

QUALITY ASSURANCE LABORATORY ACCREDITATION PROGRAM GUIDE

Developed by

WACEL

7508 Wisconsin Avenue, 4th Floor

Bethesda, Maryland 20814

301-652-7925

www.wacel.org

Eighth Edition

1.0 INTRODUCTION

WACEL (formerly the Washington Area Council of Engineering Laboratories), An Association of Engineering Laboratories, Inspection Agencies and Public Building Officials was founded in 1974 principally to upgrade the standards of practice among engineering laboratories operating in the national capital area, as well as areas south to Richmond (VA) and north to Baltimore (MD).

WACEL's initial activities focused on personnel standards. WACEL established a certification program to validate qualifications of soils, concrete, and bituminous concrete technicians as well as structural concrete, foundation and structural steel inspectors and laboratory technicians. In 1982, the group broadened its scope by developing its Laboratory Accreditation Program. Today, WACEL laboratory accreditation is a requirement of membership. Every laboratory in the WACEL region, as defined by the Board of Directors, must be accredited by WACEL or an accreditation body recognized by WACEL to be a WACEL member. Every WACEL Inspection Agency Member must participate in the Inspection Agency Quality Assurance Audit Program. Additionally, laboratories accredited by a WACEL-recognized program must participate in an annual audit performed by WACEL or another organization recognized by WACEL.

This document relates information about the WACEL Laboratory Accreditation Program and laboratory accreditation requirements as they have been revised and updated over the years, and includes various documents associated with Program implementation. WACEL conducts periodic evaluations of the Program and makes changes as necessary. WACEL requires accreditation to ASTM C1077, D3740, and E329, applicable to the disciplines practiced by a laboratory, in addition to the requirements of this guide.

WACEL regards the Quality Assurance Laboratory Accreditation Program as one of its most significant contributions to improved practice among engineering laboratories. The Program identifies criteria that laboratories must meet in order to perform their work in a conscientious and capable manner and helps assure that accredited laboratories in fact meet those criteria. The Program provides valuable reassurance to the public, governmental agencies, clients and others that accredited laboratories can perform their work in the proper manner, and that their findings comprise an accurate indication of conditions assayed. Of course, no program can guarantee an accredited laboratory will at all times perform in a proper manner, that equipment will at all times be in proper calibration, etc. However, the process of seeking accreditation demonstrates a firm's concern for proper performance, just as obtaining accreditation demonstrates its ability to provide proper performance at the time accreditation was conferred. The program also recognizes that quality assurance is an ongoing and ever-improving process. For that reason, the program constantly seeks to maintain its quality standards through annual review audits.

WACEL Laboratory Accreditation is available to members and nonmembers that meet program requirements.

This document comprises a refinement of previous documents and, undoubtedly, future revisions will be issued to make the accreditation process even more meaningful and effective. Toward that end, WACEL welcomes comments and suggestions from all who may read or use this document.

1.1 ABBREVIATIONS

Several abbreviations are used throughout this Guide, as follows:

1.1.1 LAT

The roles of the Laboratory Accreditation Team (or LAT) are defined in Section 3.0.

1.1.2 MRFI

A Materials Review and Facilities Inspection (or MRFI) Report is issued after an applicant's quality-related materials have been reviewed and facilities have been inspected, and the LAT arrives at a consensus as to findings. The MRFI Report summarizes findings of the facility inspections. In some instances, a review of revised materials or a reinspection of facilities is required to assure proper remedial measures have been taken. Accreditation is not conferred until all deficiencies have been satisfactorily addressed as determined by the LAC. If a laboratory fails to satisfactorily address accreditation requirements in the MRFI Report by the prescribed deadline, the LAT will issue a written notification advising the laboratory that the accreditation will not be issued and that the laboratory will have to begin the accreditation process anew.

1.1.3 PA

The Program Administrator (or PA) is the individual in the WACEL office charged with day-to-day administration of the program. The PA's functions are explained throughout the Guide.

1.1.4 LAC

WACEL's Laboratory Accreditation Committee (or LAC) is charged with Program oversight. WACEL's Director of Technical Services serves as the LAC Captain on almost all accreditations. The LAC Captain is sent copies of most documents to help assure he/she is kept apprised of progress. The LAC is responsible for assessing the qualifications, competence and training of Team Members and Novices.

2.0 THE PROGRAM

2.1

PURPOSE

The purpose of the WACEL Laboratory Accreditation Program ("the Program") is to:

- a. Identify criteria that an engineering laboratory must possess to provide consistently accurate data derived from tests it routinely performs and services it routinely provides to identify salient characteristics of soils and/or concrete materials.
- b. Through identification of criteria, provide to engineering laboratories, and those that may for whatever reason rely upon them, guidelines for measuring quality of performance.
- c. Provide a vehicle whereby an engineering laboratory may obtain an objective, knowledgeable evaluation of the quality of its performance.
- d. Provide a means for reassuring the public, government agencies, and others that an engineering laboratory is capable of providing accurate, reliable test data in accordance with established standards.
- e. Meet prescribed ASTM requirements.
- f. Enhance the image of WACEL members and quality-oriented laboratories.

2.2 SCOPE

The Program's scope includes:

- an examination of an engineering laboratory's Quality Assurance Manual;
- an inspection of the engineering laboratory to view facilities and equipment and observe daily operations in progress;
- Review of formal competency reviews of certified technicians;
- conduct of follow-up activities necessary to assure deficiencies or concerns have been properly addressed before final accreditation is issued, and

- annual audits to assess if the laboratory continues to operate in a manner consistent with the requirements of the WACEL Laboratory Accreditation Program.

Accreditation does not include testing of equipment for proper operation and calibration. Such activities are performed by other agencies. However, accreditation does include a review of other agencies' calibration and other quality-related reports, as well as documentation of actions taken to help correct deficiencies identified.

