

**ACIL POSITION PAPER
PROCUREMENT AND EFFECTIVE PRACTICE OF
CONSTRUCTION MATERIALS ENGINEERING AND TESTING SERVICES**

Construction Materials Engineering and Testing firms have been referred to for decades in construction project specifications as the “Independent Testing Laboratory,” yet their role on projects, the contractual arrangements under which their Professional Engineering services are provided and industry-recognized standards and practices for such firms are both highly variable and poorly understood. The related professions and industries are in need of clarifying definitions for the procurement and effective practice of Construction Materials Engineering and Testing firms.

For over 65 years, the American Council of Independent Laboratories (ACIL) has provided the industry-recognized voice for the independent testing profession. This position paper provides a compilation of statements from ACIL’s Civil Engineering Section regarding clarification, definitions and positions the Construction Materials Engineering and Testing profession believes are necessary for the advancement of the profession and to help protect safety, health and welfare of the general public.

Definitions, Relationships and Procurement

- Independent Testing Laboratory is synonymous with the professional engineering services firm providing construction materials engineering and testing services, referred to herein as the Construction Materials Engineering Laboratory (CMEL).
- Quality Assurance (QA) is defined as testing and trained observation by an independent party to provide a level of verification that products or completed operations meet minimum requirements of certain standards. Quality Control (QC) is defined as testing, processes or measures implemented by a service firm, contractor or supplier to verify service or product meets certain standards.
- Engineering technicians provide professional services under the direct supervision of an in-house licensed Professional Engineer.
- Engineering technicians are extensions of the firm's licensed Professional Engineer(s).
- QA services on construction-related projects are to be procured by the Owner with the assistance of Design Professionals.
- Procurement of QA and QC services on construction-related projects shall be by Qualification-Based Selection (Brooks Act).

Qualifications and Responsibilities of CMEL

- Firms providing QA and QC services shall meet requirements described in applicable ASTM standards (C1077 - Concrete, D3740 - Soil, D3666 - Asphalt, E329 - Steel, E543 - NDT).
- Accreditation by The National Cooperation for Laboratory Accreditation (NACLA) or other nationally recognized agency is recommended. Mutual recognition of accreditation is encouraged. Duplicative accreditations are discouraged.
- Certification of engineering technicians in the various service areas is encouraged and must be provided where required. Mutual recognition of certification is encouraged. Duplicative certifications are discouraged.
- Reports prepared by the CMEL should be objective and factual and cite the tests performed, methods employed, values or results obtained, parts of the structure or project site involved, and any other similar pertinent data as identified in ASTM and other applicable standards.
- Reports should be signed by the CMEL's appropriate licensed Professional Engineer or designated representative in accordance with State licensing board requirements. Disclosures in a report shall not make the CMEL responsible in any way for any failure by any Contractor (or subcontractor) to carry out work and to provide material in accordance with the project plans, specifications and contract documents. Furthermore, no such disclosure to any party shall make the CMEL responsible for means, methods, techniques, sequences, procedures, materials, or for any safety precautions in connection with the work.
- Information in CMEL reports shall be considered confidential. Copies should only be distributed by the CMEL to those designated by the Client.
- None of the services performed by the CMEL shall cause it to be inferred that the CMEL has or will assume, abridge or abrogate any duties, responsibilities or authority customarily vested in (or imposed by Contract upon) the Design Professionals or other cognizant design authorities or agencies.
- The CMEL shall not be authorized to accept, revoke, alter, relax, enlarge or release any requirements of the project specifications or other related contract documents.
- Work and materials shall be observed and tested by the CMEL as the project progresses. However, failure to detect any defective materials shall not, in any way, prevent later effective rejection of materials when the defect is discovered.
- The CMEL shall not be responsible for any Contractor's failure to carry out the work and to provide materials in accordance with the project specifications and contract documents.
- In no event shall the CMEL be liable or responsible for the acts or errors or omissions of any other Party involved in the design, construction, monitoring or testing of the Project.

- The CMEL shall have no duty whatsoever to undertake any safety review of the project site, nor shall the CMEL have any responsibility for the adequacy of site safety in, near or on the project site except for CMEL's own staff and equipment.

