EVALUATION RESEARCH CORPORATION

CONTROLLED COPY
CONTROL NO. QI-001

COMANCHE PEAK RESPONSE TEAM

QUALITY INSTRUCTION FOR ISSUE-SPECIFIC ACTION PLAN VII.c

INSTRUCTION NO: QI-036

REVISION NO: 1

ISSUE DATE: 03/10/86

DOCUMENTATION REVIEW OF HVAC DUCT SUPPORTS

Prepared by: [signature] Date: 3/7/86

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On-Site QA Representative

Approved by: J. L. Hand Date: 3/10/'86
QA/QC Review Team Leader

1.0 PURPOSE

This instruction describes the methods to be used and the accept/reject criteria for the document review of HVAC Duct Supports.

2.0 APPLICABILITY

The instruction applies to installed and final QC accepted HVAC duct supports in Units 1, 2 and Common areas. The population is defined in the Population Description for HVAC Duct Supports.

3.0 REFERENCES

3.1 Memorandum QA/QC-RT-1012 to A. A. Patterson delineating documentation used in development of this procedure including specific sources for attributes.

3.2 QI-035, "Reinspection of HVAC Duct Supports".

3.3 CPP-009, "Performance of Reinspection and Document Reviews".

4.0 GENERAL

4.1 Responsibilities

4.1.1 QA/QC Discipline Engineers

The QA/QC Discipline Engineers prepare the document review instructions and checklist delineating the document review requirements, attributes, and accept/reject criteria.

4.1.2 QA/QC Inspectors

QA/QC Inspectors perform and document the reviews in accord with these instructions and Reference 3.3.

4.2 Policy

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

5.0 INSTRUCTIONS

General

Using these instructions and information in "References" (Section 3.0), as applicable, the inspector shall perform a document review

5.0 INSTRUCTIONS (Cont'd)

General (Cont'd)

of the sample items of this population and document the results on the Document Review Checklists (Attachments 6.1 and 6.2) and associated forms.

Drawing Requirements

5A. ERC Reinspection Drawings

5A.1 Duct Support Detail Drawing

Record the revision number of the referenced duct support detail drawing filed in the Bahnson permanent plant file on the document review checklist.

5A.2 Duct Support Location Plan (Layout) Drawing

Record the revision number of the referenced duct support location plan (layout) drawing filed in the Bahnson permanent plant file on the document review checklist.

Duct Support Inspection Reports - General

The inspector shall obtain the duct support inspection report. The inspection reports for duct supports in Unit 1 and common areas will be found in the Brown & Root vault; the inspection reports for duct supports in Unit 2 will be found in the offices of the Bahnson Services Company, Quality Assurance Group. SEE NOTE NO. 1.

The inspector shall use the original of the inspection report to perform the document review; however, it is acceptable to use a copy if the original is not available. When a copy is used, the inspector shall note this in "Supplementary Remarks" in the document review package and state briefly, why a copy was used (e.g., no original in the vault, etc.).

If a duct support inspection report cannot be located, the inspector shall initiate a deviation report referencing all of the attributes which cannot be verified. Where the Brown & Root vault is missing a duct support inspection report, but that report is located in the Bahnson file, it shall be noted on the document review checklist.

If more than one inspection report is located for a given duct support and some support attributes have been inspected and signed-off on each report, the combination of reports shall be acceptable provided all applicable support attributes have been inspected.

5.0 INSTRUCTIONS (Cont'd)

Duct Support Inspection Reports - General (Cont'd)

A deviation report shall be written for any applicable support attribute which was not inspected.

5B Duct Support Inspector Certification

Verify, by review of the Bahnson "Qualification Record" in the inspector's certification file, that the inspector(s) that signed the duct support inspection report was certified to the procedures listed below, as applicable, at the time the inspection was performed. SEE NOTE #2.