2.3 PREREQUISITES

Any engineering laboratory that tests soil and/or concrete is eligible to participate, providing it performs, at a minimum, all of the tests identified in Exhibit 1 and meets certain other prerequisites. Among these is the requirement that a laboratory's technical functions be directed by a full-time professional engineer registered in the jurisdiction in which the laboratory is located. This individual must meet the legal service requirements of the jurisdiction in which the laboratory is physically located.. Additionally, a laboratory that seeks accreditation for concrete testing must have undergone inspection by the C.C.R.L., the Corp of Engineers (CoE), or another program that WACEL deems to be the equivalent, within the current cycle of that inspection agency from the date of facilities inspection by WACEL. The scope of the inspection must cover the required tests for concrete accredited laboratories as identified in Exhibit 1. A laboratory also must provide evidence of participation within the past year in a WACEL-recognized Concrete Reference Sampling Program such as C.C.R.L. or RMCTPC or other program recognized by WACEL. Proof of annual reference sampling program participation must be submitted annually to WACEL's Director of Technical Services in order for an accreditation to remain valid.

Similarly, a laboratory seeking soils accreditation must have undergone inspection by A.M.R.L., the Corp of Engineers (CoE), or a program that WACEL deems to be the equivalent, within two years of the date of the WACEL facilities inspection. The scope of the inspection must cover the required tests for soil accredited laboratories as identified in Exhibit 1. A laboratory also must submit evidence of annual participation in A.M.R.L. or another WACEL-recognized Soil and Aggregate Reference Sampling Program within the past year (See Exhibit 4) in order for an accreditation to remain valid. Proof of annual reference sampling program participation must be submitted annually to WACEL's Director of Technical Services in order for an accreditation to remain valid.

Certain other prerequisites are identified elsewhere in this Guide. For a laboratory to be accredited, it must present certain documentation relating to quality assurance activities, business organization, and so on. Additionally, a laboratory must demonstrate that it is ready for accreditation at the time of application. For that reason, a set of materials required for accreditation must be **submitted to the team captain at the time of application**. If required materials do not accompany an application, then the application and fee will be returned.

2.4 ACCREDITATION DURATION, SUSPENSION, TERMINATION AND RENEWAL

2.4.1 Duration

Accreditation extends three calendar years from the date accreditation requirements are met and that the laboratory continues to operate within program requirements.

2.4.2 Annual Audit -- Continued Compliance

Approximately four weeks prior to the first anniversary of accreditation, the P.E. in charge of the lab will be issued a Certification of Continued Compliance (Exhibit 4). The P.E. in charge of the laboratory and WACEL's Director of Technical Services must arrange for an Annual Audit before the accreditation anniversary date. The scope of the audit is based on predetermined criteria (See Section 5), past experience, recommendations of the most recent MRFI Final Report and changes to the accredited laboratory's operations during the past year. A walk-through evaluation, in addition to a paperwork review, may be all that is necessary. Alternatively, a limited reinspection may be required.

The same procedures must be followed 30 days prior to the second anniversary of accreditation. Should the accredited laboratory fail to provide evidence of participation in a Reference Sampling Program or if there are deficiencies, suspension or termination of accreditation could result.

2.4.3 Major Event

A major event affecting the activities of an accredited laboratory must be called to the attention of the WACEL in writing that shall determine if a reinspection or audit is warranted. A major event includes addition of a new service for which accreditation has not been obtained, relocation of a laboratory, change of PE in responsible charge, expansion, change of ownership or operating procedures, etc. An accredited laboratory's failure to contact WACEL within three

months after a major event can be considered grounds for suspension or termination of accreditation.

2.4.5 Suspension of Accreditation

Suspension of accreditation means that a firm technically loses its accreditation for a period not to exceed 30 days. It is applied typically to accredited firms that are tardy in returning their signed Certificates of Continuing Compliance or do not arrange for an Annual Audit or failure to respond satisfactorily to deficiencies uncovered in the annual audit or failure to notify WACEL of a major event or failure to operate the laboratory as required by the WACEL Laboratory Accreditation Program. It is also provided to firms that are late in applying for accreditation renewal. (See also Section 7.4.1).

2.4.6 Termination of Accreditation

Accreditation may be terminated for failure to return a signed Certificate of Compliance within 60 days of the date of issuance, or if it is discovered that a major event has not been reported within 90 days of the event's occurrence. Termination occurs if a firm fails to participate annually in a Reference Sampling Program in which accreditation has been obtained (concrete and/or soils). Additionally, termination occurs if an accredited WACEL member has its membership terminated for a violation of the WACEL Bylaws, fails to pay invoices within the required time period or elects to discontinue its membership. Terminated firms may reapply for accreditation as a nonmember. A terminated firm must delete all references to WACEL accreditation in all materials within two weeks of accreditation termination. Once a laboratory's accreditation has been terminated, the Program Administrator (PA) updates its list of accredited firms on the WACEL web site – www.wacel.org -- notifies area jurisdictions quarterly as per Sections 4.14.2

2.4.7 Renewal

Renewal of accreditation is provided in the exact same manner as the initial accreditation. Accredited firms are advised to initiate re-accreditation activity approximately three months prior to expiration of existing accreditation. Each Certification of Continued Compliance (Exhibit 4) carries such a reminder notice. In addition, approximately three months before an accreditation expires, the Director of Technical Services issues a separate reminder notice.

3.0 LABORATORY ACCREDITATION TEAMS

3.1

FUNCTIONS

A Laboratory Accreditation Team (LAT) acts on behalf of WACEL during the Accreditation Review process, except in the case of an appeal per section 7. It is up to the LAT to assure materials necessary for review are identified to the applicant laboratory in a timely fashion; to review such materials thoroughly; to arrange for and conduct the necessary meetings and the facilities inspection, etc.

3.2 COMPOSITION

A LAT shall comprise at least two persons, a LAT Captain and a LAT Member. The LAT Member shall be a representative of a WACEL member firm or other party approved by the WACEL Laboratory Accreditation Committee and collectively proficient in the disciplines (soils and/or concrete) for which accreditation is sought.

Each LAT may also include an Outside Observer representing an interested entity, such as an appropriate government agency or a consulting structural engineering firm. Such observers learn more about the process through participation.

It is also desirable to provide training for future LAT Members and, for that purpose, each LAT may also include a Novice Member, i.e., a person otherwise qualified to serve as a LAT Member who has not previously served on a LAT.

