

 	PROJECT	Standby SRU & Additional Tanks IOCL Paradip Refinery		
	CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP – INSTRUMENTATION & COMMUNICATION SYSTEM INSTALLATION – ANALYZER INSTALLATION	Project No. 080557C001	Document No. 080557C-000-QCP-1560-001	Rev. No. 0	Page 1 of 4

QUALITY CONTROL PLAN – INSTRUMENTATION & COMMUNICATION SYSTEM INSTALLATION

ANALYZER INSTALLATION

TYPE OF QUALITY CONTROL REPORT	CERTIFICATION EXTENT
ICF-001U	“U” Unpacking
ICF-005A; ICF-013A; ICF-038A	“A” Installation
ICF-039A	Final Inspection Report

REFERENCE DOCUMENTS:

- 080557C-000-STC-1590-001 Installation Standards
- 080557C-000-JSS-1590-001 Job Specification for Instrumentation Installation Works
- 080557C-000-PP-850 Site Co-ordination

LEGENDS

H	=	HOLD (Work Stop for Inspection- RFI required)
W	=	WITNESS (RFI required)
WC	=	100% SUPERVISION AND EXAMINATION BY CONTRACTOR
S	=	SURVEILLANCE (NO RFI)
R	=	REVIEW of QC REPORTS
N/A	=	NOT APPLICABLE
P	=	PREPARATION
A	=	DOCUMENT APPROVAL
IFA	=	ISSUED FOR APPROVAL / AUTHORIZATION
!	=	WARNING (Control of document revision status)
INFO	=	FOR INFORMATION
N.A.	=	NOT ACCEPTED
ACC.	=	ACCEPTED

0	14-10-2019	ISSUED FOR IMPLEMENTATION	SGR	KRS	SS	JMC
REV.	DATE	STATUS	WRITTEN BY (name & visa)	CHECKED BY (name & visa)	APPROVED BY (name & visa)	AUTHOR. BY (name & visa)

DOCUMENT REVISIONS

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QUALITY CONTROL PLAN

INSTRUMENTATION & COMMUNICATION SYSTEM INSTALLATION

ANALYZER INSTALLATION (1560.00)

QUALITY CONTROL ACTIVITIES

Nr.	CHECK AND INSPECTION ITEM	QUALITY CONTROL FORM	ACTION		NOTES
			CONTR.	TECHNIP	
A	PRELIMINARY ACTIVITIES				
A1	CHECK OF CONTRACTOR DRAWINGS REVISION STATUS	N/A	!	!	
A2	CHECK OF CONTRACTOR TECHNICAL SPECIFICATION AND PROCEDURE	N/A	P	A	
A3	CONTRACTOR'S METHOD STATEMENT (IF REQUIRED)	N/A	IFA	A	(1)
A4	AVAILABILITY OF VENDOR INSTALLATION MANUAL, DRAWING AND DOCUMENTATION	N/A	IFA	A	(1)
A5	REVIEW OF SYSTEMS FAT PUNCH LIST (IF ANY)	By Vendor	WC	R	
B	UNPACKING				
B1	MATERIAL IDENTIFICATION AND CONSERVATION STATUS (FOR BOTH LOOSE AND PREASSEMBLED MATERIALS) UNPACKING VISUAL INSPECTION	ICF-001U	WC	W/R	
C	INSTALLATION				
C1	ON-LINE ANALYZER INSTALLATION				
C1.1	Field Instrument Calibration Test				
C1.1A	Check	ICF-005A	WC	W/R	
C1.1B	Signal Calibration	ICF-005A	WC	W/R	
C1.1C	Final inspection	ICF-005A	WC	W/R	
C1.2	Field instrument Installation				
C1.2A	Installation of supports	ICF-005A	WC	W/R	

