



Three-Phase Control System

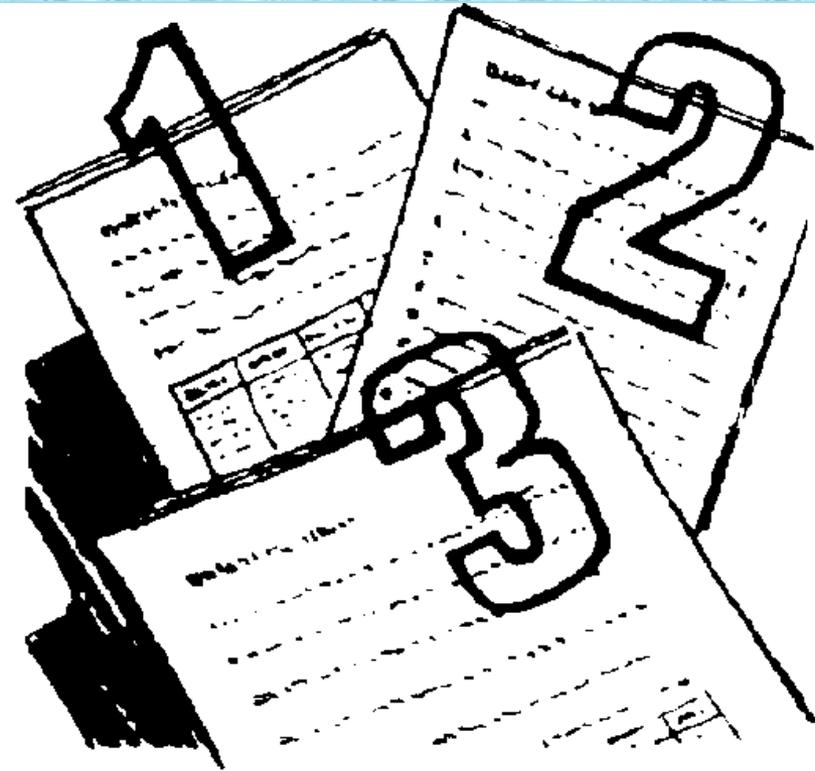
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Three Phase Control

1. Objectives
 2. Purpose
 3. 3-Phase Control Responsibilities
 4. Three-Phase Control System
 - Preparatory Phase Inspection
 - Initial Phase Inspection
 - Follow-up Phase Inspection
- Required by Contract
 - Specification Section 01451 (Contractor QC)

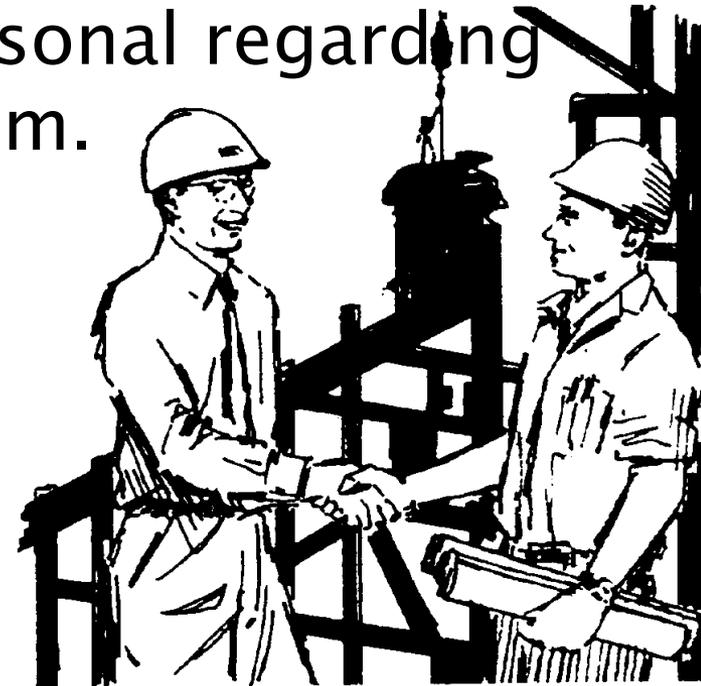




OBJECTIVES

After understanding these slides, you will be able to:

- ❑ Define the purpose of control onsite construction through the 3-Phase Control System.
- ❑ List responsibilities of QC personal regarding the Three Phase Control System.





