

QC FILE NO.

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Gross Deficiency Indirect Inspection of Piping		QCIP-037	1 OF 4
		REV. NO.	DATE
Hangers, Supports, and Restraints		0	6-14-85
PREPARED BY:		LEVEL REQ.	AREA
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REVIEWED BY:		APPROVED BY: <i>D. Parker 6/14/85</i>	

1.0 INTRODUCTION

The purpose of this Inspection Plan is to set forth the criteria used to perform an indirect inspection on piping and piping supports for gross deficiencies of a variety of systems. This Inspection Plan will be implemented by Quality Control at the request of the Nuclear Facility Engineering Department.

A walkdown indirect inspection will be performed on the system to document any gross conditions. The results of the inspection is to be documented on an Attachment I and information provided to Nuclear Facility Engineering Supervisor for evaluation.

2.0 REFERENCES

- 2.1 ANSI N45.2.6
- 2.2 Specification 12501-M-450Q
- 2.3 Specification 12501-C-406Q
- 2.4 AD 1807.00
- 2.5 QCI 3101
- 2.6 QCI 3150

**FOR INFO. ONLY**

3.0 PREREQUISITES

- 3.1 System to be inspected must be in a stable condition, (i.e. cold/shutdown, hot/operating).

4.0 EQUIPMENT

- 4.1 Flashlight

5.0 REQUIREMENTS

- 5.1 Perform an indirect inspection of each hanger for the following attributes as they apply to the hanger and complete Attachment I. Document all unsatisfactory conditions in the remarks section on the attachment, and inaccessible areas not inspected.

*No access to "roped off" areas pertaining to equipment on the attached Equipment Freehe list shall be made. Document such conditions in the remarks section.*

PERFORMED BY:	REVIEWED BY:
N/A	N/A
	QC SUPERVISOR
	N/A

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Hangers, Supports, and Restraints

NOTE: The results of inspection shall be recorded on Attachment I as follows:

- S - Satisfactory
- U - Unsatisfactory
- N/A - Not Applicable
- \* - Additional information in remarks section

- 5.1.1 Inspect anchor bolts for looseness or pulled out. Where possible, identify any signs that the base plate to anchor interface has shifted, such as chipped or cracked paint around nut, bolt, or washer.
- 5.1.2 Inspect base plate for signs of movement such as cracked painting, chipped or broken concrete/grout, etc.
- 5.1.3 Inspect the thermal insulation in the vicinity of the hanger for any indication of excessive pipe movement. Note any conditions such as crumbling, or displaced insulation blocks, deformed and loose jacketing, etc.
- 5.1.4 Inspect hanger or support structure for any degrading condition such as bent or deformed members, pipe clamp shifted or mis-orientated.
- 5.1.5 Inspect hydraulic/mechanical snubber and spring hangers for:
  - 5.1.5.1 Gross failures such as members, piston rod and welds.
  - 5.1.5.2 Verify pivot pins and retainers/load studs are installed.
  - 5.1.5.3 For hydraulic snubbers verify fluid level is correct and no evidence of leakage. (Should be approx.  $\frac{1}{2}$  full with piston rod fully extended, and  $\frac{7}{8}$  full with piston rod fully retracted. Fluid level should be at an intermediate level with piston rod at an intermediate position).
- 5.1.6 Enter initials and date on Attachment I.

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Hangers, Supports, and Restraints

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Hanger Mark #

Step #5.1.1 Anchor Bolt and  
Baseplate Interface Inspection

Step #5.1.2 Baseplate Inspection

Step #5.1.3 Thermal Insulation  
Inspection

5.1.4 Hanger Degradation Inspection

Step #5.1.5 Hydraulic/Mechanical  
Snubber and Spring Hanger  
Inspection

Step #5.1.6 Inspector's Initials  
Date

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REMARKS:

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