Verification that Bahnson inspectors were certified to duct support inspection procedure QCI-CPSES-003 shall be performed for all Bahnson inspectors who signed off attributes on inspection reports prior to 6/16/83. Bahnson inspectors shall have been certified to duct support procedure QCI-CPSES-014 for attributes signed off on inspection reports on and after 6/16/83.

Verification that Bahnson inspectors were certified to inspection procedure QCI-CPSES-003 shall be performed for all Bahnson inspectors who signed off any of the anchor bolt and/or Richmond Insert attributes on inspection reports prior to 4/3/81. Bahnson inspectors shall have been certified to inspection procedure QCI-CPSES-012 for anchor bolt and/or Richmond Insert attributes signed off on inspection reports on and after 4/3/81.

Verification that Bahnson inspectors were certified to the weld inspection procedure QCI-CPSES-011 shall be performed for Bahnson inspectors who signed off fit-up and welding attributes (all dates).

Refer to Attachments 6.5 and 6.7 for examples of inspection reports.

Welding - General

The inspector shall obtain a copy of the weld procedure that was applicable at the time of welding, from the Bahnson QA representative. The weld procedure number is listed on the Weld Material Issue (WMI) slip which is referenced on the duct support inspection report.

5C. Weld Procedure Application

5C.1 Base Material

Verify that the base material specified in the welding procedure is the same as that of the parts being joined. (SEE NOTE #3)

5.0 INSTRUCTIONS (Cont'd)

5C. Weld Procedure Application (Cont'd)

5C.2 Filler Material

Verify that the filler material classification specified in the welding procedure is the same as that specified on the WMI slip. (SEE NOTE #4)

5D. Welder Qualification

Obtain the welder's name or initials from the Weld Material Issue slip (WMI) or Material Requisition Form (MRF).

Verify, by review of the Welder's Log, that the welder was qualified to the appropriate test at the time of welding (use the date specified on the WMI or MRF). The appropriate test has the same number as the welding procedure.

If the welder's log does not specify the effective dates of the welder's qualification, the inspector shall verify that the welder's qualification had not lapsed by one of the following methods:

1) The "Material Control Weld Material Issuance Logs"

There are two logs, one for current and one for non-current welders, both filed by welder's names. Check the Material Control Weld Material Issuance Log to verify that there has been no six month or longer period of time when the welder was not issued filler material for the appropriate weld process.

2) WMI Slips

WMI Slips shall be checked for the welder, from the date of his most recent qualification, to the date of the sample weld. Use the date and the weld material (wire or electrode) on the WMI. For the period between the welder's qualification and the completion of the sample weld, ensure that at least one WMI for the appropriate weld process is issued, not less than once every six months for that welder.

See Note #5.

5E. Weld Fit-up Inspection

Verify that a weld fit-up inspection was performed:

° For duct support inspection reports dated 7-22-80 or after*, verify that "Fit-up" or "Hanger Fit-up" has been signed off.

5.0 INSTRUCTIONS (Cont'd)

5E. Weld Fit-up Inspection (Cont'd)

- For duct support inspection reports dated before 7-22-80*, verify that weld fit-up has been added to the duct support inspection report and signed off.

*The inspector shall use the date entered for fit-up or hanger fit-up attributes on the duct support inspection report.

Hilti Bolts - General

After 04-02-81, Bahnson inspections of attributes 5G.1, 5G.2, 5H and 5J were performed on a surveillance basis. These attributes will be N/A'd by the engineers for those supports which were not inspected on a surveillance basis and "no surveillance" will be entered in remarks.

5.F Hilti Bolt Torque

5F.1 Torque Wrench Number

Verify that the torque wrench number is entered on the duct support inspection report.

5F.2 Torque Wrench Calibration

Verify that the torque wrench was calibrated at the time of inspection. (Note: The calibration due date may appear anywhere on the duct support inspection report provided it is identified as such.) Calibration shall be checked by review of the calibration record in the Brown & Root Calibration Lab.