3.2.1 LAT Size Requirements

It shall be the responsibility of the LAT Captain, working with the Applicant's Representative, to determine if more than a basic LAT is required to do the required work well.

3.3 ROLES OF LAT PARTICIPANTS

3.3.1 LAT Captain

The LAT Captain plays a pivotal role in the smooth functioning of the LAT and the entire Accreditation Review process. The Captain is responsible for assembling the size of the LAT, distributing review assignments, arranging for various meetings (including the Facilities Inspection), formalizing the Facilities Inspection schedule, writing the Materials Review and Facilities Inspection (MRFI) Report, maintaining contact with other LAT participants to assure plans are realized, conducting Annual Audits, and maintaining contact with the applicant and other staff.

3.3.2 LAT Member

A LAT Member serves principally to assist the LAT Captain conduct reviews during the Facilities Inspection and review the MRFI Report for accuracy. In the case of Accreditations requiring the service of more than one LAT Member, the LAT Captain may recruit another LAT Member.

3.3.3 LAT Novice Member

A Novice Member generally has the same technical and general experiential qualifications as a Team Member, except the Novice Member has not previously served on a LAT. Assignments given to the Novice Member should be relatively similar to those given to a Member. While some, such as those associated with Facilities Inspection, may not be as critically important as a Member's, they nonetheless are essential and merit recognition as such. Moreover, should the LAT Member for any reason be unable to participate during the Facilities Inspection, the Novice Member should be able to fill in.

3.3.4 LAT Outside Observer

Although the Outside Observer need not be a registered professional engineer, the Outside Observer should have a construction-related background. Generally speaking, Outside Observers are either public officials or principals of consulting structural engineering firms. Feasibly civil engineers or architects also could be invited. Outside Observers do not participate to assure procedures are conducted in an unbiased manner. They are invited to obtain a better understanding of and appreciation for the Accreditation Review process. WACEL believes area jurisdictions should employ only accredited laboratories, and that jurisdictions with special inspection programs should require affected owners and design professionals to likewise employ only accredited laboratories. WACEL also believes design professionals should mandate in their specifications use of accredited laboratories. Participation of Outside Observers helps achieve such objectives. However, Outside Observers, by virtue of their backgrounds, should also be in a position to contribute to the process, through review of materials and provision of comments, through performing certain inspection or review functions during a Facilities Inspection, and by offering suggestions for process improvements based on their own experiences.

3.4 LAT SERVICE CRITERIA

3.4.1 General

Any individual serving on a LAT is expected to have the technical education, training and experience commensurate with the tasks and disciplines involved. Everyone participating as an evaluator in the WACEL Laboratory Accreditation Program must sign a statement that they certify to comply with the rules, policies and procedures of the WACEL Laboratory Accreditation Program, including, but not limited to, the confidentiality provisions detailed in this program manual. Failure to sign this certification statement precludes participation as a LAT Member or Novice.

Commented [TC1]: We don't do this but should start effective immediately.

3.4.2 LAT Captain

WACEL's Director of Technical Services serves as the Captain on almost all LATs. In the event that WACEL's Director of Technical Services is unavailable to serve as Captain, others can serve as Captain of an LAT provided that he or she has at least five years' experience as a principal of an engineering laboratory, or is a professional engineer in responsible charge of a laboratory, or is a project or laboratory manager or project engineer who has served as a LAT Member on at least three prior occasions.

3.4.3 LAT Member

To serve as a LAT Member, an individual must be at least a project or laboratory manager or project engineer who has participated on a LAT at least once before, either as a Member or Novice Member.

LAT Members must submit on an annual basis a resume or CV detailing their name and address, organization affiliation and position held, education qualifications and professional status, work experience, training in quality assurance, assessment and calibration and other information that helps to verify the Member's qualifications.

Commented [TC2]: We don't currently do this. We should start.

LAT Members must attend on an annual basis, a WACEL-recognized laboratory accreditation training program.

3.4.4 LAT Novice Member

A Novice Member shall be at least a project or laboratory manager or project engineer who has never before served on a LAT or has only served on one occasion.

In order to become a LAT Novice, one must submit a resume or CV detailing their name and address, organization affiliation and position held, education qualifications and professional status, work experience, training in quality assurance, assessment and calibration and other information that helps to verify the Novice's qualifications. In most cases, this will already be on file at the WACEL office, as long as the applicant possesses a WACEL technician certification.

3.5 IDENTIFYING ELIGIBLE LAT CAPTAINS AND MEMBERS

The Program is operated on a voluntary basis. Having available an adequate number of persons to serve as LAT Members is of critical importance. Accordingly, each WACEL member is encouraged to provide volunteers who are qualified to serve as Laboratory Accreditation Team Members and Novices.

3.6 LAT PROTOCOL

The LAT performs a function that is vitally important to those involved with the firm undergoing accreditation, to public agencies and clients, and to WACEL. It therefore is essential that those comprising the Team observe appropriate protocol and be thoroughly familiar with Program procedures and requirements.

3.6.1 Confidentiality

Confidentiality is of utmost importance. All information furnished by the applicant laboratory for purposes of Accreditation Review shall be considered privileged. Accordingly, no materials furnished by the applicant laboratory shall be shown to or discussed with anyone except those

serving on the same LAT and the applicant's representative. Likewise, no comments based on privileged information shall be made about the applicant laboratory except in private meetings of the LAT and meetings between representatives of the LAT and the applicant laboratory.

During meetings of the WACEL Board of Directors or LAC, a LAT representative may discuss the status of the accreditation.

3.6.2 Conduct during Facilities Inspection

The LAT's role as a representative of WACEL is particularly conspicuous during the facilities inspection. Team members shall regard themselves as guests of the applicant laboratory and conduct themselves accordingly. The LAT is not authorized or in any way permitted to examine records, policies, procedures or practices that are considered by the Applicant as proprietary, e.g. fee schedules, client lists, etc. Questions asked of laboratory personnel shall be posed in an objective manner; their responses shall be noted without oral or nonverbal comment. In meetings with the applicant laboratory's representative, a LAT representative shall be candid and professional.

Negative findings will be indicated on worksheets and in notes; they shall not be made orally except in private discussion with the applicant laboratory's representative or a principal of the laboratory depending on the nature of the negative findings.