PURPOSE

- To plan & schedule the work prior to starting each DFOW;
- They are the CORE of CQM System;
- Outlined in specification Sec 01451, Quality Control show meeting contract Requirements:





Responsibilities of QC Manger

- Develop, schedule & implement procedure for; tracking each DFOW in QC plan;
- Notify appropriate personnel of time, date & agenda
- Conduct meetings (Prep & Initial);
- Safety OK & Activity Hazard Analyses;
- Document actual discussions & provide Minutes;
- Monitor work in place via follow-up phase;
- Conduct additional control phase meetings as needed.

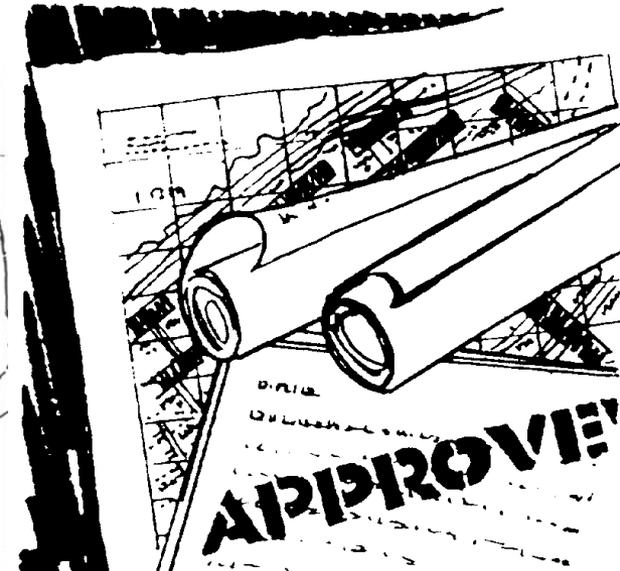




Three Phase Control System

a. Preparatory Phase:

- Conducted prior to beginning each DFOW;
- QA/QC Staff attendance, plus site superintendent, Safety
- To ensure documents, submittals, materials, equipments are approved & available;
- To ensure enough personnel is available & have the correct skills to work on DFOW
- To ensure availability of contract drawings & specifications–AHA & their review
- And all workers understand them

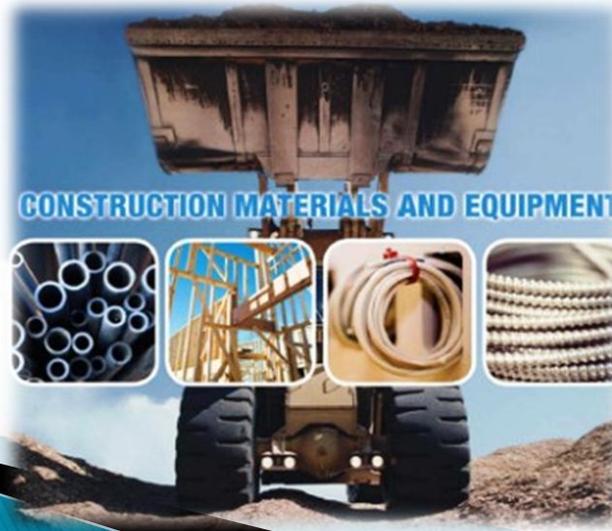




Three Phase Control System

Preparatory Phase:

- Work area examination for preliminaries;
- Physical examination of material & equipments based on shop drawings & approved submittals;
- Discussion of procedures for construction;
- Review of common/repetitive deficiencies;
- Government shall be notified at least 24 hrs prior to meeting;
- The result of meeting shall be documented & minutes shall be attached to QC daily Report;