5F.3 Torque Value

Verify that the torque setting value is listed on the duct support inspection report and that it meets or exceeds the minimum torque value requirements shown in Attachment 6.6.

5G. Abandoned Holes Covered by Duct Support Members

5G.1 Spacing

Verify that the proper spacing between abandoned holes covered by duct support members and installed Hilti bolts was maintained. For duct support inspections that were performed before 4-03-81, this is done by checking that both "Anchor Bolt Hole" and "Anchor Bolt

5.0 INSTRUCTIONS (Cont'd)

5G. Abandoned Holes Covered by Duct Support Members (Cont'd)

Angle" are signed off on the duct support inspection report. For duct support inspections that were performed on or after 4-03-81, this is done by checking only that "Anchor Bolt Hole" is signed off on the duct support inspection report.

5G.2 Patching

Verify that abandoned holes, covered by duct support members, spaced less than or equal to four bolt diameters from installed Hilti bolts have been properly filled and patched. For duct support inspections that were performed before 4-03-81, this is done by checking that both "Anchor Bolt Hole" and "Anchor Bolt Angle" are signed off on the duct support inspection report. For duct support inspections that were performed on or after 4-03-81, the inspector shall look for an additional line item entered on the inspection report that clearly shows that this inspection was performed.

5H. Cut Rebar

Verify that no rebar was cut during the drilling of holes for Hilti bolts without the approval from Gibbs & Hill. For duct support inspections that were performed before 4-03-81, this is done by checking that both "Anchor Bolt Hole" and "Anchor Bolt Angle" are signed off on the duct support inspection report. For duct support inspections that were performed on or after 4-03-81, this is done by checking only that "Anchor Bolt Hole" is signed off on the duct support inspection report.

5J. Resetting of Hilti Bolts

Verify that holes for Hilti bolts that slipped, loosened or pulled out during the setting of the bolt were properly reworked to allow for adequate embedment in accord with the construction procedure. For duct support inspections that were performed before 4-20-81, this attribute shall be NA'd by the inspector and the Hilti inspection date entered in remarks. For duct support inspections that occurred on or after 4-20-81, this is done by checking that "Anchor Bolt Torque" has been signed off on the duct support inspection report.

5.0 INSTRUCTIONS (Cont'd)

Materials

5K. Material Traceability - General

Traceability of materials used for safety related duct supports is not required after receipt inspection. Therefore, this attribute relates to only bulk receipt inspection of materials used in safety related duct supports. These are structural shapes (angle, channel, plate and tube steel) and nuts, bolts and washers. This document review will be performed once and the results will apply to all samples within this population. This generic type inspection is assigned a unique verification package number (R-S-HVDS-200) with the inspection checklist shown in Attachment 6.2.

5K.1 Material Specifications

Verify, for each purchase order, that the material received is in accord with the following:

- ASTM A36 - angles, channels and plate steel
- ASTM A500 - tube steel (TS)
- ASTM A307 - bolts
- ASTM A563 - nuts
- ASTM A325 - flat washers

The inspector shall do this by reviewing the Bahnson "Receiving Checklist for Q Material" for the applicable purchase order. (SEE NOTE #6) This attribute is rejected when a component type (e.g., angle, bolts, etc.) is found on a purchase order with a material specification other than as specified above. All rejected items shall be listed on Attachment 6.8.

5K.2 Material Documentation

Verify that a Certified Material Test Report (CMTR) or a Certificate of Compliance (C of C) is on file (for the materials listed in 5K.1) for each purchase order reviewed. Inspectors shall make entries on Attachment 6.8 for material documentation, as applicable. (SEE NOTE #6)

NOTES:

1. To obtain duct support inspection reports from the vault, the inspector must identify the turnover package number to vault personnel. To obtain the duct support inspection reports from Bahnson, the inspector must provide the Bahnson QA representative with the following information:

   - Duct support mark number
   - The duct support location plan (layout) drawing number
   - The turnover number

   These items will be listed on Attachment 6.4, "Pertinent Duct Support Information". (Ref. Section 5.0, "Duct Support Inspection Reports").