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Nr.	CHECK AND INSPECTION ITEM	QUALITY CONTROL FORM	ACTION		NOTES
			CONTR.	TECHNIP	
C1.2B	Secondary Cable tray installation	ICF-005A	WC	W/R	
C1.2C	Signal cable installation, wiring and instrument grounding, cable gland installation	ICF-005A	WC	W/R	
C1.2D	Installation of instrument	ICF-005A	WC	W/R	
C1.2E	Instrument Check	ICF-005A	WC	W/R	
C1.2F	Final inspection	ICF-005A	WC	W/R	
C1.3	Instrument Impulse Line Pressure Test				
C1.3A	Ferrules Installation	ICF-005A	WC	W/R	
C1.3B	Tubing/Piping Test	ICF-005A	WC	W/R	
C1.3C	Final inspection	ICF-005A	WC	W/R	
C1.4A	Final Documentation Review	ICF-005A	P	R	
C1.4B	Field Instrument Installation Final Inspection	ICF-039A	WC	W/R	(2)
C2	ANALYZER INSTALLATION IN ANALYZER SHELTER				
C2.1	Field Instrument Calibration Test				
C2.1A	Check	ICF-005A	WC	W/R	
C2.1B	Signal Calibration	ICF-005A	WC	W/R	
C2.1C	Final inspection	ICF-005A	WC	W/R	
C2.2	Field instrument Installation				
C2.2A	Installation of supports	ICF-005A	WC	W/R	
C2.2C	Signal cable installation, wiring and instrument grounding, cable gland installation	ICF-005A	WC	W/R	
C2.2D	Installation of instrument	ICF-005A	WC	W/R	
C2.2E	Instrument Check	ICF-005A	WC	W/R	
C2.2F	Final inspection	ICF-005A	WC	W/R	

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Nr.	CHECK AND INSPECTION ITEM	QUALITY CONTROL FORM	ACTION		NOTES
			CONTR.	TECHNIP	
C2.3	Instrument Impulse Line Pressure Test				
C2.3A	Ferrules Installation	ICF-005A	WC	W/R	
C2.3B	Tubing/Piping Test	ICF-005A	WC	W/R	
C2.3C	Final inspection	ICF-005A	WC	W/R	
C2.4A	Final Documentation Review	ICF-005A	P	R	
C2.4B	Field Instrument Installation Final Inspection	ICF-039A	WC	W/R	(2)
C3	ANALYZER EQUIPMENT INSTALLATION				
C3.1	Field instrument Installation				
C3.1A	Installation of support	ICF-013A	WC	W/R	
C3.1D	Installation of instrument	ICF-013A	WC	W/R	
C3.1E	Check	ICF-013A	WC	W/R	
C3.1F	Final inspection	ICF-013A	WC	W/R	
C3.1G	Final Documentation Review	ICF-013A	P	R	
C3.1H	Field Instrument Installation Final Inspection	ICF-039A	WC	W/R	(2)

GENERAL NOTES

1 THE ENCLOSED ITP'S ARE INDICATIVE AND SHALL BE FOLLOWED FOR DEVELOPING THE JOB SPECIFIC ITP'S FOR THE WORKS TO BE PERFORMED BY THE CONTRACTOR. THE PROVISIONS INDICATED FOR STAGE WISE INSPECTION BY TECHNIP AND OWNER (FOR SPECIFIC ACTIVITIES) ARE THE MINIMUM AND THE ENGINEER-IN- CHARGE MAY DECIDE TO INCREASE HOLD POINTS/ WITNESS POINTS, WHILE APPROVING THE JOB SPECIFIC ITP'S. ACTIVITIES FOR WHICH ITP'S ARE NOT PROVIDED IN THIS SPECIFICATION. CONTRACTOR TO DEVELOP AND GET THE SAME APPROVED BY TECHNIP/OWNER BEFORE START OF THE WORK. IN GENERAL ROLE OF TECHNIP HAS BEEN SPECIFIED IN THE DOCUMENT THE ROLE OF OWNER TO BE SPECIFIED DURING PREPARATION OF SITE SPECIFIC ITP'S.

2 CONTRACTOR TO SUBMIT JOB SPECIFIC REPORTING FORMATS AND JOB PROCEDURES FOR THE JOBS FOR EACH ACTIVITY LISTED IN THE ITP'S AND SUBMIT TO TECHNIP/OWNER FOR APPROVAL. BEFORE COMMENCEMENT OF THE ACTIVITY. IF THE CONTRACTOR HAS TO DEViate FROM THE GIVEN ITP FOR A VALID REASON, HE SHALL OBTAIN PRIOR WRITTEN APPROVAL OF TECHNIP/OWNER. CONTRACTOR TO CARRY OUT 100% EXAMINATION OF ALL ACTIVITIES.