Preparatory Meeting Check List



PREPARATORY PHASE CHECKLIST		SPEC SECTION	DATE
(CONTINUED ON SECOND PAGE)		Enter Spec Section # Here	Enter Date (DD/MMM/YY)
CONTRACT NO	DEFINABLE FEATURE OF WORK	SCHEDULE ACT NO.	INDEX #
Enter Cnt# Here	Enter DFOW Here	Enter Sched Act ID Here	Enter Index# Here
PERSONNEL PRESENT	GOVERNMENT REP NOTIFIED _____ HOURS IN ADVANCE:		YES <input type="checkbox"/> NO <input type="checkbox"/>
	NAME	POSITION	COMPANY/GOVERNMENT
SUBMITTALS	REVIEW SUBMITTALS AND/OR SUBMITTAL REGISTER. HAVE ALL SUBMITTALS BEEN APPROVED? YES <input type="checkbox"/> NO <input type="checkbox"/>		
	IF NO, WHAT ITEMS HAVE NOT BEEN SUBMITTED? _____		
	ARE ALL MATERIALS ON HAND? YES <input type="checkbox"/> NO <input type="checkbox"/>		
IF NO, WHAT ITEMS ARE MISSING? _____			
CHECK APPROVED SUBMITTALS AGAINST DELIVERED MATERIAL. (THIS SHOULD BE DONE AS MATERIAL ARRIVES.)			
COMMENTS: _____			
MATERIAL STORAGE	ARE MATERIALS STORED PROPERLY? YES <input type="checkbox"/> NO <input type="checkbox"/>		
	IF NO, WHAT ACTION IS TAKEN? _____		



Preparatory Meeting Check List

SPECIFICATIONS	REVIEW EACH PARAGRAPH OF SPECIFICATIONS. _____

	DISCUSS PROCEDURE FOR ACCOMPLISHING THE WORK. _____

	CLARIFY ANY DIFFERENCES. _____

PRELIMINARY WORK & PERMITS	ENSURE PRELIMINARY WORK IS CORRECT AND PERMITS ARE ON FILE.
	IF NOT, WHAT ACTION IS TAKEN? _____



Preparatory Meeting Check List

TESTING

IDENTIFY TEST TO BE PERFORMED, FREQUENCY, AND BY WHOM. _____

WHEN REQUIRED? _____

WHERE REQUIRED? _____

REVIEW TESTING PLAN. _____

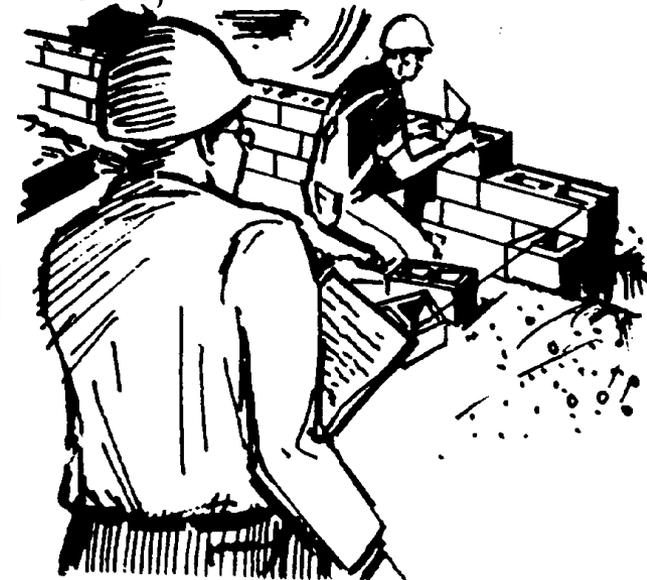
HAS TEST FACILITIES BEEN APPROVED? _____



Three Phase Control System

Initial Phase:

- Conducted after DFOW has begun;
- Check all Pre-work verifies performance level of workmanships mutually agreed;
- Review minutes of Preparatory-Meeting;
- Check all preliminary work is done;
- Capability of work force is achieved;
- Safety - AHA will checked for enforcement;





Three Phase Control System

Initial Phase:

- Verify adequacy of controls to ensure full contract compliance;
- Resolve all differences & deficiencies;
- Verify QC testing;
- Government shall be notified of this inspection earlier;
- QC Manager is in charge of this & shall take minutes & attach it to the daily report
- It could be repeated for each new crew onsite, or when level of workmanship is not being met.





Initial Phase Checklist

INITIAL PHASE CHECKLIST		SPEC SECTION Enter Spec Section # Here	DATE Enter Date (DD/MMM/YY)
CONTRACT NO Enter Cnt# Here	DEFINABLE FEATURE OF WORK Enter DFOW Here	SCHEDULE ACT NO. Enter Sched Act ID Here	INDEX # Enter Index# Here
PERSONNEL PRESENT	GOVERNMENT REP NOTIFIED ____ HOURS IN ADVANCE: YES <input type="checkbox"/> NO <input type="checkbox"/>		
	NAME	POSITION	COMPANY/GOVERNMENT
PROCEDURE COMPLIANCE	IDENTIFY FULL COMPLIANCE WITH PROCEDURES IDENTIFIED AT PREPARATORY. COORDINATE PLANS, SPECIFICATIONS, AND SUBMITTALS.		
	COMMENTS: _____		

PRELIMINARY WORK	ENSURE PRELIMINARY WORK IS COMPLETE AND CORRECT. IF NOT, WHAT ACTION IS TAKEN?		