2. If this attribute is rejected, the inspector shall determine if the QC inspector(s) who signed the inspection report were ever certified to the applicable procedure(s). If never certified, this shall be so noted in the remarks column. If certified at some time, but not at the time of inspection, the inspector shall record the time period(s) of certification. Bahnson inspector's certification periods shall be obtained from the "Qualification Record" form in the Bahnson inspector's certification file. After 7/8/81, the certification period shall be three (3) years with the exception of inspectors certified after 3/11/82 and before 7/8/83. The certification period between 3/12/82 and 7/7/83 (inclusive) shall be two (2) years.

3. Duct support materials are as follows:

   - plates, angle and channel members: ASTM-A36
   - tube steel : ASTM-A500
   - sheet metal : ASTM-A526 or A527

   (Ref. Section 5C.1)

4. If the filler material classification is not specified on the WMI slip, it can be obtained from the heat number. Bahnson QA representatives are prepared to assist inspectors in obtaining this information. (Ref. Section 5C.2)

5. The inspector shall perform a check to determine if the welder symbol (when recorded during the duct support reinspection) matches the welder listed on the WMI slip. If they are different, the inspector shall evaluate the qualification of the welder to whom the symbol belongs (see Section 5D). If the symbol cannot be traced to a welder, the inspector shall note this on the document review checklist. (Ref. Section 5D.)

NOTES: (Cont'd)

6. The following items are exempt from the requirements of attributes 5K.1 and 5K.2 where they appear on material purchase orders:

   - L 1 1/2" x 1 1/2" x 3/16"
   - L 2" x 2" x 3/16"
   - L 2" x 2" x 1/4"
   - L 3" x 3" x 3/8"
   - 5/16" x 1 1/4" bolts
   - 5/16" dia. nuts
   - sheet metal

   (Ref. Section 5K.1 and 5K.2)

6.0 LIST OF ATTACHMENTS

6.1 Document Review Checklist (2 sheets)

6.2 Material Document Review Checklist (2 sheets)

6.3 Supplemental Remarks (1 sheet)

6.4 Pertinent Duct Support Information (1 sheet)

6.5 Duct Support Inspection Report Forms (Samples) (1 sheet)

6.6 Hilti Bolt Torque Requirements (1 sheet)

6.7 Duct Support/Hilti Bolt Inspection Report Forms (Samples) (2 sheets)

6.8 Duct Support Materials (1 sheet)

COMANCHE PEAK RESPONSE TEAM CHECKLIST				Attachment 6.1 QI-036 Rev. 1
POPULATION DESC HVAC DUCT SUPPORTS	VERIFICATION PKG NO. R-S-HVDS-			PAGE 1 OF 2
QUALITY INSTRUCTION QI-036	☐ REINSPECTION			☐ UNIT 1
EQUIPMENT MARK/TAG NO.	☒ DOCUMENTATION REVIEW			☐ UNIT 2 ☐ COMMON
ATTRIBUTE	VERIFICATION			REMARKS
	ACCEPT	REJECT	DATE	
5A. ERC Reinspection Drawings 5A.1 Duct Support Detail Drawing	NA	NA		For Information Only
5A.2 Duct Support Location Plan (Layout) Drawing	NA	NA		For Information Only
5B. Duct Support Inspector Certifications				
5C. Weld Procedure Application 5C.1 Base Material				
5C.2 Filler Material				
5D. Welder Qualification				
5E. Weld Fit-up Inspection				

PREPARED BY: DISCIPLINE ENGR. DATE	APPROVED BY: LEAD DISCIPLINE ENGR. DATE
INSPECTED BY: INSPECTOR DATE	APPROVED BY: LEAD INSPECTOR DATE

