	PROJECT		Standby SRU & Additional Tanks	
	CLIENT		IOCL Paradip Refinery	
QCP-PREFABRICATION OF CONCRETE ELEMENTS	Project No. 080557C001	Document No. 080557C-000-QCP-1710-002	Rev. No. A	Page 1 of 5

QUALITY CONTROL PLAN

CIVIL WORKS PREFABRICATION OF CONCRETE ELEMENTS

TYPE OF QUALITY CONTROL REPORT	CERTIFICATION EXTENT
W 12/A –CW 15A	SINGLE REPORT PER EACH MATERIAL – CONCRETE MIX
CW 35 – CW 17	SINGLE REPORT PER EACH ITEM
CW 33 B	CONCRETE ELEMENTS PREFABRICATION REPORT



REFERENCE DOCUMENTS:

- 080557C-000-PP-805 SITE CO-ORDINATION & COMMUNICATION PROCEDURE
- 080557C-000-JSS-1700-001 SPECIFICATION FOR PLAIN & REINFORCED CEMENT CONCRETE.
- Drawings

LEGENDA

H	=	HOLD (RFI required - Work stop for inspection)
W	=	WITNESS (RFI required)
WC	=	100 % SUPERVISION AND EXAMINATION BY CONTRACTOR.
P	=	PREPARATION
S	=	SURVEILLANCE (No RFI)
R	=	REVIEW OF REPORTS
N.A.	=	NOT APPLICABLE
A	=	AUTHORIZATION / APPROVAL
IFA	=	ISSUED FOR AUTHORIZATION/APPROVAL
INFO	=	FOR INFORMATION
!	=	WARNING (control of document revision status)

A	21/10/2019	ISSUED FOR INFROMATION	SMP	PKP	LA/ANJ	JMC
REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	AUTHORIZED

 	PROJECT		Standby SRU & Additional Tanks	
	CLIENT		IOCL Paradip Refinery	
QCP-PREFABRICATION OF CONCRETE ELEMENTS	Project No. 080557C001	Document No. 080557C-000-QCP-1710-002	Rev. No. A	Page 2 of 5



QUALITY CONTROL PLAN
CIVIL WORKS
PREFABRICATION OF CONCRETE ELEMENTS

QUALITY CONTROL ACTIVITIES

Nr.	CHECK AND INSPECTION ITEM	QUALITY CONTROL REPORT	ACTION		NOTES
			CONTR.	TECHNIP	
A)	PRELIMINARY ACTIVITIES				
A.1	CONTRACTOR DRAWINGS CHECK REVISION STATUS	N.A.	!	!	
A.2	CONTRACTOR TECHNICAL SPECIFICATION AND PROCEDURE	N.A.	IFA	A	
A.3	CONTRACTOR METHOD STATEMENT & ENGINEERING LIFTING STUDY	N.A.	P	A	(1)
B)	BEFORE CASTING				
B.1	MATERIALS APPROVAL	W 12/A	IFA	A	(1) (4)
B.2	MIXING FORMULA APPROVAL	CW 15A	IFA	A	(1)
B.3	MIXING FORMULA LIST	CW 01	IFA	A	(1) (2)
C)	CONSTRUCTION				
C.1	REINFORCEMENT - SPACERS AND CONCRETE COVER - LAP SPLICE - BENDING AND TIE BAR - REBAR NUMBER, SIZE & SPACING - CLEANLINESS - WELDED WIRE FABRIC (IF ANY) - COATING TOUCH-UP (IF ANY)	CW 33 B	WC	W/R	
C.2	FORMWORK - GEOMETRY - STABILITY AND PLUMBNESS - CLEANLINESS AND OIL COATING - HOLES & PENETRATION	CW 33 B	WC	W/R	
C.3	EMBEDDED ITEMS - ANCHOR BOLTS: NUMBER/SIZE & POSITION - STEEL INSERTS: POSITION & GEOMETRY - COATING TOUCH-UP (IF ANY)	CW 33 B	WC	W?R	

This document is developed by TECHNIP India Limited and the information it contains is property of Indian Oil Corporation Ltd. It shall not be used for any purpose other than that for which it is supplied.