Initial Phase Checklist

WORKMANSHIP	ESTABLISH LEVEL OF WORKMANSHIP. WHERE IS WORK LOCATED? _____ _____
	IS SAMPLE PANEL REQUIRED? YES <input type="checkbox"/> NO <input type="checkbox"/>
	WILL THE INITIAL WORK BE CONSIDERED AS A SAMPLE? YES <input type="checkbox"/> NO <input type="checkbox"/> (IF YES, MAINTAIN IN PRESENT CONDITION AS LONG AS POSSIBLE AND DESCRIBE LOCATION OF SAMPLE) _____
RESOLUTION	RESOLVE ANY DIFFERENCES. COMMENTS: _____ _____ _____
CHECK SAFETY	REVIEW JOB CONDITIONS USING EM 385-1-1 AND JOB HAZARD ANALYSIS COMMENTS: _____ _____ _____
OTHER	OTHER ITEMS OR REMARKS _____ _____ _____
_____ QC MANAGER	
_____ DATE	



Three Phase Control System

Follow Up Inspection:

- Conducted by CQC/QA daily during progress of DFOW;
- Purpose is to assure Requirements are met;
- Documents comments in QC/QA daily reports;
- Control safety and workmanship of testing until completion of DFOW;





Three Phase Control System

Follow Up Inspection:

- Checks shall be recorded in CQC documentations;
- All deficiencies corrected before starting additional work;
- QC/QA personnel continually refer back to standards set in Preparatory Meeting & Initial-Inspection;
- Paves the Ground for commissioning & testing;

Note: QC/QA in midst of day-to-day duties, can easily fall into the trap of only working to detect deficiencies when in fact their role is to PREVENT DEFICIENCIES.