COMANCHE PEAK RESPONSE TEAM CHECKLIST				Attachment 6.1 QI-036 Rev. 1
POPULATION DESC HVAC DUCT SUPPORTS	VERIFICATION PKG NO. R-S-HVDS-			PAGE 2 OF 2
ATTRIBUTE	VERIFICATION			REMARKS
	ACCEPT	REJECT	DATE	
5F. Hilti Bolt Torque 5F.1 Torque Wrench Number				
5F.2 Torque Wrench Calibration				
5F.3 Torque Value				
5G. Abandoned Holes Covered by Duct Support Members 5G.1 Bolt Spacing				
5G.2 Patching				
5H. Cut Rebar				
5J. Resetting of Hilti Bolts				

COMANCHE PEAK RESPONSE TEAM CHECKLIST		Attachment 6.2 QI-036 Rev. 1
POPULATION DESC HVAC DUCT SUPPORTS	VERIFICATION PKG NO. R-S-HVDS-200	PAGE 1 OF 2
QUALITY INSTRUCTION QI-036	☐ REINSPECTION	☒ UNIT 1
EQUIPMENT MARK/TAG NO. DUCT SUPPORT MATERIAL TRACEABILITY	☒ DOCUMENTATION REVIEW	☒ UNIT 2 ☒ COMMON

ATTRIBUTE	VERIFICATION			REMARKS
	ACCEPT	REJECT	DATE	
Purchase Order No.:				
5K.1 Material Specification				
5K.2 CMTR or C of C				
Purchase Order No.:				
5K.1 Material Specification				
5K.2 CMTR or C of C				
Purchase Order No.:				
5K.1 Material Specification				
5K.2 CMTR or C of C				

PREPARED BY: DISCIPLINE ENGR. DATE	APPROVED BY: LEAD DISCIPLINE ENGR. DATE
INSPECTED BY: INSPECTOR DATE	APPROVED BY: LEAD INSPECTOR DATE

COMANCHE PEAK RESPONSE TEAM
CHECKLIST

Attachment 6.2
QI-036
Rev. 1

POPULATION DESC HVAC DUCT SUPPORTS	VERIFICATION PKG NO. R-S-HVDS-200			PAGE 2 OF 2
ATTRIBUTE	VERIFICATION			REMARKS
	ACCEPT	REJECT	DATE	
Purchase Order No.: _____				
5K.1 Material Specification				
5K.2 CMTR or C of C				
Purchase Order No.: _____				
5K.1 Material Specification				
5K.2 CMTR or C of C				
Purchase Order No.: _____				
5K.1 Material Specification				
5K.2 CMTR or C of C				
Purchase Order No.: _____				
5K.1 Material Specification				
5K.2 CMTR or C of C				

SUPPLEMENTAL REMARKS

DOCUMENT REVIEW PACKAGE NO. R-S-HVDS-_____

DUCT SUPPORT DETAIL DRAWING NO. _____

Attribute No./Description	Additional Remarks

INSPECTOR _____ DATE _____

Verification Pkg. No. R-S-HVDS-

PERTINENT DUCT SUPPORT INFORMATION

1. Drawing No. _____

2. Location Plan (layout) Drawing No. _____

3. Mark No. _____

4. Turn/Over Package No. _____

_____ _____
QA/QC Discipline Engineer Date

ATTACHMENT 6.5
QI-036 Rev. 1 Pg 1 of 1
Ref Section 5.0 "Hilti Bolts"

"Attachment #1"
DUCT SUPPORT INSPECTION REPORT

TUSI - COMANCHE PEAK STEAM ELECTRIC STATION PROJECT NO. A-0093

TURNOVER NO. _____ LAYOUT DWG. 2323-M -MAN REV. NO. _____

HANGER NO. _____ REV. NO. _____ REF: QCI-CPSES-014

ITEM	CRITERIA	N/A	ACCEPT	REJECT	REINSPECT & ACCEPT	DATE	COMMENTS
CONFORMANCE TO DRAWING	WELDING						
	LOCATION						
	CONFIGURATION						
	ATTACHMENT						
	DUCT ATTACHED						
	PAINTING						
	ORIENTATION						
	FIT-UP						
	OTHER						
WELDING							
	SIZE, LENGTH						
	CRACKS, SLAG						
	POROSITY						
	FUSION						
	X-SECTION						
	CONCAVITY						
	REINFORCE						
	UNDERCUT						
	PROFILE						

WELDER	BACK WELD OUT	DATE	WMI NOS.

