

CEEC-EH-W

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
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ETL 1110-2-309

Engineer Technical
Letter No. 1110-2-309

5 February 1988

Engineering and Design
WATER AND WASTEWATER LABORATORY INSPECTIONS

1. Purpose. The purpose of this letter is to provide guidance for conducting inspections of commercial laboratories engaged in the chemical and physical analysis of environmental samples of water, wastewater, and related media for the Corps of Engineers.

2. Applicability. This ETL is applicable to all HQUSACE/OCE elements and field operating activities having civil works responsibility for laboratory inspections.

3. References.

a. ER 1110-1-261

b. ER 1110-1-263

c. ER 1110-1-8100

d. USACE Chemical Quality Management Protocol for Evaluation of Contract Laboratories Providing Analyses for Superfund and Defense Environmental Restoration Account (DERA) Projects, 8 April 1986.

4. Policy. The basic policies concerning inspection of laboratories performing analysis for water and wastewater projects are set forth in references 3a and 3c. Activities involving Superfund and DERA projects are governed by references 3b and 3d.

5. Background. The purpose of laboratory inspections is to assure that laboratories performing analyses for water and wastewater projects have the required capability, are following accepted quality control procedures and are using methods consistent with those contained in documents listed in Enclosure 1 or in contract specifications. Difficulties arising during laboratory inspections are frequently a result of deficient program or contract specifications.

6. Laboratory Inspections.

a. General. Inspections should be performed prior to the initiation of laboratory testing (or award of contract) and at appropriate intervals thereafter. Following each inspection, a report covering observations and recommendations should be provided to the district commander and will

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generally include a summary of contract requirements for chemical/physical testing, a completed laboratory evaluation checklist, and a summary of findings with specific recommendations. If satisfactory performance on audit samples is a contract requirement, an evaluation of the results should be included in the report.

b. Program Specifications. Prior to an inspection, a review of the program and contract specifications should be made to determine requirements for field sampling and analysis, transportation and handling of samples, laboratory analyses, facilities and equipment, personnel, reporting, and quality control. This review will establish the level of detail required in the inspection. Enclosure 2 describes material generally covered in this review.

c. Onsite Laboratory Inspection. When a site visit is planned, arrangements should be made for a schedule that will have a minimum impact on routine activities, allow observation of a variety of tests in actual operation, and assure the presence of the laboratory staff. At the laboratory, an interview is held with the facility director to discuss the purpose of the site visit and to emphasize the Corps requirements for an active quality assurance/quality control program. This is followed by an evaluation survey to determine the laboratory's ability to meet program requirements or contract specifications. A checklist is presented in Enclosure 3 to aid in this evaluation. It may be necessary to add or delete items based on individual program needs. Note also that much of the information in Enclosure 3 may be obtained before the inspection, either as part of the quality assurance plan required by contract specifications, or by written communication. An exit interview is then held with the laboratory director to discuss observations and make recommendations.

7. Conclusions. The inspection of laboratories to ensure the reliability of environmental data is a very important part of the overall quality assurance plan for the Corps of Engineers. The enclosures provide guidance to assist in carrying out this responsibility. However, variations in funding levels, types of laboratories involved, and analyses required dictate that considerable judgement be exercised by the individuals responsible for the inspection program. All of the information outlined may not be required for each inspection, while additional information may be needed in some cases. Contracts must often be written which require state-of-the-art procedures and this may cause some contracts to be less specific than others. Established methods often allow some discretion on the part of the analyst.

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In addition, new equipment can make procedures unnecessary that were previously mandatory. In view of these considerations, inspections should be carried out by personnel qualified in laboratory techniques and knowledgeable regarding acceptable alternative methods.

FOR THE COMMANDER:

3 Encls



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