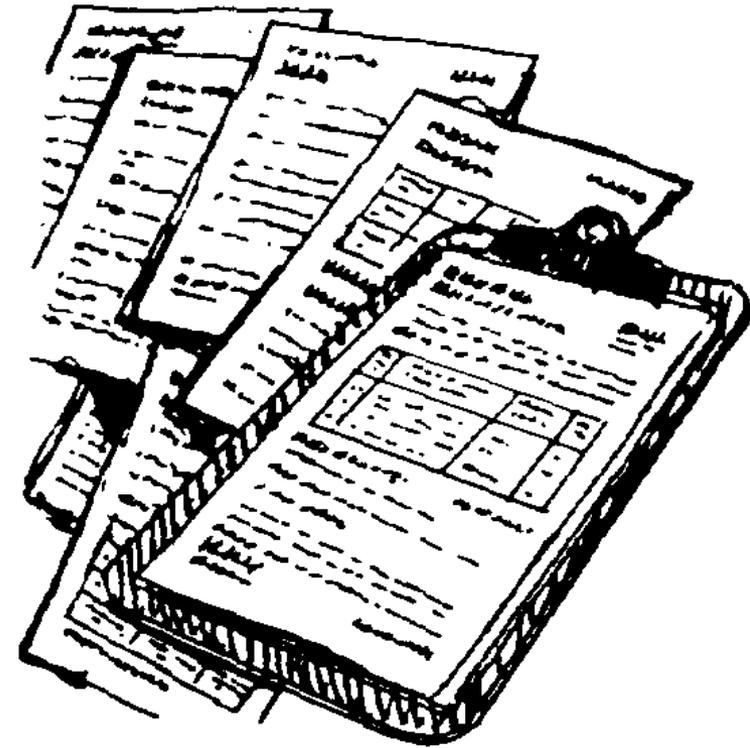




Three Phase Control System

Repeat Meeting / Inspection

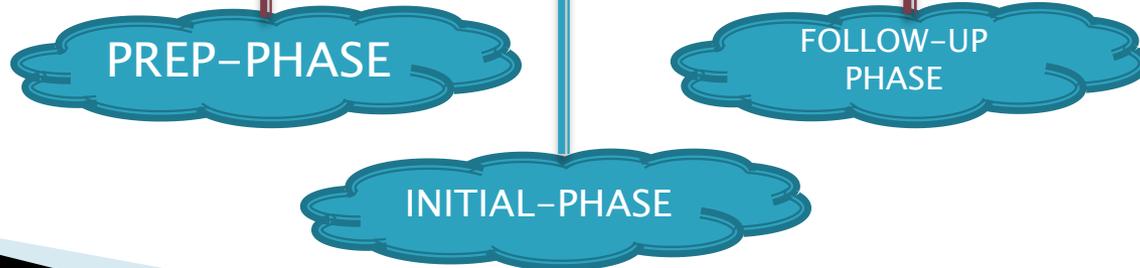
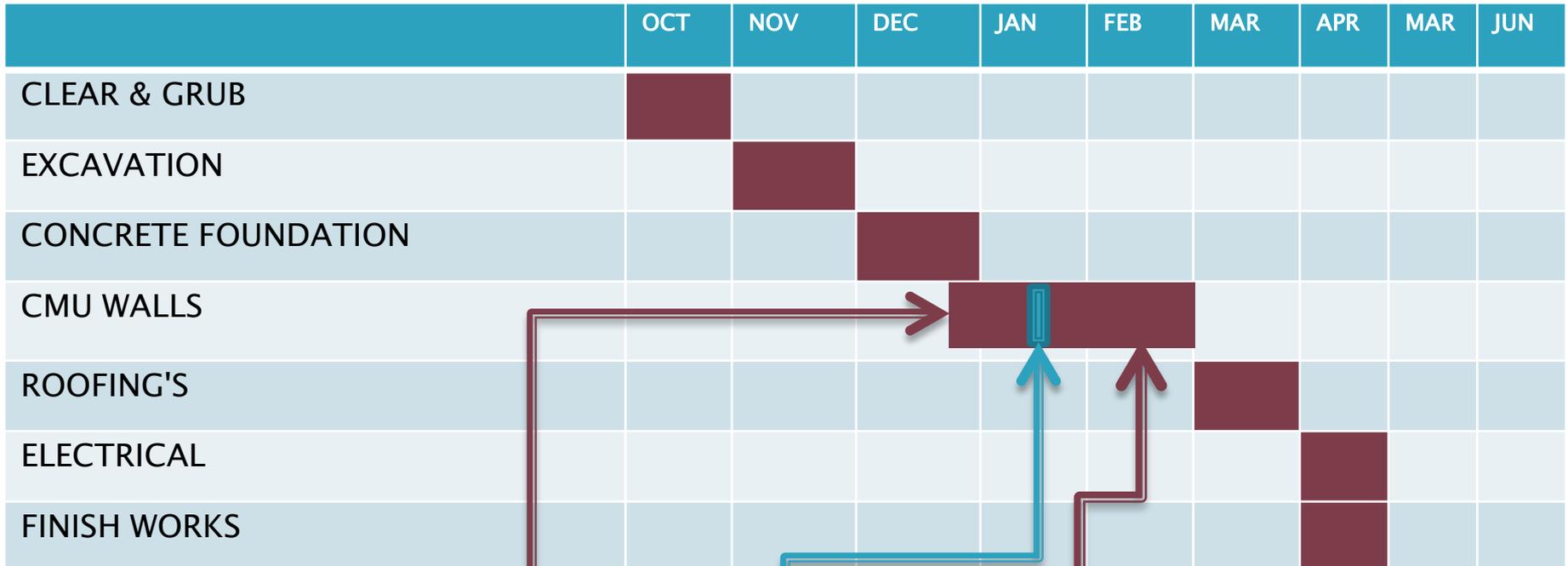
- Repeat preparatory meeting and initial inspection if:
 - QC can repeat preparatory meeting
 - QC/QA can repeat initial inspection
 - Deficiencies persist
 - Work on a definable feature resumes after long pause
 - Large turnover in construction crew





