

CESWL-CO-CS

DEPARTMENT OF THE ARMY  
Little Rock District, Corps of Engineers  
P.O. Box 867  
Little Rock, Arkansas 72203-0867

SWLOM 415-1-5

Office Memorandum  
No. 415-1-5

23 January 1990

Construction  
DESIGN AND CONSTRUCTION EVALUATION (DCE)

1. PURPOSE. This regulation prescribes the administrative and technical evaluation and reporting system for the Military and Civil Construction Programs.

2. APPLICABILITY. This regulation applies to Little Rock District elements having military and/or civil works construction responsibility as directed by paragraph 6 of ER 415-1-13, Design and Construction Evaluation (DCE), dated 1 September 1987.

3. POLICY. The Design and Construction Evaluation (DCE) effort, under the overall direction of the Chief, Construction-Operations Division and executed by Quality Assurance Section, CESWL-CO-CS, shall encompass all phases of the project, identify quality management failures, and provide the basis for improvements through feedback and distribution of the information. Evaluation teams will review ongoing construction in an effort to discover and correct endemic design or construction related problems. The teams will consist of a composite of representatives from Construction-Operations and Engineering Divisions.

a. Construction. All phases of construction execution will be examined for compliance with the contract provisions and HQUSACE guidance. Particular care will be exercised to identify important and repetitive type problems and problems related to inadequate or improper contract control. These problems are of particular interest in determining need for new or improved management and coordination procedures. Other deficiencies peculiar to the job should be identified for action and independently recorded by FOA representatives.

b. Design. Problems discovered which are considered to be design oriented will be investigated by the office responsible for design, determining where in the process the problem originated. The contract documents will be examined to determine the need for revised or additional guidance. The specific areas of interest include basic design judgment and practice; suitability of the design, materials and equipment for the application and geographic location; design adequacy, thoroughness and clarity; cost-effectiveness; energy conservation, safety, environmental considerations; and conformance with the using agency's functional requirements.

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c. Criteria Requirements. Contract documents will be reviewed for conformance with established OCE guidance. Unauthorized deviations from the requirements of the various design manuals, guide specifications, design standards, Engineer Technical Letters (ETLs), Engineer Regulations (ERs), Army Regulations (ARs), etc., should be noted. An authorized deviation should always be noted. Items of a proprietary nature or items unsuitable for the intended application are expressly of interest and should be reported. Instances of repetitive misuse of criteria will be analyzed by the appropriate team members for inadequate requirements and for recommendation of directive corrective action.

4. PROCEDURES. Team composition and scheduling will be established by Quality Assurance Section in coordination with Chief, Engineering Division in the manner described below:

a. Team Composition. Each evaluation team shall be composed of a civil engineer, a mechanical engineer, and an electrical engineer as a minimum. When determined necessary, an architect, a structural engineer, a construction representative, or another specialist will be assigned to the team. All team members should be thoroughly experienced in the respective discipline, five years or more. The team should consist of at least two members from Design Branch, two from Construction-Operations, and one from a field office. The project manager and project coordinator for the respective project should accompany the evaluation team when possible. District and field representatives are encouraged to accompany the team as deemed appropriate. Team composition for each trip will be outlined in the announcement letter described below.

b. Selecting and Scheduling. An advance travel schedule of the evaluations covering approximately six months will be prepared and distributed quarterly by Quality Assurance Section, CESWL-CO-CS, Little Rock District. The scheduling goal will be to visit each military and civil construction project valued at greater than \$200,000 at least once. The installation and projects to be evaluated will be selected by Quality Assurance Section based on the amount and stage of work, time of year, and date since last evaluated. A letter announcing each evaluation visit with the proposed travel itinerary and a project listing will be forwarded to the appropriate resident office approximately one month in advance. Recommended changes will be discussed and coordinated with the Chief of Quality Assurance to establish the final itinerary. An evaluation will generally be extended for a one-week period and include projects in the same geographic region.

c. Travel Arrangements. Each team member shall be responsible for his/her own travel arrangements in accordance with the final itinerary. The itinerary will list the installations/projects selected for evaluation. Quality Assurance Section will arrange government transportation.

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d. Daily Reporting. Each team member will be responsible for inspecting, evaluating, and reporting on his/her particular area of expertise. Each team member is expected to report his/her findings with appropriate recommendations on the Design/Construction Observation Card, ENG form 4702-R, Appendix A, for consideration. Cards documenting all significant comments and required actions will be completed daily or after each project evaluation. To avoid duplication, items will be discussed between team members as necessary to determine whether a comment is required. Findings will be discussed at the exit interview at the field office and at the district. Copies of all observation cards will be provided to the field office and district for follow-up action if required. The record observation card file will be maintained in the Quality Assurance Section.

e. Trip Report. A trip report will be written by the designated team leader for each DCE which will indicate the team composition, projects visited, and highlights of evaluations in narrative conclusion and recommendation format. The trip report will be completed within two weeks after completion of the trip.

f. Follow-Up Correspondence. A letter will be prepared by the team leader for dispatch to the field offices within one month of completion of the trip, enclosing the trip report. The letter will include a summary of the evaluation, required follow-up action, and references to the trip report. Appropriate comments on resource management, quality management, and reference to other significant findings should be included. Within one month after receipt of the letter and trip report, a response will be forwarded to Chief, Construction-Operations, to include follow-up and corrective measures which will provide a basis for future evaluations and feedback for similar experiences at other locations.