3.6.3 Disposition of Materials

Subsequent to completion of an Accreditation Review, all LAT participants shall forward to the PA or destroy, as directed, any and all materials pertaining to the Review. No comments about the specific procedure, laboratory involved, etc., shall be made on a voluntary basis to any person at any time.

4.0 ACCREDITATION REVIEW PROCEDURES

4.1 NOTIFICATION OF DESIRE FOR ACCREDITATION

An engineering laboratory shall contact WACEL to indicate its desire to seek accreditation. In response to a WACEL Member, the PA shall promptly issue a copy of this Guide. This is sent with a covering letter that stresses the need to comply with prerequisites and to obtain guidance if they are unsure about compliance.

4.2 APPLICATION

An engineering laboratory that meets prerequisites shall apply for accreditation by completing an application form and submitting it with the materials required for accreditation as described in Exhibit 3 along with the accreditation fee. Failure to provide materials described in Exhibit 3 will result in the application and fee being returned. The applicant may utilize a photocopy of the form shown in Exhibit 2 or, if preferred, may request a form from the WACEL office or download a copy from the WACEL website, www.wacel.org. The form must be completed fully and, when returned, must be accompanied by payment.

4.2.1 Numbering System and PA Follow-Up

Upon receipt of the form, the Director of Technical Services assigns a number to the Accreditation Review. The same number applies to the LAT and, if and when issued, to the accreditation itself. (If a laboratory fails to be accredited, the number assigned to its Accreditation Review will not be reused. Thus, for example, Accreditation No. 25 could be the next accreditation number issued after Accreditation No. 23, if Accreditation Review No. 24 (by LAT No. 24) does not lead to accreditation).

4.3 ASSIGNMENT OF TEAMS

The Director of Technical Services or PA shall contact potential LAT Members and Novice Members to determine their willingness to conduct the accreditation, within the time period requested. In the event no LAT is available to direct the process within the time period requested, the applicant will be asked to identify alternate dates.

The LAT Captain shall confer with the Applicant's Representative relative to LAT size requirements if necessary, and call prospective Outside Observers to determine their willingness to serve (see Sections 3.2, 3.3 and 3.7). In assembling the team, the PA and LAT Team Captain must assure Members, Novices and Outside Observers are compatible with one another.

4.5 FINALIZATION OF DATES

The LAT Captain shall contact the Applicant's representative to identify specific dates acceptable for Facilities Inspection. The LAT Captain shall discuss with the Applicant's Representative the procedures that will be followed and the tentative timetable, all of which the Applicant's Representative should be familiar with by virtue of having read this Guide. The LAT Captain shall also mention the names of the several Outside Observers under consideration, to determine if any is unacceptable to the Applicant's Representative for any reason.

After discussion with the Applicant's Representative, the LAT Captain shall speak again with the Team Member and Novice Member, if appropriate, to select a specific date. Once the LAT has been assembled and a date for Facilities Inspection has been set, the LAT Captain shall speak with proposed Outside Observers, if available, in order of preference until one willing to serve has been identified.

Once the full LAT has been assembled and a specific date for Facilities Inspection has been agreed to, the LAT Captain shall write to the Applicant's Representative to confirm the date and

LAT composition. A copy of this correspondence shall be sent to all other LAT participants. These copies will be sent with a covering memorandum, which includes an indication of related service requirements, dates involved as appropriate, as well as locations.

4.5.1 Expense Forms

Once the LAT Captain issues copy of the correspondence to the applicant identifying composition of the LAT, the LAT Captain shall forward to each LAT participant a memorandum relative to reimbursement of expenses and an expense reimbursement form.

Commented [TC3]: Is this done or necessary?

4.6 REMINDERS AND REVIEW

The LAT Captain shall check materials furnished by the applicant to assure all required materials have been provided, and shall contact the Applicant's Representative to discuss any materials that may be missing.

The LAT Captain shall immediately forward materials and MRFI worksheets (Exhibit 5) to the LAT Team and Novice Member(s). The LAT Captain shall also remind other participants of the schedule of subsequent activities and shall contact the LAT Outside Observer (if assigned) in writing or by telephone to reconfirm the date of Facilities Inspection.

Approximately one week prior to the Facilities Inspection, the LAT Captain shall call or email the Applicant's Representative to remind him or her of the date and times involved, need for private space at certain times, etc., to minimize the briefing time required during the Facilities Inspection. The LAT Captain may also wish to send to the Applicant's Representative a copy of the schedule developed by the LAT Captain subsequent to the Materials Review Meeting.

4.7 MATERIALS REVIEW MEETING AND FOLLOW-UP

Approximately one week prior to the Facilities Inspection, the LAT (exclusive of the Outside Observer unless he or she prefers to attend) shall meet in person or by conference call to discuss materials submitted by the applicant. The strengths and weaknesses of the various items will be considered, particularly in terms of implications for Facilities Inspection. For example, the applicant's technical practices manual may appear to be so complex it is difficult to follow. Accordingly, it may be appropriate to query various members of the applicant's staff as to their understanding of various practices. (If they are unfamiliar with technical policies or do not understand them, more guidance is required, or the manual should be rewritten, or both.) Similarly, if job descriptions for various field personnel indicate no requirements for certifications of any type, such as those issued by WACEL, ACI or NICET, the LAT would be well advised to inquire into this matter on site.

Commented [TC4]: Is this done?

After materials have been discussed and related follow-up actions decided upon in general, the LAT Captain shall review the MRFI Worksheets furnished earlier (see Section 4.6 and Exhibit 5), to identify specific responsibilities. At this time each LAT participant will also be given assignments relative to follow-up concerns identified through review of applicant-furnished material and earlier discussion of it. The LAT Captain and other participants will then develop a timetable, beginning with the Pre-Inspection Meeting, up through the conclusion of the day (see Section 4.9). As a final matter of business, the LAT Captain shall review general inspection considerations, transportation (car pools etc.), keeping track of expenses and LAT protocol as to conduct during the Facilities Inspection, confidentiality of materials, and so on.