3 Phase of Control

USING A SIMPLIFIED SCHEDULE

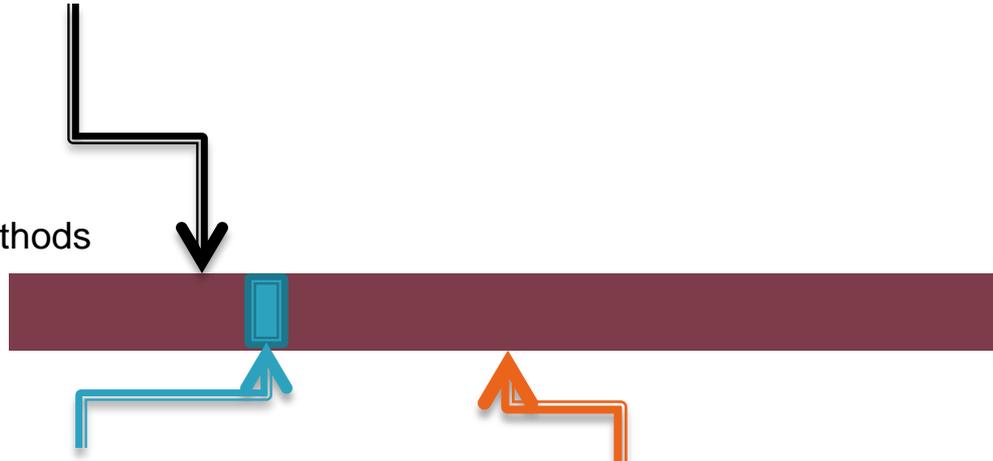




3 Phase- What is involved?

Preparatory Phase:

- Review plans and specs
- Verify submittal approval
- Review test plan
- Check preliminary work
- Examine materials
- Discuss construction methods
- Review safety



Initial Phase:

- Establish quality required
- Resolve conflicts
- Ensure testing is performed
- Review safety

Follow-up Phase:

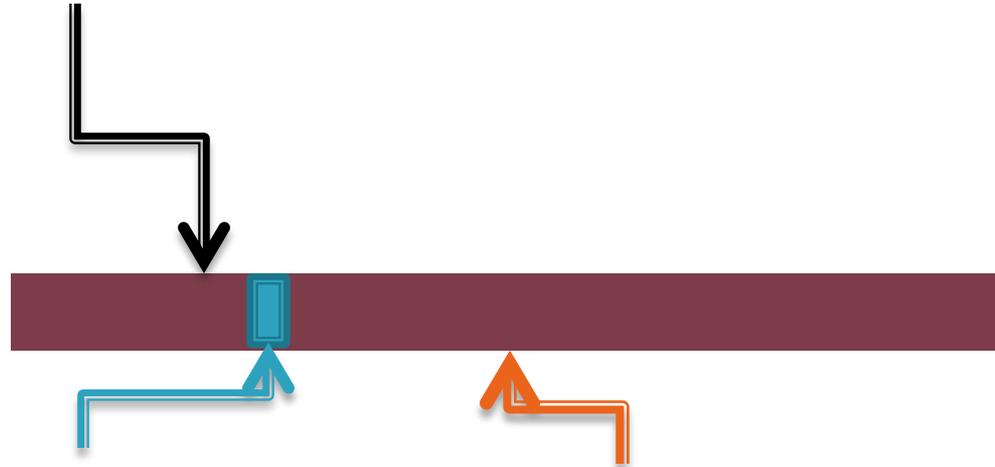
- Ensure Contract compliance
- Maintain quality
- Ensure testing report is submitted
- Ensure reworks are completed



3 Phase- Who is involved?

Preparatory Phase:

QC Manager
QC Specialist
Superintendent
Subcontractor Foremen
QA Representatives



Initial Phase:

QC Manager
QC Specialist
Superintendent
Subcontractor Foremen
QA Representatives

Follow-up Phase:

QC Manager
QC Specialist
Superintendent
Subcontractor Foremen
QA Representatives



Three Phase Control (QCS)

Contract ID - L1001373 Contract No. - W912PP-07-C-0010 NA

File Options Help

QCS **RMS Training Contract**

Close Contract Administration QC Submittals Import / Export Contract Reports Exit QCS

