

SWLED-E

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

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Office Memorandum  
No. 1110-1-5

Engineering and Design  
OPERATIONAL PROJECTS AND FACILITIES

1. Purpose. The purpose of this memorandum is to establish responsibility for engineering and design for maintenance, repair, rehabilitation, and modernization of major items of plant and structures at operational projects and facilities in the Little Rock District.
2. Applicability. This memorandum applies to the Little Rock District and all its operational projects.
3. Related References.
  - a. ER 10-1-3 Organizations and Functions, Divisions and Districts
  - b. ER 1110-2-1200 Engineering and Design, Plans and Specifications
4. Policy.
  - a. It is the policy of the District Commander to require the highest order of engineering and design in the performance of work under his supervision. Pursuant to this policy, technical studies, design memorandums, final designs, and plans and specifications for maintenance, repair, rehabilitation and modernization at operating projects in the District will be prepared by Engineering Division. Engineering and design in support of maintenance activity is a function of the Engineering Division.
  - b. The Chief, Construction-Operations Division and all Resident Engineers/Managers will consult with the Chief, Engineering Division, through their appropriate staff members, on maintenance, repair, rehabilitation, and modernization work affecting major items of equipment and structures which would require engineering inspection, technical research, technical studies, design memorandums, and/or plans and specifications for accomplishing work.
  - c. Construction-Operations personnel and Resident Engineers/Managers will consult with Engineering personnel on problems of a technical nature where field consultation and research is indicated in consideration of a solution. This policy envisions that Engineering

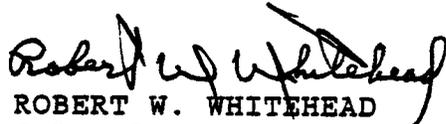
Division personnel will make regular and recurring visits to operating projects in the District in an effort to help identify potential needs to modernize, replace, repair, or rehabilitate operating equipment and apparatus, and shall play an integral role, along with Construction-Operations Division personnel, in establishing out-year programs.

d. Designs prepared by Engineering Division, relative to operating projects, will be reviewed by Construction-Operations Division personnel and Resident Engineers/Managers for constructability, operability, and maintainability.

e. Field tests performed on operational equipment to determine performance, operational characteristics, structural integrity, etc., shall be coordinated with Engineering Division personnel in the planning phase, and performed under their on-site technical supervision.

5. Policy Implementation. Details and procedures to be used in implementing this policy are outlined by the procedural memorandum attached hereto as Appendix "A".

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Appendix A

  
ROBERT W. WHITEHEAD  
Colonel, Corps of Engineers  
District Engineer

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Appendix A

LITTLE ROCK DISTRICT  
PROCEDURAL MEMORANDUM  
FOR  
ENGINEERING AND DESIGN  
OPERATIONAL PROJECTS AND FACILITIES

1. PURPOSE. The purpose of this memorandum is to streamline the communication process between operations and maintenance personnel and engineering personnel through a series of written procedures for handling maintenance and modernization of major equipment and structures. The procedures contained herein are intended to implement the District's policy on engineering and design for maintenance, repair, rehabilitation, and modernization of major equipment and structures at operational projects as contained in LRDOM-1110-1-5 . This is not intended to rescind or take away from directives already in place covering emergency reporting procedures.

2. ENGINEERING AND DESIGN.

a. GENERAL. Engineering and design work as envisioned by this memorandum covers all levels of the process involved in repair or replacement of major equipment items and structures from inception to completion.

3. PROCEDURE OUTLINE. Procedures to be followed are:

a. Whenever problems with equipment and structures are detected by operations and maintenance personnel through observed changes in stability, operating characteristics, test data, detailed inspection or other means, the Resident Engineer/Manager or his appointed representative shall notify the Chief of Construction-Operations Division or the appropriate technical Branch Chief. Chief, Construction-Operations or his representative will notify Engineering Division immediately that a potential maintenance problem exists which may result in engineering and technical support from Engineering Division. The urgency of the situation will dictate the method of notification and the response. Also the urgency of the situation will dictate the level of engineering input into testing and data interpretation.

b. Notification of a problem will normally be by telephone, however, as soon as practicable a Disposition Form shall be forwarded to the Chief of Construction-Operations, with a copy to Chief, Engineering Division, summarizing the problem and action to that point. Longer term rehabilitation and retrofit items

also fall in this notification requirement for a Disposition Form. The Disposition Form, or other current written communication method, will serve as the official inception of a maintenance, rehabilitation, or modernization activity.

c. Upon receipt of the above notification Engineering Division and Construction-Operations Division will coordinate a site visit with appropriate individuals for the purpose of beginning a solution.

d. When it has been decided that an activity will be included in an upcoming program or budget, both the Construction-Operations Division and the Engineering Division must provide input to the program development office before the activity can become an official District program or budget item. This coordination will also apply to major or unusual items for inclusion in the 5-year program. Major items should be classified as those in excess of \$50,000.00 and unusual items are those non-recurring or non-routine maintenance items.

e. After an item has been included in a program or budget the Construction-Operations Division and the Engineering Division will agree on an engineering and design schedule.

f. During the engineering and design period the project manager for the engineering activity will ensure that Resident Engineers/Managers and Construction-Operations representatives are kept up to date on the engineering activity and have timely input into it.

g. Throughout the life of contracts for maintenance, rehabilitation, or modernization the design engineer will be kept up to date on problems arising in the field with the contract. Design engineers will be expected to visit the work site on occasion, the frequency of visits to be determined through close coordination with the COR on the contracts.

h. Many of the major equipment rehabilitation and modernization activities include special field tests and operational tests to validate the equipment performance. Test procedures proposed must be submitted to the Engineering Division for comments prior to performance and the tests performed in the presence of Engineering Division personnel unless otherwise agreed upon. Typical of these field and operational tests are:

- Generator Segregated Loss Tests
- Generating Unit Load Rejection Tests
- Turbine Index Tests
- Miter Gate Alignment and Diagonal Loading
- Generator Winding High Potential Tests

HVAC Unit Air Balance and Performance Tests  
Hoist Drive Retrofit Performance Tests  
Pumping Station Retrofit Performance Tests

4. Policy implicit in LRDOM-1110-1- also envisions that Engineering Division personnel will assume an active role in non-routine operations and maintenance activity the nature of which involves machine or structure disassembly, mechanical or structural modification, electrical power or control modification or need to operate equipment outside its design rating. When project personnel anticipate activity of this nature, the Resident Engineer/Manager will notify Construction-Operations and Engineering Divisions by submittal of a proposal for the activity.