

Centre for PROJECT DEVELOPMENT & MANAGEMENT (CPD)

As per Ministry's programme, CPD has been entrusted for conducting 13 nos State/Regional level workshop on "Capacity Building for Quality Assurance & TPIM" during the year 2010-11. Accordingly, 8 workshops have already been organized at Mumbai, Kolkata, Ahmedabad, Chandigarh, Bhubaneswar, Kolkata, Varanasi & Jaipur. The remaining 5 workshops have been tied up and are being completed as per schedule.

The training module for the above workshops are as follows:

TRAINING MODULE ON CAPACITY BUILDING FOR QUALITY ASSURANCE & TPIM

Aim and scope of the training programme

Monitoring of any housing and infrastructure project is incomplete without quality control and quality assurance. Through National Housing and Habitat Policy 2007, Govt of India has set forth the objective of "Affordable Housing to All" with the aid of its flagship scheme 'Jawaharlal Nehru Urban Renewal mission'. The tenure of the Mission is expiring on December, 2012. Amongst other objectives of JNNURM, ensuring deliveries of components with proper quality control and assurance is one of the objectives. For achieving the adequate scale of quality control in project management, HUDCO has been assigned the task of conducting capacity building programme primarily in respect of IHSDP/BSUP projects for quality assurance and TPIM by the Ministry. The target group under the programme basically includes BSUP/IHSDP project workers, PIU/PMU officials, Municipal officers, Mayors, Community Organizers, Line Department Functionaries and engineers/architects of state governments consisting of around 30 -40 participants.

In the light of above objectives, a training module has been designed for duration of 2-days and different sub modules for the programme are as follows:

Sl No	Session	Duration	Resource persons
Day 1			
1	Quality Assurance and quality control	1:15 hrs	HSMI
2	States' presentation on quality aspects of JNNURM projects	1:15hrs	Nodal co-coordinator for JNNURM projects

3	Quality Assurance and monitoring aspects of SLNA	1:00 HR	SLNA
4	Third party Inspection & monitoring (TPIM)	1:15 hrs	HSMI
5	Social audit		HSMI
6	PMU/PIU/TPIMAs' presentation on their activities	1:00hr	PMU/PIU/TPIM participants
Day 2			
1	Quality assurance & monitoring in project implementation period with a overview of quality control guidelines under JNNURM	1:15 hrs	HSMI
2	DPR preparation	1:15 hrs	HSMI
3	Field visit/case studies	2:30hrs	participants
4	Group exercise & presentation	1:30 HRS	Participants
5	Interactive session	1:00hr	HSMI

THE SUB MODULES FOR THE SESSIONS ARE PLACED AS FOLLOWS:

- **QUALITY CONTROL & QUALITY ASSURANCE :**
 - **CONCEPT OF QUALITY**
 - **QUALITY REQUIREMENTS**
 - **QUALITY MANAGEMENT**
 - **QUALITY CONTROL**
 - **QUALITY CONTROL SPECIFICATION AND PARAMETERS**
 - **QUAINTLY CONTROL BY STATISTICAL METHOD**
 - **SYSTEM**
 - **FEATURES OF QUALITY MANAGEMENT SYSTEM**
 - **MANAGEMENT FUNCTIONARIES OF QUALITY MANAGEMENT**
 - **QUALITY PROCEDURE**
 - **QUALITY ASSURANCE**
 - **QUALITY ASSURANCE PRINCIPLES**
 - **ASSESSMENT OF QUALITY CONTROL**
 - **LIMITATIONS OF QUALITY ASSURANCE**