ANCHOR BOLTS

TORQUE WRENCH NO. _____ CAL. DUE DATE _____

BOLT NO.	SIZE	TORQUE	EMBED	BOLT NO.	SIZE	TORQUE	EMBED

If any work rejected, give DCRF _____ Inspector _____

Form No. QA-101-A Rev. 1 Date _____

Attachment 1
DUCT SUPPORT INSPECTION REPORT

TUSI - COMANCHE PEAK STEAM ELECTRIC STATION PROJECT NO. A-0093

TURNOVER NO. _____ LAYOUT DWG. 2323-M -MAN REV. NO. _____

HANGER NO. _____ REV. NO. _____ REF: QCI-CPSES-014 ROCI NO. _____

ITEM	CRITERIA	N/A	ACCEPT	REJECT	REINSPECT & ACCEPT	DATE	COMMENTS
CONFORMANCE TO DRAWING	WELDING						
	LOCATION						
	CONFIGURATION						
	ATTACHMENT						
	DUCT ATTACHED						
	PAINTING						
	ORIENTATION						
	FIT-UP						
	OTHER						
WELDING							
	SIZE, LENGTH						
	CRACKS, SLAG						
	POROSITY						
	FUSION						
	X-SECTION						
	CONCAVITY						
	REINFORCE						
	UNDERCUT						
	PROFILE						

SAMPLE

WELDER	BACK WELD OUT	DATE	WMI NOS.

ANCHOR BOLTS

TORQUE WRENCH NO. _____ CAL. DUE DATE _____

BOLT NO.	SIZE	TORQUE	EMBED	BOLT NO.	SIZE	TORQUE	EMBED

If any work rejected, give DCRF _____ Inspector _____

Date _____

DUCT SUPPORT INSPECTION REPORT FORMS (SAMPLES)

HILTI BOLT TORQUE REQUIREMENTS

Bolt Diameter	Minimum Embedment		Minimum Torque (Ft/Lbs)
	Kwik Bolts	Super Kwik Bolts	
1/4	1 1/8	--	8
3/8	1 5/8	--	17
1/2	2 1/4	3 1/4	70
5/8	2 3/4	--	120
3/4	3 1/4		150
1	4 1/2	6 1/2	230
1 1/4	5 1/2	8 1/8	400

ATTACHMENT 6.7
QI-036, Rev. 1 Page 1 of 2
Ref. Section 5.0 "HiltiBolts"

Attachment #2

BAHNSON/ENVIROTECH

DUCT SUPPORT INSPECTION

TUSI-CPSES GROUP _____ CUBE _____ PROJECT 0085 DRAWING _____

Support Number _____	INSPECTOR	DATE	S	U	N/A
Anchor Bolt Hole					
Anchor Bolt Angle					
Anchor Bolt Tourque					
Torque Wrench Cal. Date					
Hanger Fit-Up					
Final Weld Inspection					
Material Heat/Lot Number or Color Code					
Material Heat/Lot Number or Color Code					
Material Heat/Lot Number or Color Code					
Material Heat/Lot Number or Color Code					