4.8 PRE-INSPECTION MEETING

On the morning of the Facilities Inspection, the entire LAT including the Outside Observer, if assigned, -- may meet for breakfast at a restaurant close to the applicant laboratory. At this time the LAT Captain shall review individual Facilities Inspection assignments and the schedule.

4.9 FACILITIES INSPECTION

4.9.1 Meeting with Applicant's Representative

The LAT shall arrive at the applicant's facility by approximately 9:00 AM. At that time, the LAT meets privately with the Applicant's Representative for purposes of introductions, and to review procedures and schedules.

4.9.2 Meeting with Personnel

After introductions, the Applicant's Representative should call a brief staff meeting to introduce LAT personnel to laboratory personnel, the latter being introduced by name and title. Afterward, the LAT should be given a brief general tour of facilities.

4.9.3 AM Inspection

For approximately 2.5 hours, the LAT shall observe work in progress, review various records, including formal competency reviews of certified technicians, interview various personnel, etc., according to the schedule previously agreed to.

4.9.4 Luncheon

The LAT shall have a one-hour luncheon recess. At this time, the LAT shall discuss findings to date and shall review the schedule for the afternoon. Schedule changes deemed advisable by virtue of preliminary findings shall be made at this time.

4.9.5 PM Inspection

The LAT shall continue its Facilities Inspection from approximately for at 2.5 hours.

4.9.6 Summation Meeting

Prior to departing, LAT shall hold a Summation Meeting in a private room provided by the applicant. Each person shall discuss findings in a qualitative manner. The LAT Captain shall

then review these to assure consensus in terms of the applicant's strengths (activities or materials which are subject to judgmental evaluation and which are excellent or require no improvement), tolerable weaknesses (activities or materials which would benefit from improvement), and deficiencies (activities or materials which must be improved before accreditation (soils and/or concrete) can be accorded).

Decisions made at the Summation Meeting are extremely important, because they determine whether or not the laboratory is to be accredited. There are no hard and fast rules in this regard. It is a decision of the LAT based on their education, training, experience and judgment. When deficiencies exist, of course, the decision is obvious. Deficiencies would include, among many others, failure to document equipment calibration, use of equipment which is broken or clearly unreliable, improper storage of cylinders, personnel performing functions which they have not been properly trained to do, failure to comply with ASTM standards and so on.

The most difficult decisions usually will relate to minor problems, that is, those that are just over the borderline between a situation that is intolerable and one that needs only slight improvement to be tolerable. When the applicant has demonstrated a clear commitment to quality control, the tendency would be to give him the benefit of the doubt. But this would be an improper decision. If it will only take a little effort to correct the problem, all the more reason to delay accreditation for the few days needed to have the problem taken care of. In essence, both the LAT and the Applicant must recognize and appreciate the significance of accreditation. It comprises a "stamp of approval" rendered on behalf of innumerable people who are not in a position to make such qualitative judgments on their own, and who may have a tremendous amount at risk, depending on the quality of service rendered by a laboratory.

A large number of tolerable weaknesses can be interpreted to indicate lack of attention to detail, and the likelihood of quality deterioration in a relatively brief period of time. In such instances,

it may be appropriate to delay accreditation until some of the most significant of these tolerable weaknesses are improved upon.

Of course, the Applicant's Representative will almost always be anxious to obtain accreditation then and there. The LAT must in all cases resist any pressure. However, in cases where the applicant seeks accreditation in both soils and concrete, the LAT does have authority to accredit for one, but delay accreditation for the other, pending improvements and if necessary -- reinspection.

The Team Captain, Member or other representative appointed by the Chairman of the LAC or WACEL President will perform on the first and second anniversary of accreditation an audit, verifying that procedures and practices needed for the accreditation have been maintained (See Section 5).

As a final element of Summation Meeting business, the LAT Captain shall finalize the schedule for subsequent activities. The Captain shall determine who shall attend the Exit Meeting with the Applicant's Representative (the LAT Captain alone or with others), when it would be convenient for a follow-up inspection (if necessary), and who should review revised materials (if required), as well as matters relating to the writing of the MRFI report, destruction of copies of materials, etc.

4.9.7 Exit Meeting

The LAT Captain (possibly joined by one or more other LAT participants) shall meet privately with the Applicant's Representative to discuss findings in terms of strengths, tolerable weaknesses and deficiencies. If there are deficiencies, the LAT Captain shall advise that accreditation must be withheld (in one or both disciplines) until improvements are made. The LAT Captain shall also review the nature of improvements required and by when they should be

instituted (within 30 days maximum). If such improvements relate to equipment or activities, a follow-up inspection will be required to visually ascertain that improvements have in fact been instituted.

In the event the LAT discovers suspected improprieties such as fabrication of records, reports, certifications, etc., these may not be related immediately to the Applicant's Representative, but instead to a principal of the Laboratory who would have the option to conduct an internal investigation of the deficiencies before the notice of the alleged impropriety would be issued by WACEL to the Applicant's Representative.

4.10 LETTER OF THANKS

Within one week from the date of Facilities Inspection, the LAT Captain shall issue a letter of thanks to the Outside Observer, if one was involved.

4.11 MATERIALS REVIEW AND FACILITIES INSPECTION (MRFI) REPORT

Within approximately 14 business days from the date of Facilities Inspection, the LAT Captain shall prepare a draft Materials Review and Facilities Inspection (MRFI) Report to the applicant putting into written form the substance of the report presented orally at the Exit Interview (see Exhibit 6). The LAT Captain shall issue the draft report including copies of inspection checklists to the other LAT participants with a request to review and comment on the report (even if the draft is totally acceptable) within seven business days. The LAT participants are to treat the report as confidential.

After the LAT Captain has assured that all other LAT participants have commented, he shall, within approximately 10 business days from seeing the draft, make whatever modifications are necessary in order to finalize it. The final LAT Captain's final MRFI Report shall be issued to the applicant with a covering letter or email. A copy shall be sent to each other LAT participant

(including the Outside Observer, at the LAT Captain's option). The copy shall note that it is wholly confidential and provided for checking purposes only. If the Team Member(s), Novice Member or Outside Observer disagrees with any of the report's findings, conclusions, etc., they are to write to the Team Captain within five business days of receiving the report documenting their differences. Upon receipt of the correspondence, the Team Captain should discuss and resolve with the team the areas of disagreement. If necessary, a new report reflecting agreements reached at the meeting shall be issued to the Team for a final review and comment. If the Team agrees to the report's findings, the Team Member, Novice Member and Outside Observer shall destroy their copies of the report. Only the WACEL PA and the applicant are permitted to retain a copy of the report. WACEL will retain a copy of the report for three years. This report is considered and is treated as confidential.