CONFIDENTIAL – Not to disclose without Authorization



 	PROJECT		Standby SRU & Additional Tanks	
	CLIENT		IOCL Paradip Refinery	
QCP-PREFABRICATION OF CONCRETE ELEMENTS	Project No. 080557C001	Document No. 080557C-000-QCP-1710-002	Rev. No. A	Page 3 of 5

QUALITY CONTROL PLAN
CIVIL WORKS
PREFABRICATION OF CONCRETE ELEMENTS

QUALITY CONTROL ACTIVITIES

Nr.	CHECK AND INSPECTION ITEM	QUALITY CONTROL REPORT	ACTION		NOTES
			CONTR.	TECHNIP	
C.4	AUTHORIZATION FOR CASTING	CW 33 B	WC	A	(3)
C.5	CASTING:	CW 33B	WC	W/R	
C.5.1	SLUMP TEST & AIR CONTENT TEST (IF REQUIRED)	CW 35 / CW 33B	WC	W/R	
C.5.2	SAMPLE STRENGTH TEST	CW 17 / CW 33B	WC	R	
C.6	CURING	CW 33 B	WC	R/S	
C.7	ANCHOR BOLTS: - POSITION AND ELEVATION	CW 33 B	WC	W/R	
C.8	FORMWORK STRIPPING	CW 33 B	WC	R/S	
C.8.1	REPAIRS (IF ANY)	CW 33 B	WC	R/S	
C.9	PROTECTIVE COATING (WHERE REQUIRED)	CW 33B	WC	R R	
C.10	STORAGE CHECK; FOR PRECAST PIPE-RACK CHECK SLEEVE HOLE AIR BLOWING TOO	CW 33 B	WC	W/R	
C.11	STRENGHT TEST RESULT & SAMPLE UNIT WEIGHT	CW 17 / CW 33B LAB. TEST	WC	R	
C.12	FINAL DOCUMENTATION REVIEW	CW 33 B	P		

- NOTES:
- (1) A COPY OF THE DOCUMENT WILL BE DELIVERED TO COMPANY FOR INFORMATION
 - (2) THE FORM CW 01 (MIX DESIGN LIST) MUST BE FILLED AND UP-TO-DATE BY CONTRACTOR, BUT SCANNED AT THE END OF THE WORKS ONLY
 - (3) CONTRACTOR WILL PREPARE A DETAILED SKETCH
 - (4) MATERIAL APPROVAL WILL BE EXECUTED ONLY FOR MATERIAL SUPPLIED BY CONTRACTOR

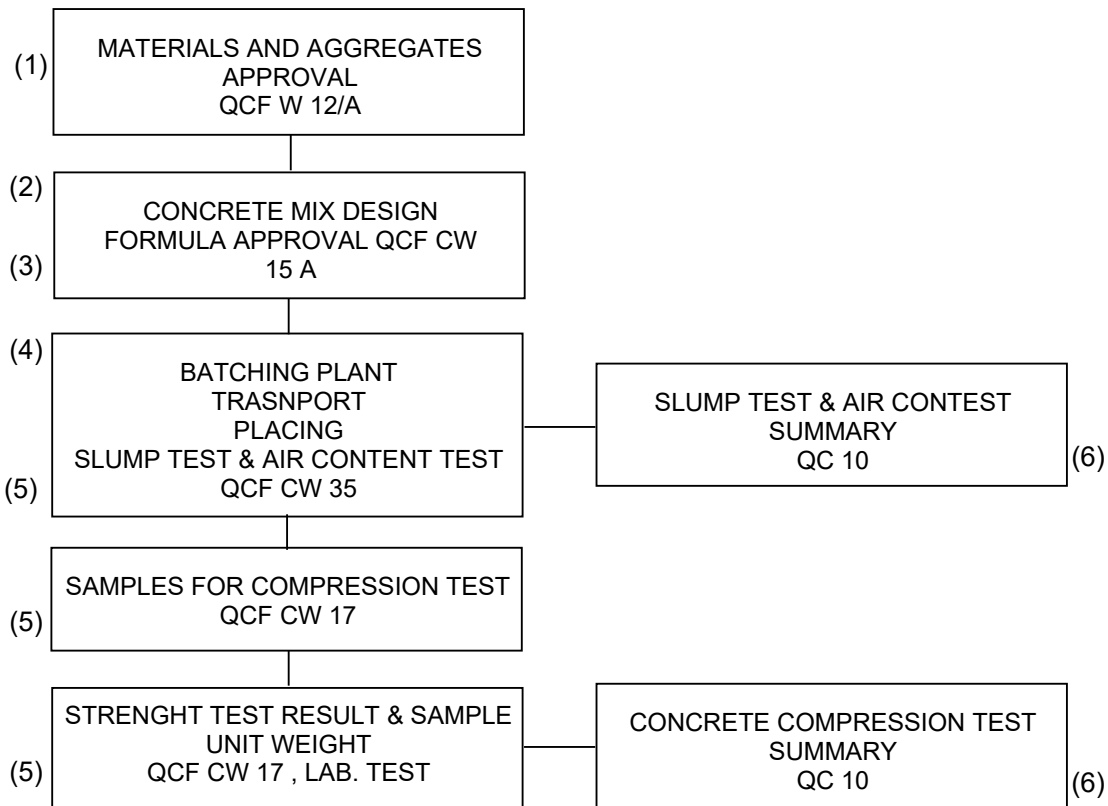
		PROJECT	Standby SRU & Additional Tanks		
		CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP-PREFABRICATION OF CONCRETE ELEMENTS	Project No. 080557C001	Document No. 080557C-000-QCP-1710-002	Rev. No. A	Page 4 of 5	