Welder	Tack W/O	Date	WHI

NOTE: S = Satisfactory U = Unsatisfactory N/A Not Applicable

PROCEDURE NO. QCI CPSES 003 REV. 0
DATE _____ PAGE _____ OF _____

Attachment #2

BAHNSON/ENVIROTECH

DUCT SUPPORT INSPECTION

TUSI-CPSES JOB NO. 0085 CUBE _____ DRAWING _____

Support Number _____	INSPECTOR	DATE	S	U	N/A
Anchor Bolt Hole					
Anchor Bolt Angle					
Anchor Bolt Tourque					
Tourque Wrench Cal. Date					
Tourque Wrench Number					
Richmond Insert Tightening					
Hanger Fit-Up					
Field Weld Inspection					
Material Heat/Lot Number or Color Code					
Material Heat/Lot Number or Color Code					
Material Heat/Lot Number or Color Code					

Welder	Tack W/O	Date	WHI

NOTE: S = Satisfactory U = Unsatisfactory N/A = Not Applicable

Procedure No. QCI-CPSES-003 Revision 2
Date 5-11-79 Page 5 of 5

Attachment #2

FLAKT/BAHNSON

DUCT SUPPORT INSPECTION REPORT

TUSI-CPSES
JOB NO. 0085

CUBE _____
DRAWING _____

Support Number _____	Inspector	Date	S	U	N/A
Anchor Bolt Hole					
Anchor Bolt Angle					
Anchor Bolt Size _____ " x "					
Torque Wrench No. _____					
Torque Wrench Cal. Due Date _____					
Anchor Bolt Torque _____ ft. lbs.					
Richmond Insert Tightening					
Hanger Fit-up					
Field Weld Inspection					

Anchor Bolt Embedments

Bolt No.	Embedment	Bolt No.	Embedment

Elevation _____

SKETCH

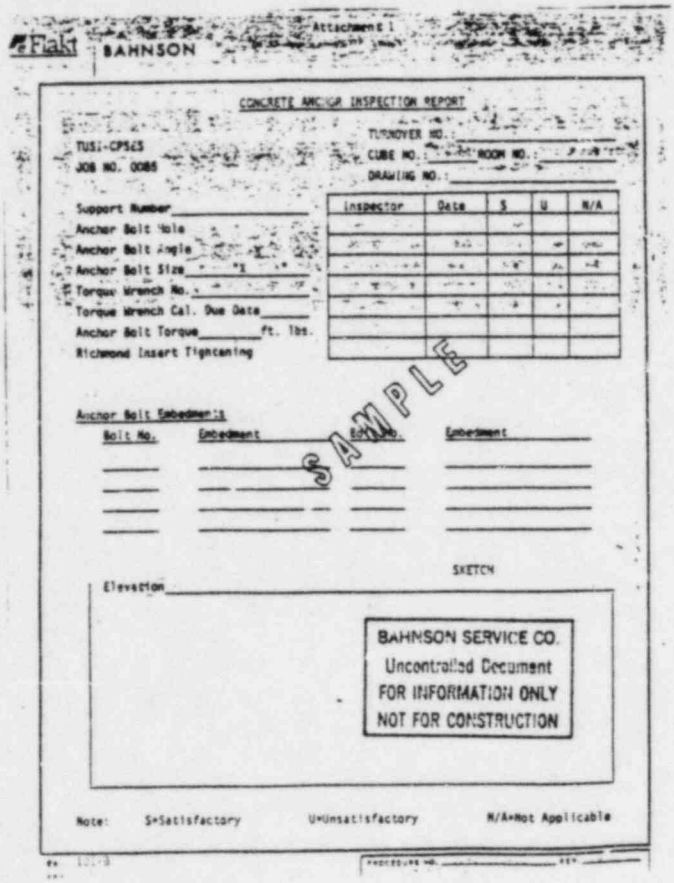
Welder	Tack/WO	DATE	WHI No.s

Note: S=Satisfactory Unsat=Unsatisfactory N/A=Not Applicable

Procedure No. QCI-CPSES 003 REV. 5

DUCT SUPPORT/HILTI BOLT INSPECTION REPORT FORMS (SAMPLES)