- **QUALITY ASSURANCE MEASURES**
- **DUTIES OF PROJECT OFFICER IN FULFILLING QUALITY ASSURANCE**
- **INTERRELATIONSHIP OF QUALITY CONTROL AND QUALITY ASSURANCE**
- **TOTAL QUALITY MANAGEMENT (TQM)**
- **CONSTRUCTION PROCESS**
- **FACTORS AFFECTING QUALITY IN CONSTRUCTION PROCESS**
- **ELEMENTS OF TQM IN CONSTRUCTION PROCESS**
- **TQM FLOW CHART**
- **DEVELOPING QUALITY SYSTEM**
- **PROJECT MANAGEMENT**
- **PROJECT MANAGEMENT SUCCESS CRITERIA**
- **QUALITY CONTROL PROJECT MANAGEMENT**
- **QUALITY CONTROL IN PROJECT CYCLE**
- **QUALITY SYSTEM IMPLEMENTATION PROCESS**
- **APPLICATION OF ISO STANDARDS IN QUALITY MANAGEMENT**
- **ISO 9000 STANDARD**
- **REQUIREMENT OF ISO STANDARD IN CONSTRUCTION PROCESS.**
- **BENEFITS OF ISO STANDARD IN QUALITY ASSURANCE**
- **DIFFICULTIES AND OBSTACLES IN INTRODUCING ISO STANDARD**
- **CONCLUSION**

- **QUALITY ASSURANCE IN PROJECT IMPLEMENTATION PERIOD**

- **REGULATION OF QUALITY CONTROL**
- **THREE TIER POLICY FOR QUALITY CONTROL UNDER JNNURM**
- **DUTIES AND RESPONSIBILITIES OF IMPLEMENTING AGENCIES.**
- **RESPONSIBILITIES OF SLNAs**
- **RESPONSIBILITIES OF THIRD PARTY INSPECTION & MONITORING AGENCY.**
- **MAJOR ITEMS OF CIVIL & STRUCTURAL WORKS DURING CONSTRUCTION**
- **MAJOR CONSTRUCTION PROCESS FOR VARIOUS ITEMS OF CIVIL WORKS**
 - **POST EXCAVATION**
 - **PLAIN CEMENT CONCRETE**
 - **ANTI-TERMITE TREATMENT AND BACKFILL**
 - **REINFORCED CEMENT CONCRETE**

- BRICKS MASONRY WORKS
- PLASTERING
- TILE FLOORING
- PLUMBING AND WATER SUPPLY
- DRAINAGE SYSTEM
- PAINTING
- **BUILDING MATERIAL TESTS FOR QUALITY CONTROL**
 - **WATER :**
 - PH VALUE
 - CONCENTRATION OF SOLIDS IN WATER
 - SULPHATE IMPURITIES
 - ORGANIC/INORGANIC SOLIDS
 - CHLORIDE CONTROL
 - **CEMENT**
 - FINENESS
 - SOUNDNESS
 - SETTING TIME
 - COMPRESSIVE STRENGTH
 - CONSISTENCY
 - SPECIFIC GRAVITY
 - **SAND**
 - (i) FINENESS MODULES
 - (ii) SILT CONTENT
 - (iii) BULK AGE OF SAND
 - (iv) SPECIFIC QUALITY & WATER ABSORPTION
 - (v) ORGANIC IMPURITIES
 - **COARSE AGGREGATE**
 - SIEVE ANALYSIS FOR GRADING
 - SPECIFIC GRAVITY AND WATER ABSORPTION
 - SOUNDNESS
 - IMPACT VALUE
 - CRUSHING VALUE
 - STONE METAL ABRASION TEST
 - FLAKING INDEX
 - **BRICKS**
 - TEST FOR WATER ABSORPTION
 - COMPRESSIVE STRENGTH
 - TEST FOR EFFLORESCENCE
 - **STEEL**
 - PROOF STRESS
 - PERCENTAGE ELONGATION
 - TENSILE STRENGTH
 - REINFORCING STEEL BEND TEST