NOTES: (1) A COPY OF THE DOCUMENT WILL BE DELIVERED TO COMPANY FOR INFORMATION
(2) TO BE FILED AS PART OF LOOP CHECK FOLDERS

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 				PROJECT		Standby SRU & Additional Tanks IOCL Paradip Refinery	
QUALITY CONTROL FORM ICF 005A				CLIENT		INDIAN OIL CORPORATION LIMITED	
FIELD INSTRUMENT CALIBRATION, INSTALLATION AND IMPULSE LINE PRESSURE TEST SUMMARY REPORT				PROJ. No. 080557C001		REV. 0	SH. _1_ OF _2_
				CONTRACTOR:		ICF 005A N° _____	
GENERAL DATA							
Tag/ Identification				Instrument pattern tag:			
MR/P.O. No.:				Hook Up Standard:			
Instrument type				Ref. drawing:			
Manufacturer				P & ID			
Model No/ Serial No.:				Operating pressure (Kg/Cm2g)			
F.F DATA OPER ATION	Field Device TAG			Test Media			
	Node Address:			Test pressure (Kg/Cm2g)			
	Engineering Range / Unit:			Rev:			
	Calibr. Range:						
	Output signal:						
Accuracy:							
Mode (Analogue/Digital):							
INSPECTIONS / CHECK (Ref. to QCP 1560.001)				N.A.	ACC.	Report / Reference	INSPECTOR SIGNATURE & DATE
							CONTR. TECHNIP
1A- Check				Results			
A1. Instrument supply				☐	☐		
A2. Overrange protection				☐	☐		
1B- Signal Calibration				Results			
Input Signal	B1.	0%	Output signal/ Error:	☐	☐		
	B2.	25%	Output signal/ Error:	☐	☐		
	B3.	50%	Output signal/ Error:	☐	☐		
	B4.	75%	Output signal/ Error:	☐	☐		
	B5.	100%	Output signal/ Error:	☐	☐		
	B6.	75%	Output signal/ Error:	☐	☐		
	B7.	50%	Output signal/ Error:	☐	☐		
	B8.	25%	Output signal/ Error:	☐	☐		
	B9.	0%	Output signal/ Error:	☐	☐		
1C- Final Inspection							
C1. Final visual inspection				☐	☐		
C2. As-built marked up copy updated and available				☐	☐		
2A- Installation of support							
A1. Support prefabrication				☐	☐		
A2. Support installation				☐	☐		
2B-Secondary cable tray Installation				☐	☐		
2C-Signal cable Installation, Wiring and Instrument Grounding, cable gland Installation				☐	☐		
2D - Installation of Instrument							
D1. Hook up installation complete and sealed				☐	☐		
D2. Sampling system installation				☐	☐		
D3. Drains / vents				☐	☐		
D4. Cable glands installed and tight				☐	☐		
D5. TC / RTD fully inserted with gasket bolts and nuts tight				☐	☐		
D6. Signal cable and cable tray install.				☐	☐		
D7. Wiring and Grounding connection				☐	☐		

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 		PROJECT		Standby SRU & Additional Tanks IOCL Paradip Refinery	
QUALITY CONTROL FORM		ICF 013A		CLIENT	
FIELD INSTRUMENT INSTALLATION SUMMARY REPORT		PROJ. No. 080557C001		REV. 0	SH. _1_ OF _1_
		CONTRACTOR:		ICF 013A N° _____	
GENERAL DATA					
Tag / Identification:					
MR/P.O.:					
Manufacturer & Model:					
Serial number:					
Hook Up Standard:					
Ref. drawing:					
INSPECTIONS / CHECK (Ref. to QCP 1560.001)		N.A.	ACC.	Report / Reference	INSPECTOR SIGNATURE & DATE
					CONTR. TECHNIP
1A- Installation of support					
A1.	Support prefabrication	☐	☐		
A2.	Support installation	☐	☐		
1B - Secondary cable tray Installation		☐	☐		
1C - Signal cable Installation, Wiring and Instrument Grounding, cable gland Installation		☐	☐		
1D - Installation of Instrument					
D1.	Hook up installation complete and sealed	☐	☐		
D2.	Sampling system installation	☐	☐		
D3.	Drains / vents	☐	☐		
D4.	Cable glands installed and tight	☐	☐		
D5.	TC / RTD fully inserted with gasket bolts and nuts tight	☐	☐		
D6.	Signal cable and cable tray install.	☐	☐		
D7.	Wiring and Grounding connection	☐	☐		
1E - Check					
E1.	Instrument installation and maintenance space check	☐	☐		
E2.	HP & LP connections check (including Impulse line and slope)	☐	☐		
E3.	Flow direction check	☐	☐		
E4.	Cable identification	☐	☐		
E5.	Wiring identification & connection	☐	☐		
E6.	Labeling	☐	☐		
1F - Final inspection					
F1.	Final visual inspection (including material & rating)	☐	☐		
F2.	As-built marked up copy updated and available	☐	☐		
REMARKS :					
1G - FINAL DOC. REVIEW	INSPECTORS	CONTRACTOR		TECHNIP	OWNER
	NAME				
	SIGNATURE				
	DATE				