ATTACHMENT 6.7
QI-C36, Rev. 1 Page 2 of 2
Ref Section 5.0 "Hilti Bolts"



Attachment 1

Flakt BAHNSON

CONCRETE ANCHOR INSPECTION REPORT

TURNOVER NO.:
TUSI-CPSES
JOB NO. 0085
CUBE NO.: ROOM NO.:
DRAWING NO.:

Support Number	Inspector	Date	S	U	N/A
Anchor Bolt Hole					
Anchor Bolt Angle					
Anchor Bolt Size					
Torque Wrench No.					
Torque Wrench Cal. Due Date					
Anchor Bolt Torque ft. lbs.					
Richmond Insert Tightening					

Anchor Bolt Embedments

Bolt No.	Embedment	Bolt No.	Embedment

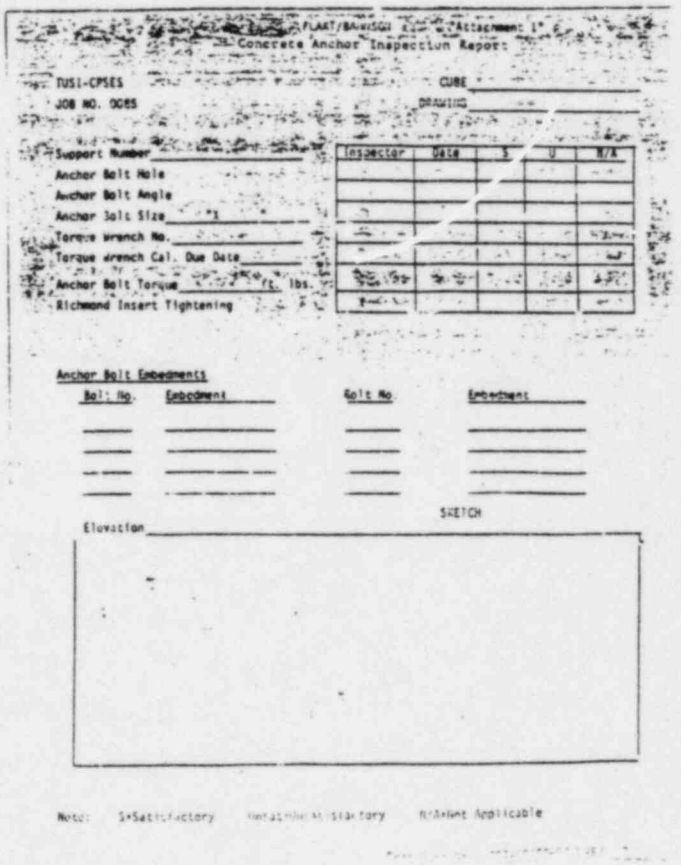
SAMPLE

SKETCH

Elevation

BAHNSON SERVICE CO.
Uncontrolled Document
FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

Note: S=Satisfactory U=Unsatisfactory N/A=Not Applicable



Attachment 1

FLAKT/BAHNSON

Concrete Anchor Inspection Report

TUSI-CPSES
JOB NO. 0085
CUBE
DRAWING

Support Number	Inspector	Date	S	U	N/A
Anchor Bolt Hole					
Anchor Bolt Angle					
Anchor Bolt Size					
Torque Wrench No.					
Torque Wrench Cal. Due Date					
Anchor Bolt Torque ft. lbs.					
Richmond Insert Tightening					

Anchor Bolt Embedments

Bolt No.	Embedment	Bolt No.	Embedment

SKETCH

Elevation

Note: S=Satisfactory U=Unsatisfactory N/A=Not Applicable

DUCT SUPPORT / HILTI BOLT INSPECTION FORMS (SAMPLES)

DUCT SUPPORT MATERIALS

VERIFICATION PACKAGE NO. R-S-HVDS-200

Purchase Order No.	Material Specification	Hardware Description	Documentation CofC	Documentation CMTR	Documentation None	Remarks

Inspector _____ Date _____