- **CONCRETE**
 - **SLUMP TEST**
 - **COMPACTION FACTOR**
 - **WEIGHT, CEMENT FACTOR AND AIR CONTENT TEST**
- **REINFORCEMENT**
 - **TENSILE STRENGTH**
 - **REBOUND TEST**
 - **ELONGATION TEST**
 - **PROOF STRESS**
 - **BEND TEST**
- **ROAD WORKS**
 - **LOS ANGELS TEST FOR COARSE AGGREGATE**
 - **ABRASION VALUE OF AGGREGATE**
 - **IMPACT VALUE**
 - **FLAKINESS INDEX**
 - **GRADING REQUIREMENT**
 - **TEST FOR DELETERIOUS MATERIAL**
- **SUGGESTED LIST OF EQUIPMENT FOR QUALITY CONTROL LABORATORY**
- **CHECK LIST**
 - **EXCAVATION**
 - **PCC**
 - **ANTI TERMITE TREATMENT**
 - **RCC**
 - **MASONRY, MORTAR AND PLASTER**
 - **CC ROADS**
- **CONCLUSION**

SOCIAL AUDIT

- **TERMS & REFERENCES**
- **OBJECTIVES OF SOCIAL AUDIT'**
- **BENEFITS OF SOCIAL AUDIT**
- **USEFULNESS OF SOCIAL AUDIT AT COMMUNITY LEVEL**
- **USEFULNESS OF SOCIAL AUDIT AT ORGANIZATIONAL LEVEL**
- **METHODOLOGY OF SOCIAL AUDIT**

- **OPERATIONAL ASPECTS OF SOCIAL AUDIT**
 - **STATE LEVEL SOCIAL AUDIT CELL**
 - **DISTRICT LEVEL RESOURCE PERSONS**
 - **SOCIAL AUDIT COMMITTEE AT ULV LEVEL**
 - **COMMUNITY SOCIAL AUDITORS.**
- **COMMUNITY MOBILIZATION**
- **FUNDING, BUDGETING AND MAINTAINING ACCOUNTS FOR SOCIAL AUDIT**
- **REPORTING**
- **INSTITUTIONALIZATION OF SOCIAL AUDIT**
 - **INTERNALIZING WITH GOVERNMENT**
 - **LEGAL SUPPORT**
 - **ACTION TAKEN REPORT**
 - **INFORMATION, DISSEMINATION AND DISCLOSURE**
 - **EVOLUTION OF EFFECTIVENESS OF SOCIAL AUDIT**
 - **ADOPTION OF SOCIAL AUDIT FORMAT**
- **CONCLUSION**

THIRD PARTY INSPECTION AND MONITORING

- **GOAL**
- **SPECIFIC OBJECTIVES**
 - **APPOINTMENT OF TPIMA BY SLNA**
 - **BRING STANDARDIZATION AND CONSISTENCY IN THE PROCESS**
 - **PROVIDE A STRUCTURED REPORT ON THE PROJECTS UNDER JNNURM**
- **NEED FOR TPIM**
- **SCOPE OF SERVICES AND DELIVERABLES**
 - **PRE-CONSTRUCTION STAGE**
 - **POST-CONSTRUCTION STAGE**
 - **CONSTRUCTION STAGE**
 - **COMMISSIONING, TRIAL RUN & TESTING STAGE**
 - **POST-CONSTRUCTION STAGE**
- **ROLE OF TPIMA**
 - **DESK REVIEW**
 - **INSPECTION**
- **REPORTING FORMAT**

- **FINANCIAL SUPPORT**
- **SELECTION OF TPIMA**
- **CONFLICT OF INTEREST**
- **ROLES & RESPONSIBILITIES**
 - o **STATE LEVEL STEERING COMMITTEE (SLSC)**
 - o **PROJECT MANAGEMENT UNIT (PMU) / SLNA**
 - o **PROJECT IMPLEMENTATION AGENCY (PIU) / ULB**
 - o **PROJECT EXECUTION AGENCY (PEA)**

CASE STUDIES/FIELD VISIT:

TO INSPECT SITE AND TO FILL UP CHECKLIST FOR DIFFERENT ITEMS OF CIVIL WORKS IN RESPECT OF QUALITY CONTROL ASPECTS FOLLOWED BY GROUP EXERCISE

- **CONCLUSION**