4.12 EXPENSE REPORT

Subsequent to submitting the MRFI Report, the LAT Captain shall submit a complete expense report, comprising his expenses and those of other LAT participants. Other LAT participants must be reminded that failure to submit an expense report in a timely fashion may preclude their ability to be reimbursed (more than 120 days after the inspection). The WACEL PA will authorize immediate WACEL payment of all expenses, and shall directly bill the applicant to recover all applicable costs. WACEL will rescind an accreditation conferred if expenses have not been paid within 90 days of the invoice.

4.13 DEFICIENCIES CORRECTION AND REVIEW

The applicant has thirty days from the date of the MRFI Report and the Annual Audit Report to correct deficiencies. Any request for an extension of time shall be referred by the LAT Captain to the LAC for review and decision. The LAC may grant one additional month.

If the deficiencies require a reinspection, such shall be discussed at the Summation Meeting (4.9.6) or in the final report. The LAT Captain shall conduct the reinspection.

4.13.1 Continued Deficiencies

If the changes made still do not relieve an applicant of the deficiency, the LAT Captain shall inform him by letter or email and shall give him additional time to finalize corrections.

However, the aggregate amount of time permitted shall in no case exceed two months from the date of the MRFI Report. If by that time the deficiencies still have not been corrected, the LAT Captain shall inform the applicant that the Accreditation Review is over, and that the applicant may apply for accreditation again.

4.13.2 Elimination of Deficiencies

If the changes made by the applicant eliminate deficiencies, the LAT Captain shall send to the applicant a notice by email indicating that the review showed that deficiencies have been corrected and that the applicant is recommended for accreditation (in soils and/or concrete) by WACEL.

4.14 PA FOLLOW-UP

After being notified that an applicant's accreditation procedure has been completed and the applicant is being recommended for accreditation, and after the laboratory has paid all sums owed to WACEL, the PA pursues the following activities:

4.14.1 Records Update

- a. The accredited laboratory's file is moved from "in process" to "accredited."
- b. The list of accredited laboratories is revised.

- c. "Tickle" dates are established for issuance of the first annual Certification of Continued Compliance (see Exhibit 3), Annual Audits, second Annual Certification of Continued Compliance, and a reminder notice that accreditation will expire in three months.
- d. Service records of those who comprised the LAT are revised.

4.14.2 Jurisdictional Notification

Jurisdictions will be encouraged periodically to check the WACEL web site for the most current list of WACEL-accredited laboratories.

4.14.3 Certificate

The PA prepares a certificate (see Exhibit 7), forwards it for signatures and -- once completed -- mails it to the accredited laboratory.

5.0 ANNUAL AUDIT

Approximately, forty five days before the first anniversary of the accreditation, the Applicant will be sent a copy of the Certificate of Continued Compliance that indicates the certificate must be signed and returned along with evidence of participation in reference sampling programs for each discipline of accreditation (soils and/or concrete) along with a cover letter or email indicating that the Annual Audit must be conducted within the next six weeks. Failure to return the Certificate of Continued Compliance and reference sampling program participation evidence will result in automatic termination of accreditation.

Upon receipt of the signed certificate of continued compliance and reference sampling program data, WACEL's Director of Technical Services shall contact the lab representative to arrange a date for the annual audit.

5.1 SCOPE OF ANNUAL AUDIT

The purpose of the Annual Audit is to reaffirm that the laboratory continues to operate in a manner that is consistent with the requirements of the accreditation program. It offers the laboratory the opportunity to demonstrate improvements made as a result of its participation in the Laboratory Accreditation Program and to obtain an independent evaluation of the effectiveness of changes made to enhance quality control policies and procedures. The scope of the audit involves, at a minimum, a review of records indicating equipment has been calibrated in the last year, a visual examination that equipment is in operable condition, verification that the laboratory remains capable of performing the tests identified in Exhibit 1, verification that technicians who have been employed more than 120 days have obtained certification in the technical disciplines in which they are providing observation and testing services and review of documentation indicating the laboratory has participated in a WACEL-recognized reference sampling program for each discipline in which accreditation has been conferred. In addition, actions the laboratory has taken to improve tolerable weaknesses identified in the MRFI and significant changes, if any, that a laboratory may have undergone in the last year will be discussed.

5.2 FINALIZATION OF AUDIT DATE

Upon receipt of the correspondence notifying the Applicant of the need to conduct an Annual Audit, the Director of Technical Services (DTS) shall contact the Applicant's Representative to identify specific dates acceptable for the Annual Audit. Once a date has been agreed to, a confirmation should be sent to the Applicant Representative with a copy to the PA.

5.3 AUDIT VISIT

The DTS, upon arrival at the laboratory, should meet privately with the Applicant Representative to review procedures and the schedule for the Audit. These include review of records, spot check of equipment and a discussion of policies and procedures implemented to enhance quality since the last visit.

5.3.1 Summation Meeting

After reviewing records and equipment, the DTS shall meet with the Applicant to review findings. As was the case with the initial summation meeting, the DTS shall review strengths (activities or materials which are subject to judgmental evaluation and which are excellent or require no improvement), tolerable weaknesses (activities or materials which would benefit from improvement), and deficiencies (activities or materials which must be improved before accreditation can be accorded).

The DTS must exercise judgment in determining whether or not the laboratory continues to meet program requirements. The decision is obvious if a laboratory has not participated in the required reference sampling program or scope of activity does not include the ability to provide testing services identified in Exhibit 1.

The difficulty will be to determine if there are sufficient tolerable weaknesses that preclude the continuation of accreditation. At the conclusion of the meeting, the DTS will report the results of the Audit, informing the Applicant Representative if the laboratory continues to meet program criteria. If so, the Captain informs the PA of the continuation of accreditation.

