Cont'd)

If the base material local contours, weld seam offset, and weld seam surface meets the above criteria the checklist shall be marked accept. If the base material local contours, weld joint offset, or weld seam surface does not meet the above criteria the checklist shall be marked reject and the weld and rejectable item shall be identified by a deviation report.

5.2 Tank Stainless Steel Liner Reinspection

The weld seam surface will be reinspected to verify the following:

B 1 Weld Seam Surface

- a. The weld seam surface shall be free from coarse ripples or grooves, overlap and abrupt ridges or valleys.
- b. Verify that undercut does not exceed 1/32-inch.
- c. The surface of the reinforcement of all butt welded joints may be flush with the base material or may have uniform crowns. Verify that the height of the reinforcement on each face of the seam does not exceed 3/32-inch.
- d. Verify that the exposed surface of the Stainless Steel tank liner is free of rust.

If the weld seam surface meets the above criteria the checklist shall be marked accept. If the weld seam does not meet the above criteria the checklist shall be marked reject and the weld and rejectable item shall be identified by a deviation report.

6.0 ATTACHMENT

6.1 Checklist

## CHECKLIST

COMANCHE PEAK RESPONSE TEAM CHECKLIST				
POPULATION DESC Reinspect. of Cont. Liner & Tank S.S. Liner		VERIFICATION PKG NO.		PAGE 1 OF <u>2</u>
QUALITY INSTRUCTION QI-031		<input type="checkbox"/> REINSPECTION		<input type="checkbox"/> UNIT 1
EQUIPMENT MARK/TAG NO.		<input type="checkbox"/> DOCUMENTATION REVIEW		<input type="checkbox"/> UNIT 2
				<input type="checkbox"/> COMMON
ATTRIBUTE	VERIFICATION			REMARKS
	ACCEPT	REJECT	DATE	
A 1 Base Material Local Contours				
a. Max 1 inch gap between 6-foot template and plate				
b. Max 1 1/2 inch gap between 6 foot template and plate across weld seam				
c. Max 3/8 inch gap between 15 inch template and plate				
d. Max 3/4 inch deviation from 10 foot straight edge				
A 2 Weld seam offset				
a. Max 3/32 inch off- set for 3/4 inch shell plate				
b. Max 1/8 inch off- set for 1/2 inch dome plate				
PREPARED BY:		APPROVED BY:		
DISCIPLINE ENGR. _____ DATE _____		LEAD DISCIPLINE ENGR. _____ DATE _____		
INSPECTED BY:		APPROVED BY:		
INSPECTOR _____ DATE _____		LEAD INSPECTOR _____ DATE _____		

## CHECKLIST (cont'd)

COMANCHE PEAK RESPONSE TEAM CHECKLIST				
POPULATION DESC	VERIFICATION PKG NO.			PAGE <u>2</u> OF <u>2</u>
Reinspect. of Cont. Liner & Tank S.S. Liner				
ATTRIBUTE	VERIFICATION			REMARKS
	ACCEPT	REJECT	DATE	
c. Offset faired at least 3-to-1				
A 3 Weld Seam Surface				
a. Free of coarse ripples or grooves, overlaps, or abrupt ridges or valleys				
b. Undercut does not exceed 1/32 inch				
c. Flush with base material or has uniform crown. Reinforcement does not exceed 3/32 inch at each face.				
B 1 Tack SST Liners Reinspection				
a. Weld surface free of coarse ripples or grooves, over- laps, and abrupt ridges or valleys.				
b. Undercut does not exceed 1/32 inch				
c. Weld surface is flush with base material or has uniform crown. Reinforcement height does not exceed 3/32 inch at each face.				
d. Exposed surface of S.S. liner is free of rust.				