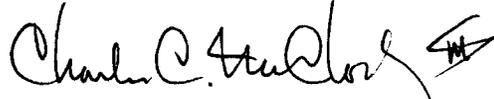
5. FEEDBACK. Upon completion of each field visit, the evaluation findings will be reviewed and the necessary technical and editorial changes will be made to each record observation card to ensure accurate information in entry format for the Construction Evaluation Retrieval System (CERS). The system's file will be utilized for feedback, including printouts of previous findings for follow-up by team members and periodic distribution of common problems to the field. Card comments on design and criteria items are distributed to the appropriate individuals in the Engineering Division for necessary revision and addition to technical manuals and guide specifications. Action of feedback related to standard plans is initiated at appropriate levels in HQUSACE. Findings will be discussed at the weekly coordination meeting between Engineering and Construction to develop mutually agreeable solutions to problems and implement the necessary coordination required for corrective action.

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6. District and field offices will develop procedures for supporting this Design Construction Evaluation Program. These will include budgeting travel funds and time to properly participate in this program during the visits as well as taking follow-up action to correct deficiencies noted.

2 Appendixes  
App A - ENG Form 4702-R  
App B - Quality Assurance  
Management Worksheet

DISTRIBUTION: A

  
CHARLES C. MCCLOSKEY III  
Colonel, Corps of Engineers  
District Engineer



**APPENDIX A (CONT'D)**  
**(Instructions - ENG Form 4702-R)**

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**NOTE:** Items marked with \* need only be completed on the first card for each contract evaluated. All insertions are to be left hand justified (start at left).

- \* LOCATION - Self-explanatory
- \* DESCRIPTION - Self-explanatory
- \* RPT# - Year in which visit is made followed by sequential number for each inst/fac visited
- CARD# - Sequential number on each card at each inst/fac visited
- TYPE - Type of observation and evaluation/inspection. In first block insert "C" for construction, "D" for design, "M" for maintenance or "O" for other. In second block insert "F" for DCFI, "P" for PCI, "R" for DCE and "W" for Warranty inspection.
- SPEC# - Appropriate Guide Spec number for subject addressed
- \* CATCODE - Five digit Army Category Code or six digit Air Force Category Code
- \* DDMYY - Date of evaluation/inspection day, month, year
- \* DIST - Self-explanatory
- CONT# - Contract Number
- I - Increments of a contract encompassing several facilities.
- \* - This will occur when a single contract is awarded, i.e., a barracks complex consisting of a BOQ, chapel, brigade headquarters, etc.,. Leave blank if contract is for a single facility.
- \* TLH - Initials of technical evaluator
- \* AG - Insert "AR" if Army, "AF" if Air Force, "OT" if other
- P - "P" if a photograph taken, otherwise leave blank
- D CODE - Deficiency code
- SUBJECT - Brief description of subject addressed, i.e. paragraph title from specifications.
- COMMENT - Self-explanatory
- RECOMMENDATION - Self-explanatory
- ACTION AGENCY - Agency responsible for taking action
- RESPONSE - "Y" for yes response required.. "N" for no response required.
- BY - Name of individual making observation.
- OFFICE - Office Symbol of individual making observation.

*Reverse of ENG Form 4702-R, Apr 88*

APPENDIX B  
QUALITY ASSURANCE MANAGEMENT WORKSHEET

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=====  
SITE VISIT DATE: \_\_\_\_\_

LOCATION: \_\_\_\_\_

Q. A. REP(S): \_\_\_\_\_  
\_\_\_\_\_

VISITING TEAM: \_\_\_\_\_  
\_\_\_\_\_

=====  
=====  
CONTRACT INFORMATION

1. NAME:

2. NUMBER:

CONTRACTOR: \_\_\_\_\_

3. PROGRESS: SCHEDULED:

ACTUAL:

=====  
=====  
QUALITY ASSURANCE SYSTEM

4. Q. A. PLAN APPROVED:	YES	NO	N/A
5. Q. A. SUPPLIMENT APPROVED:	YES	NO	N/A
6. Q. A. PLANS APPROVED TIMELY:	YES	NO	N/A
7. CQC COORDINATION CONDUCTED BY RE RM PE	YES	NO	N/A
8. Q. A. TESTING PERFORMED:	YES	NO	N/A
9. Q. A. TESTING PLAN APPROVED:	YES	NO	N/A
10. Q. A. LAB APPROVED:	YES	NO	N/A
11. Q. A. REP ATTENDS ALL PREP INS. MTGS.	YES	NO	N/A
12. Q. A. REP ATTENDS 80% OF INITIAL INS.	YES	NO	N/A
13. Q. A. REP PERFORMS FOLLOW UPS:	YES	NO	N/A
14. Q. A. FILES SEPARATELY FILED:	YES	NO	N/A
15. SUBMITTALS ON SITE UP TO DATE:	YES	NO	N/A
16. SUBMITTAL REVIEW TIMELY:	YES	NO	N/A
17. CQC PLAN APPROVED:	YES	NO	N/A

QA MANAGEMENT WORKSHEET CONTINUED

18. THREE PHASE INSPECTIONS USED:	YES	NO	N/A
19. INSPECTION RESULTS DOCUMENTED:	YES	NO	N/A
20. CQC TESTING BEING PERFORMED:	YES	NO	N/A
21. SUBMITTALS ON SITE UP TO DATE:	YES	NO	N/A
22. PLANS AND SPECS UP TO DATE:	YES	NO	N/A
23. SAFETY PLAN APPROVED:	YES	NO	N/A
24. CQC REPORTS ADEQUATE:	YES	NO	N/A
25. QA REPORTS ADEQUATE:	YES	NO	N/A

26. SPECIFIC DEFICIENCIES:

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

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COMMENTS

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SUMMARY