If there are deficiencies that preclude continuation of accreditation, the DTS shall advise that accreditation has been suspended in one or both disciplines until improvements are made. The DTS shall review the nature of improvements required and by when they should be instituted (within one month of the audit). If such improvements relate to equipment or activities, a follow-up audit will be required to visually ascertain that improvements have in fact been instituted.

5.4 AUDIT REPORT

Within one week form the date of the Audit, the DTS shall prepare and send an Audit Report to the applicant, documenting the conclusion reached at the audit and follow up action that may be required.

5.5 EXPENSE REPORT

The DTS shall submit a complete expense report to the WACEL PA, comprising expenses for the audit. The PA will review the charges and forward payment of all expenses, directly billing the Applicant to recover applicable costs.

5.5 DEFICIENCIES

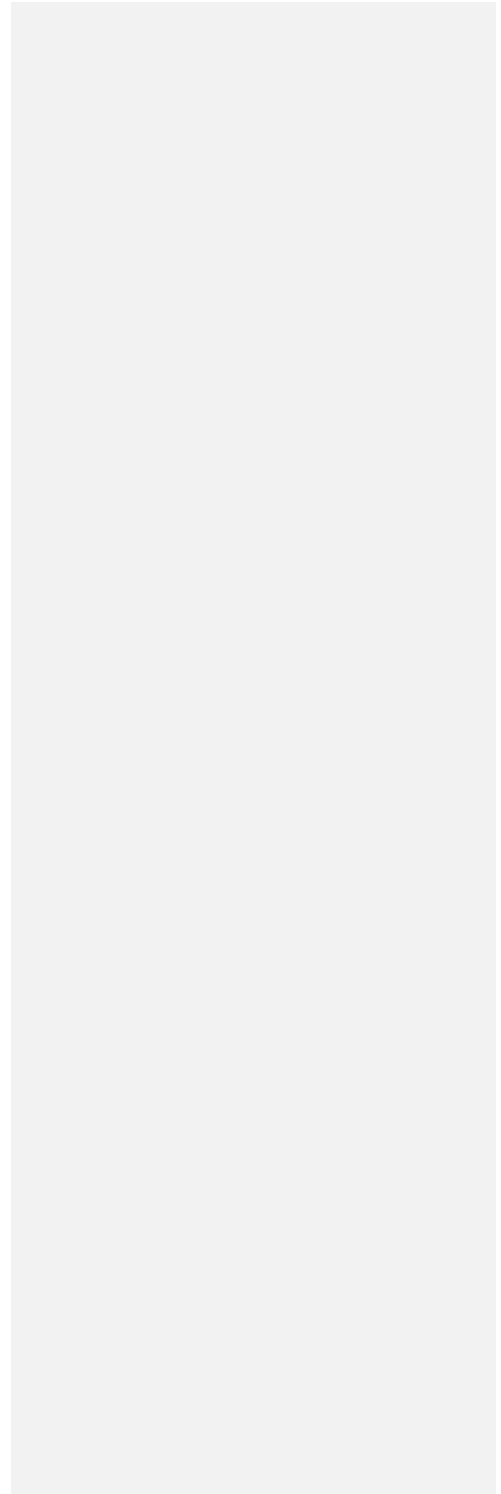
The Applicant has 30 days from the date of the audit report to correct any deficiencies. Any request for an extension of time shall be referred by the DTS to the LAC for review and decision. The LAC may grant one additional month. If the deficiencies require a reinspection, such shall be discussed at the conclusion of the Audit. The reinspection should be brief.

5.5.1 Continued Deficiencies

If the laboratory fails to respond to the deficiencies identified in the Audit Report or if the response does not satisfy the deficiencies, the DTS shall inform the Applicant and shall give the applicant two additional weeks to finalize corrections. If the deficiencies are not resolved by the deadline, the DTS shall inform the Applicant and PA. The PA shall then write to the applicant indicating that the Annual Audit is over, the accreditation has been terminated and that the applicant may apply for accreditation again.

5.5.2 Elimination of Deficiencies

If the changes made by the applicant eliminate deficiencies, the DTS shall send the applicant a brief report indicating that the review showed that deficiencies have been corrected and that the applicant is recommended for accreditation in the appropriate disciplines.



6.0 COMPENSATION AND FEES

6.1 WACEL MEMBERS

WACEL members shall pay a fee of \$1,000 to WACEL for coordinating the accreditation procedure on their behalf and \$500 for each annual audit. This fee shall be payable with the application and is not refundable. If the Facilities Inspection has not been held within one year from the date of application acceptance, the \$1000 is forfeited and the member firm must reapply, unless delays have been caused solely by the LAT. (Applicants must recognize that the LAT comprises volunteers. It is difficult for them to identify mutually acceptable dates. If they are unable to get together on or near a date desired by the applicant, and a year passes, reapplication shall not be necessary, nor is any additional fee. However, if the applicant cancels a Facilities Inspection date previously agreed-to, and the LAT finds it impossible to identify another mutually agreeable date, the one-year rule does apply: The fee is forfeited and the applicant must reapply.)

Subsequent to Facilities Inspection, each person serving on the LAT shall send to the LAT Captain an itemization of expenses. The LAT Captain shall review these for appropriateness and shall add to this list his own expense. This shall be forwarded to the PA who shall then make payment directly to the individuals involved and issue a bill to the applicant, such bill being payable upon receipt.

If reinspection is not required, accreditation shall not be made final until the bill is paid. If reinspection is required, it shall not be performed until the bill is paid. However, if the bill is paid, a subsequent bill shall be required for reinspection, to cover the expenses of the individual performing reinspection. This second bill shall be handled as the first, unless the LAT Captain performs reinspection. In no case, will accreditation be formally conferred unless all bills have been paid. Additionally, accreditation will not be conferred upon any member whose account is more than 60 days in arrears.

6.1.1 Termination of Membership

Should a firm's membership terminate at any time during the Accreditation Review process, all WACEL charges must be paid at the nonmember rate before accreditation will be provided.

Should a firm's membership terminate after accreditation has been conferred, the laboratory accreditation will no longer be valid. The laboratory has the option of re-applying as a nonmember.