QUALITY CONTROL PLAN

CIVIL WORKS



REINFORCED CONCRETE FOR FOUNDATION / ELEVATION STRUCTURES AND BASINS

CONCRETE CONTROL SEQUENCE





NOTES:

- (1) MATERIALS AND AGGREGATES MUST BE APPROVED PRIOR STARTING OF WORKS AND EVERY CHANGE OF SOURCE.
- (2) - GRANULOMETRY TEST EVERY WEEK AND EVERY CHANGE OF SOURCE OR WHENEVER REQUESTED BY CONTRACTOR
- WATER CHEMICAL ANALYSIS SHALL BE REPEATED EACH TWO MONTHS AND EVERY CHANGE OF SOURCE OR WHENEVER REQUESTED BY CONTRACTOR.
- (3) ADMIXTURES REQUIRE PRIOR APPROVAL FROM CONTRACTOR/ENGINEER.
- (4) EVERY CONCRETE MIXER TRUCK MUST BE ACCOMPANIED BY TICKET REPORT (QCF CW 35) AND EVERY CASTING SITE MUST BE HAVING CONCRETE SLUMP TEST APPARATUS.
- (5) FOR SLUMP & COMPRESSION TESTS SEE 072849C-000-JSS-1701-001
- (6) **THE QC 10 WILL NOT BE PART OF THE QUALITY DOSSIER. IT IS ATTACHED AS AN EXAMPLE OF ELECTRONIC SHEET FOR CONCRETE MANAGEMENT ONLY.**



 	PROJECT		Standby SRU & Additional Tanks	
	CLIENT		IOCL Paradip Refinery	
QCP-PREFABRICATION OF CONCRETE ELEMENTS	Project No. 080557C001	Document No. 080557C-000-QCP-1710-002	Rev. No. A	Page 5 of 5

GENERAL NOTES

- 1 THE ENCLOSED ITP'S ARE INDICATIVE AND SHALL BE FOLLOWED FOR DEVELOPING THEJOB 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.

 		PROJECT:	
		COMPANY:	
QUALITY CONTROL FORM CW 15 A		PROJ. No.:	QCF REV. 0
		SH. 1 OF 1	
CONCRETE MIX DESIGN APPROVAL		CONTRACTOR: CW 15 A N° _____	
1. MIX DESIGN N°		_____	
2. SPECIFIED CONCRETE STRENGTH (28 DAYS) (CONCRETE CLASS)		_____	
3. MIX DESIGN CONCRETE STRENGTH (28 DAYS)		_____	
4. MIX DESIGN CONCRETE SLUMP		_____	
5. CEMENT TYPE		_____	
6. ADMIXTURES		_____	
7. PURPOSE		_____	
8. BATCHING PLANT		_____	
9. ATTACHMENT DATA		_____	
REMARKS:			
RESULT: ACCEPTED <input type="checkbox"/> NOT ACCEPTED <input type="checkbox"/>			
INSPECTORS	CONTRACTOR	PMC	OWNER
NAME			
SIGNATURE			
DATE			

[illegible]