 		PROJECT Standby SRU & Additional Tanks IOCL Paradip Refinery		
QUALITY CONTROL FORM ICF 038A		CLIENT INDIAN OIL CORPORATION LIMITED		
INSTRUMENT AIR SUBHEADERS PRESSURE TEST INSPECTION REPORT		PROJ. No. 080557C001	REV. 0	
		SH. _1_ OF _1_		
		CONTRACTOR:		
GENERAL DATA				
INSTRUMENT SUBHEADER ID. OR AIR TAP N.				
Instruments supplied:				
Test pressure (Kg/Cm2g)		7 Kg/Cm2g (Unless otherwise specified)		
Test medium used		Air (Unless otherwise specified)		
INSTALLATION INSPECTION			Accepted	
			N.A.	ACC.
A- Installation				
A1. Support			☐	☐
A2. Installation			☐	☐
B - Connection / wiring				
B1. Main air header commissioned			☐	☐
B2. Secondary air header connected			☐	☐
B3. Air distribution to instrument connected			☐	☐
C - Check				
C1. Pressure service test with air at 7Kg/Cm2g			☐	☐
C2. Blowing/Tightness			☐	☐
C3. Labelling			☐	☐
D - Final inspection				
D1. Final visual inspection			☐	☐
D2. As-built marked up copy updated and available			☐	☐
REMARKS :				
INSPECTORS		CONTRACTOR		TECHNIP
NAME				
SIGNATURE				
DATE				

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TechnipFMC IndianOil		PROJECT Standby SRU & Additional Tanks IOCL Paradip Refinery			
QUALITY CONTROL FORM ICF 039A		CLIENT INDIAN OIL CORPORATION LIMITED			
FIELD INSTRUMENT INSTALLATION FINAL INSPECTION REPORT		PROJ. No. 080557001	REV. 0		
		SH. <u> 1 </u> OF <u> 1 </u>			
		CONTRACTOR: ICF 039A N° _____			
GENERAL DATA					
Instrument TAG:					
Serial:					
Model:					
MR:					
P.O.:					
P&ID:					
Rev:					
INSPECTIONS / CHECK (Ref. to QCP 1560.001)		N.A.	ACC.		
		Report / Reference	INSPECTOR SIGNATURE & DATE		
			CONTR.	TECHNIP	
1A- Inspection / Check Point					
A1.	Instrument calibration	☐	☐	ICF (*)	
A2.	Instrument installation	☐	☐	ICF (*)	
A3.	Impulse line pressure test	☐	☐	ICF (*)	
A4.	Instrument signal cable to JB/LP and wiring check	☐	☐	ICF (*)	
A5.	Instrument power cable and wiring check if any	☐	☐	ICF (*)	
A6.	Cable way in trays; in conduits or underground-layout and installation checks	☐	☐	ICF (*)	
A7.	Instrument cable - terminals execution and connection to Instruments and J.Box/L.Panel sides	☐	☐	ICF (*)	
A8.	Instrument air sub headers pressure test	☐	☐	ICF 038A (*)	
A9.	Pneumatic connection and air-supply leak test	☐	☐	ICF (*)	
A10.	Instrument ready for Loop check (relevant JB/LP checked, relevant cable from JB/LP to system checked, relevant system powered up)	☐	☐		
REMARKS : (*) THE QC REPORTS SHALL BE INDICATED IN THE RELEVANT HERE BELOW SPACES : A1. ICF _____ N° _____ A2. ICF _____ N° _____ A3. ICF _____ N° _____ A4. ICF _____ N° _____ A5. ICF _____ N° _____ A6. ICF _____ N° _____ A7. ICF _____ N° _____ A8. ICF 038A N° _____ A9. ICF _____ N° _____					
INSPECTORS		CONTRACTOR		TECHNIP	
NAME		NAME		NAME	
SIGNATURE		SIGNATURE		SIGNATURE	
DATE		DATE		DATE	