QC - 3 Phase Inspections

Edit Find

Feature of Work	Number of Preparatory Checks	Number of Initial Checks	Number of Follow-up Checks
▶ ACCORDIAN PARTITIONS	116	96	9
ACOUSTICAL TREATMENT, CEILINGS	12	10	4
ADMINISTRATION & MOBILIZATION	0	0	0
ARCH FURNISHINGS, INT/EXT	11	6	1
ASPHALT PAVING	19	15	5
BLEACHERS	0	0	0
BUILDERS HARDWARE	0	0	0
BUILDING INSULATION-RIGID/BATT	1	0	0
CARPENTRY - ROUGH	8	1	0
CASEWORK	9	6	5
CAULKING & SEALANTS	20	11	2
CONCRETE, CAST-IN-PLACE	48	22	5
Clearing and grubbing	0	0	0
DEMOLITION	0	0	0
DOORS - HOLLOW METAL & FRAMES	0	0	0
DRYWALL	29	7	1
Drilled Foundation Caissons	0	0	0
EARTHWORK - AGG BASE COURSE	6	6	1
EARTHWORK - BORROW AND FILL	0	0	0
ELECTRICAL, INTERIOR - FINISH	0	0	0
ELECTRICAL, INTERIOR - ROUGH	0	0	0
ELECTRICAL, LIGHTNING PROTECTN	0	0	0
ELECTRICAL, UNDERGROUND	0	0	0
ELEVATED STEEL WATER TANK	0	0	0

[QC Daily Reports](#)
[QC Summary](#)
[Features of Work](#)
[3 Phase Inspections](#)
[Hazard Analysis](#)
[QC Requirements](#)
[Equipment Checks](#)
[Dredging Equipment](#)
[Exposure Hours](#)
[Activity Schedule](#)
[Feature Schedule](#)
[Warranty Items](#)



Three Phase Control (QCS Report)

Contract ID - J3000672 Contract No. - W9128A-08-C-0006 NA

File Options Help

QCS RMS Manual

Close Contract Administration QC Submittals Import / Export Contract Reports Exit QCS

QC - 3 Phase Inspections

QC Daily Reports Edit Find

Contract ID - L1001373 Contract No. - W912PP-07-C-0010 NA

File Options Help

QCS RMS Training Contract

Close Contract Administration QC Submittals Import / Export Contract Reports Exit QCS

	Number of Preparatory Checks	Number of Initial Checks	Number of Follow-up Checks
	0	0	0
	0	0	0
	0	0	0
	0	0	0

Contract Reports - QA/QC

Administrative Finances QA/QC Submittals Schedule Closeout

Expand Collapse

- QC Daily Report
- Dredging Production Summary
- Three Phase Schedule
- Three Phase Activity Schedule
- Three Phase Control Worksheet**
- Deficiency Items Issued by QA
- Deficiency Items Issued by QC
- Deficiency Items Issued by QA/QC
- QC Requirement List
- QC Tests
- Monthly Injuries/Illness & Exposure
- Warranty Items

Three Phase Control Worksheet

Preview Print Close

 **Three Phase Control Worksheet**

Type Preparatory
Range Specific Feature
Group By Activity

Type Preparatory Initial

Group Group QC Requirements By Feature By Activity



Three Phase Control (QCS Report)



US Army Corps
of Engineers

Three Phase Schedule

18 Dec 2007

Log Depot-Class V Ammo Supply
W917PM-06-C-0034 NA

Kabul South Resident Office

Feature of Work	Preparatory		Initial		Number of Activities	Number of Final Follow-Ups Held
	Scheduled Date	Actual Date	Scheduled Date	Actual Date		
Area Lighting	05/05/2007	05/06/2007			0	0
Clearing & Grubbing	04/08/2007	04/08/2007			0	0
Communication					0	0
Demolition					0	0
Earthwork-Trenching & Backfill	07/17/2007	07/19/2007			0	0
Electrical (Interior Lighting)					0	0
Electrical (Primary)					0	0
Electrical (Secondary)					0	0
Electrical Grounding					0	0
Force Protection Barriers	05/07/2007	05/07/2007	06/15/2007	06/16/2007	0	0
Install Guard Towers					0	0
Install Solar Break					0	0
Intrusion Detection Systems					0	0
Lightning Grounding Protection			09/10/2007	09/10/2007	0	0
Main Entry Control Point					0	0
Metal Structure Erection					0	0
Minor Concrete			08/02/2007	08/06/2007	0	0
Perimeter Fencing	05/03/2007	05/03/2007			0	0
Reinforced Concrete	06/11/2007	06/11/2007			0	0
Roadway & Parking Lot	05/30/2007	05/30/2007			0	0
Roadway Lighting					0	0
Security Lighting					0	0
Survey					0	0
UXO / Demining					0	0



DISCUSSIONS