 				PROJECT:			
				COMPANY:			
QUALITY CONTROL FORM CW 33 B				PROJ. No.:	QCF REV. 0	SH. 1 OF 1	
PREFABRICATION OF CONCRETE ELEMENTS SUMMARY REPORT				CONTRACTOR:		CW 33B N° ____	
ITEM _____ AREA _____ DWG'S & REV _____				FOOTING <input type="checkbox"/> COLUMN <input type="checkbox"/> FOUNDATION BEAMS <input type="checkbox"/> WALLS <input type="checkbox"/> ELEVATED BEAMS <input type="checkbox"/> PITS <input type="checkbox"/> ELEVATED SLABS <input type="checkbox"/> <input type="checkbox"/>			
INSPECTIONS (REF. TO QCP 1710.02)			N.A.	ACC	REMARKS / REFERENCES	INSPECTORS SIGNATURE & DATE	
						CONTRACTOR	TECHNIP
C.1	REINFORCEMENT - SPACERS & CONCRETE COVER - LAP SPLICE - BENDING AND TIE BAR - REBAR NUMBER, SIZE & SPACING - CLEANLINESS - WELDED WIRE FABRIC - COATING TOUCH-UP	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				
C.2	FORMWORK - GEOMETRY - STABILITY & PLUMBNESS - CLEANLINESS AND OIL COATING - HOLES & PENETRATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				
C.3	EMBEDDED ITEMS - ANCHOR BOLTS: NUMBER / SIZE & POSITION - STEEL INSERTS: POSITION & GEOMETRY - COATING TOUCH-UP	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				
C.4	AUTHORIZATION FOR CASTING YES <input type="checkbox"/> NO <input type="checkbox"/>						
C.5	CASTING	<input type="checkbox"/>	<input type="checkbox"/>				
C.5.1	SLUMP TEST & AIR CONTENT TEST	<input type="checkbox"/>	<input type="checkbox"/>	CW 35 (*)			
C.5.2	SAMPLE STRENGTH TEST	<input type="checkbox"/>	<input type="checkbox"/>	CW 17 (*)			
C.6	CURING	<input type="checkbox"/>	<input type="checkbox"/>				
C.7	ANCHOR BOLTS: POSITION & ELEVATION	<input type="checkbox"/>	<input type="checkbox"/>	SEE ATTACHED SKETCH			
C.8	FORMWORK STRIPPING	<input type="checkbox"/>	<input type="checkbox"/>				
C.8.1	REPAIRS (IF ANY)	<input type="checkbox"/>	<input type="checkbox"/>				
C.9	PROTECTIVE COATING	<input type="checkbox"/>	<input type="checkbox"/>				
C.10	STORAGE CHECK; FOR PRECAST PIPE-RACK CHECK SLEEVE HOLE AIR BLOWING TOO	<input type="checkbox"/>	<input type="checkbox"/>				
C.11	STRENGHT TEST RESULT	<input type="checkbox"/>	<input type="checkbox"/>	CW 17 (*)			
NOTES: (*) THE QC REPORTS N° SHALL BE INDICATED IN THE RELEVANT HERE BELOW SPACES : CW 17 N° _____; CW 35 N° _____;							
C.12) FINAL DOC. REVIEW	INSPECTORS	CONTRACTOR		PMC		OWNER	
	NAME						
	SIGNATURE						
	DATE						



COMPANY:

CW 35

SH. 1 OF 1

CW 35 N°

DATE _____

CONCRETE MIX DESIGN No. _____

REMARKS:

TEST RESULT: ACCEPTED ☐

INSPECTORS	CONTRACTOR	PMC	OWNER
NAME			
SIGNATURE			
DATE			



PROJECT:

COMPANY:

QUALITY CONTROL FORM

QC 10

PROJ. No.:

SH. 1 OF 1

CONCRETE TEST SUMMARY FOR



CONTRACTOR:

QC 10 N° _____

PROGR	ITEM OR DESCRIPTION	AREA/ LOCATION	CASTING DATE	SITE CASTING TEMP. °C	Q.TY m³	CONCRETE		SLUMP TEST & AIR CONTENT TEST		STRENGTH TEST		REPORTS (1)	REMARKS
						CLASS	MIX DESIGN NUMBER	TICKET NR	CW 35 NR LAB. TEST	SAMPLE NR	CW 17 NR LAB. TEST		
1													
2													
3													
4													
5													
6													
7													
8													
10													
11													
12													
13													
14													

NOTE: THIS QCF SHALL BE DONE BY ELECTRONIC SHEET

(1) CW 33 FOR CONCRETE STRUCTURES – CW 32B FOR RIGID PAVING – CW 54 FOR CONCRETE PILES

 		PROJECT:	
		COMPANY:	
QUALITY CONTROL FORM W 12/A		PROJ. No.:	QCF REV. 0
CONSTRUCTION MATERIALS APPROVAL		CONTRACTOR:	W 12/A N° _____
CIVIL <input type="checkbox"/>	PIPING <input type="checkbox"/>	MACHINERY <input type="checkbox"/>	INSULATION <input type="checkbox"/>
BLDG. <input type="checkbox"/>	MECHANIC. <input type="checkbox"/>	ELECTRICAL <input type="checkbox"/>	STEEL STR. <input type="checkbox"/>
NDT <input type="checkbox"/>	SUPPORT PRF. <input type="checkbox"/>	_____ <input type="checkbox"/>	_____ <input type="checkbox"/>
1. MATERIALS			
2. SUPPLIER			
3. PURPOSE			
4. ATTACHMENT DATA			
5. TYPE OF TEST PERFORMED			
6. TEST STANDARD UTILIZED			
REMARKS:			
RESULT:		ACCEPTED <input type="checkbox"/>	NOT ACCEPTED <input type="checkbox"/>
INSPECTORS	CONTRACTOR	PMC	OWNER
NAME			
SIGNATURE			
DATE			