Contractor Responsibilities

- Quality Control (QC) is the full responsibility of the Contractor.
- The Contractor's use of the Owner's QA testing for QC is purely at the Contractor's risk and does not relieve the Contractor from controlling its operation to fully meet project specification requirements.
- Test results submitted by a Contractor, Subcontractor or Supplier to an Owner or Design Professional shall only be considered to be valid when (a) testing firm possesses all legally required licenses, certificates and registrations for the work performed, (b) firm performing the testing meets requirements described in applicable ASTM standards and (c) testing is performed by technicians with appropriate training and certifications.
- The CMEL shall be provided advance notice of activities requiring testing. At a minimum, 24-hour notice shall be provided, but, it is expressly acknowledged that there will be situations where tests or observations require more notice.
- The Contractor shall resolve any identified deficiencies to the satisfaction of the CMEL, Design Professional and Owner.
- The Contractor shall have sole responsibility for the means, methods, techniques, sequences, procedures, materials and safety precautions in connection with the project.
- The Contractor, in cooperation with the CMEL, shall furnish such labor and facilities as necessary to obtain and handle samples at the project site and to facilitate the specified professional services.
- The Contractor, in cooperation with the CMEL, shall provide and maintain for the sole use of the CMEL, adequate facilities for safe storage and proper curing of test specimens that are specified to remain at the project site prior to testing.
- The Contractor shall have adequate supervision and staff to direct and control its work and to observe the performance of CMEL's field services and testing activities. The Contractor shall take all appropriate action to prevent the continuation of all identified deficient work and to promptly resolve deficiencies.

Owner Responsibilities

- The Owner must provide the CMEL with all applicable and relevant specifications, addenda, change orders, approved shop drawings and other information as may be necessary to conduct the construction materials engineering and testing services.
- The Owner shall formally authorize the CMEL to have free access to the project site and to shops or yards where materials are being fabricated or stored.

- The Owner shall designate in writing to the CMEL the designee who will provide complete authority to: (a) transmit instructions to the CMEL, (b) receive information and data from the CMEL, (c) interpret and define the Owner's requirements and decisions concerning the services of the CMEL as per the contract, and (d) order technical services from the CMEL.
- The CMEL shall be invited to attend prebid, preconstruction and progress meetings with the Owner, Design Professional, and Contractor to allow the coordination of CMEL services.
- The Owner shall authorize the CMEL to distribute test reports to the Owner, the Design Professional and the Contractor.

About ACIL and Member Firms

ACIL is the trade association representing independent, commercial scientific and engineering firms. ACIL members are professional service firms engaged in testing, product certification, consulting, and research and development. The association was founded in 1937.

ACIL defines independent scientific and engineering services firms as commercial entities engaged in analysis, testing, inspection, materials engineering, sampling, product certification, research and development and related consulting services for the public. They are not affiliated with any institution, company, or trade group that might affect their ability to conduct investigations, render reports, or give professional, objective and unbiased counsel.

Each member of the Association agrees that it is their policy to abide by the following code of ethics:

- To cooperate in elevating and maintaining the professional status of independent scientific, engineering and testing firms and in securing recognition of the value of services rendered by them.
- To assert competency only in work for which adequate equipment and personnel are available or adequate preparation has been made.
- To have a clear understanding with the client as to the extent and kind of services to be rendered, especially in fields where different grades or characters of services are offered.
- To endeavor in reports to make clear the significance and limitations of findings reported.
- To safeguard reports as far as possible against misinterpretation or misuse, and to contend against such misinterpretation or misuse.
- To oppose and to refrain from incompetent and fraudulent inspection, sampling, analysis, testing, consultation, development and research work.
- To deal honestly and fairly in all business and financial matters with employees, clients and the public.

ACIL's Mission is to enhance members' success by:

- Providing advocacy, education, service and mutual support
- Promoting quality, ethics, objectivity and free enterprise.

ACIL's core values include:

- Ethical, Objective and Quality Business Practices
- Spirit of Community and Sharing
- Growth of Individuals and Their Businesses
- Advocacy for Our Industry

ACIL is committed to promoting and protecting the interests of independent scientific, engineering and testing firms. Its goal is a business environment where independence is valued and competition is fair.

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