6.2 NONMEMBERS

Procedures applicable to nonmembers are essentially identical to those applicable to members, except the accreditation fee charged by WACEL shall be \$5,000. The nonmember applicant (as the member applicant) is responsible for the expenses of the Team Captain, Members, Novice Members and Outside Observers. The bill for their expenses shall be issued by the PA subsequent to issuance of the MRFI Report.

Should reinspection be required, the nonmember shall pay \$500 plus expenses, unless more than four hours (including travel time) are required for reinspection. If so, the fee shall be \$750 plus expenses.

Should the Facilities Inspection not be conducted within one year from the date of application, the nonmember applicant shall receive a refund. The amount of this refund shall be determined by the PA. In general, the application fee may or may not be refunded, depending on the cause of the delay, as already discussed. If expenses have been incurred on the applicant's behalf, these will be deducted from whatever other amounts may be due. Also, if the LAT Captain has spent considerable time on procedures up to but not including Facilities Inspection, a \$500 charge may be imposed, depending on the cause of the delay.

6.3 FEE MODIFICATIONS

The fees charged by WACEL for coordination and those imposed on nonmembers for the service of WACEL member representatives are subject to change at any time, per directives of the WACEL Board of Directors. Should such changes be made, this Program Guide and the application form shall be revised. Applicants using outdated application forms shall be advised of new charges once their application is received. Those who apply prior to the institution of new rates shall pay the rates applicable at the time of application.

7.0 APPEAL

An applicant or any LAT participant shall have the right to appeal any decision made by WACEL representatives during any aspect of the Accreditation Review or Audit. To appeal, an individual shall write to the Program Administrator (PA) and identify exactly why the appeal is being made. This will state the individual's position and what he believes the LAT's, or PA's or other party's position to be. He shall then state why in his opinion the decision made should be reversed or otherwise modified.

The PA shall forward copies of the appeal request to the LAC Chairman and to those persons or that person whose decision is being challenged. The latter shall have three weeks to issue a response setting forth his or their position. This response shall be addressed to the LAC Chairman, with a copy being sent to the appellant and others to whom the appeal was sent. The appellant and any other interested parties will then have two weeks to comment in writing to the LAC Chairman, relative to either or both letters.

Following the commentary period, the LAC Chairman shall prepare to call a meeting. Any individual serving on that Committee who is affiliated with the appellant or any individual whose decision is being challenged shall be unable to vote, however. If the number remaining -- including the WACEL President who shall meet with the LAC -- is less than five, the President shall appoint other persons to the LAC. The LAC Chairman shall then distribute copies of correspondence received (and any comments he may care to add) to the LAC as then constituted, and shall set a date for a meeting to be held no more than two weeks from the date of distribution of correspondence.

The LAC in its meeting shall have a full and vigorous discussion of the issues. It shall then vote on the matter. Its vote will be final and binding by virtue of at least a two-thirds majority opinion. If a two-thirds majority opinion cannot be obtained, the parties involved will be so notified, and the matter will be heard once again within four weeks of the meeting. At this time, the appellant shall attend to present his position orally, with those persons or that person whose decision is being challenged being invited to do likewise. Following the

conclusion of presentations, and questions which may be posed by the LAC, the LAC shall go into executive session to vote, with its decision to be determined by a simple majority.

7.1 TIME CONSIDERATIONS

Certain activities associated with Accreditation Review depend on timing factors, e.g., time permitted between date of application and date of Facilities Inspection; time permitted to correct deficiencies. In that considerable time may be lost due to the appeal procedure, the time involved shall be applied as a credit in the applicant's favor when the applicant is the appellant. However, if the appeal is filed after a given time span has elapsed, no further time will be provided, unless the LAC shall decide otherwise.

8.0 PROMOTION

All accredited laboratories are encouraged to make known their accredited status, to help generate competition on the basis of quality. However, certain restrictions apply, and -- as part of the application process -- an applicant must agree to these (and all other applicable restrictions included in this Program Guide).

8.1 ACCREDITATION DELINEATION

In all cases and all applications, notice of WACEL ACCREDITATION MUST INDICATE THE ACCREDITATION NUMBER AND DISCIPLINE INVOLVED, e.g., "WACEL Accreditation NO. 15, Soils and Concrete."

8.2 MEDIA SELECTION

Notice of accreditation may be used without restriction in or on any media subject to rapid modification. These would include letterheads, business cards, newspaper advertising, etc. However, the notice may not be used in any type of long-term medium, such as an annual directory, Yellow Pages advertising, etc.

8.3 MULTIPLE LABORATORIES

An organization which comprises more than one laboratory may apply WACEL accreditation notice only to specific laboratories. It may not state "Laboratory Accredited by WACEL" or words to that effect. Each laboratory must be identified, and the accreditation number and specialty must be delineated for each.

8.4 LOSS OF ACCREDITATION

A firm which loses its accreditation for any reason shall have two weeks to delete accreditation notices from any and all media bearing same. This can be done through overprinting such notice, if necessary.

In any manner implying accreditation by WACEL when such accreditation no longer exists shall be considered fraud, and shall make whatever entity commits such fraudulent act subject to whatever civil and/or criminal penalties shall apply.

8.4.1 Suspension of Accreditation

Reasons for suspension of accreditation have been identified elsewhere in this Program Guide. A suspension lasts no longer than 30 days. During suspension, a laboratory is considered nonaccredited, but is not required to take those actions associated with loss of accreditation.

9.0 RECORD RETENTION

All document submitted and/or developed as part of the WACEL Laboratory Accreditation Program are treated as and considered confidential. The Program Administrator will maintain and store the following records:

- Application for Accreditation
- Applications and resumes of Team Captains, Members and Novices
- Copies of Materials Submitted for Accreditation
- Copies of the final MRFI Report
- Copies of Correspondence indicating that laboratories have accredited
- Copies of the signed Certificates of Continues Compliance, including evidence of reference sampling program participation
- Copies of Annual Audit Reports
- List of Accredited Laboratories
- Program correspondence

Materials retained by Team Captains and Team Members should only retain copies of the final MRFI Report. All other materials obtained from the participating lab should be destroyed or returned.