

Arkansas Department of Environmental Quality Laboratory Certification Program



**April 24, 2015
Revision 2**

**FOR QUESTIONS OR COMMENTS
CONTACT:**

Penny Semberski
qaofficer@adeq.state.ar.us or 501-682-0941
Quality Assurance Officer
Technical Services Division
<http://www.adeq.state.ar.us/techsvs/labcert.htm>

Pursuant to the provisions of Ark. Code Ann. § 8-2-202 *et seq.*, the Arkansas Department of Environmental Quality (“ADEQ”) is authorized to establish and administer an environmental laboratory certification program so that laboratories that submit data and analyses to the department may be certified by the department as having demonstrated acceptable compliance with laboratory standards so that the validity of scientific data submitted to the department may be further assured. ADEQ is authorized to establish and administer the State Environmental Laboratory Certification Program for laboratories applying for certification by the department; to enforce all laws, rules, and regulations relating to the program and to environmental testing; to issue, deny, revoke, or suspend the certification of a laboratory for cause; and to refuse to accept analytical results from a laboratory when the department reasonably determines that the results do not meet reasonable criteria for validation, regardless of whether the laboratory is certified.

DEFINITIONS

"Acceptable results" means a result within limits determined on the basis of statistical procedures as prescribed by the Arkansas Department of Environmental Quality. In the case of EPA or commercial samples, the acceptable values will be determined by the published acceptance criteria.

"Certificate" means that document issued by the Department showing those parameters for which a laboratory has received certification.

"Consulting laboratory" means a laboratory, as defined herein, which performs analyses for any person other than itself, and does not include laboratories which are wholly owned by the person for whom the analyses are performed;

"Department" means the Arkansas Department of Environmental Quality.

"Evaluation" means a review of the quality control and quality assurance procedures, records keeping, reporting procedures, methodology, facilities, equipment, personnel, and analytical techniques of a laboratory for measuring or establishing specific parameters.

"Laboratory" means any facility that performs analyses to determine the chemical, physical, or biological properties of air, water, solid waste, hazardous waste, wastewater, soil or subsoil materials, or any other analyses related to environmental quality evaluations required by the Department or which will be submitted to the Department, except that evaluations to determine the engineering properties related to soil mechanics shall not be included herein.

"Parameter" means the characteristic or characteristics of a laboratory sample determined by an analytic laboratory testing procedure.

“Performance audit sample” means a sample intended for laboratory analysis in which the concentrations of the constituents are known only to the department and that is used in a test procedure to determine a laboratory’s analytic, quality control, and quality assurance precision and accuracy. Performance audit samples are otherwise known as performance testing samples. Performance testing (PT) samples must be purchased from a TNI approved PT provider. <http://www.nelac-institute.org/ptproviders.php>

"Person" means any individual, corporation, company, firm, partnership, association, trust, joint-stock company or trust, venture, municipality, state, or federal government or agency, or any other legal entity, however organized.

"Program" means the State Environmental Laboratory Certification Program, otherwise known as the ADEQ Laboratory Certification Program.

"Regulation 9" means the regulation promulgated to establish fees for certification.

APPLICATION PROCEDURE

Any laboratory requesting certification under the Department's program will be required to complete an application for certification. See application on p. 8.

INITIAL CERTIFICATION CRITERIA

The following information must be submitted to ADEQ for the initial certification application process.

1. A completed application (p.8) from the laboratory.
2. A copy of the laboratory's Quality Assurance Manual.
3. A resume or summary of qualifications for each manager/supervisor.
4. A “parameter sheet” (p. 9) for each parameter requested. Metals can be grouped on a single sheet.
5. PT Requirements: Performance Testing (PT) samples must be purchased through a TNI approved provider.
 - a. To obtain initial certification, the laboratory shall successfully analyze at least two unique PT samples (from TNI approved vendor; different studies or lots) for EACH requested parameter or organic group.
 - i. For organic groups (i.e., herbicides, pesticides, volatile organics, semivolatile organics, explosives) the laboratory must successfully complete two PT samples

for each organic group, each with a minimum of (80%) successful results.

- ii. For each parameter (such as TSS, TDS, pH, etc.) the laboratory must successfully complete two PT samples with a success rate of >50% for each parameter.
 - iii. Whole Effluent Toxicity (WET) certification requires an annual PT with 100% passing.
- b. On or before the closing date of the study, the laboratory shall authorize the PT Provider to release the laboratory's final evaluation report directly to the QA Officer at ADEQ.
 - c. All PT studies from the previous 18 months prior to the application date shall be submitted, with the analysis date of the most recent PT sample having been no more than 6 months prior to the application date. There shall be at least fifteen calendar days between the analysis dates of successive PT samples for the same parameter.
 - d. If additional PT samples must be analyzed to achieve the above listed passing percentages, the laboratory may purchase any required PT samples, including quick response PT samples, from any approved PT provider. PT Samples analyzed to make up for missed PT sample results must be analyzed at least fifteen calendar days apart.
6. The laboratory must successfully complete an onsite evaluation by a representative of the Department. The evaluation will involve an inspection of the laboratory's quality control and quality assurance procedures, records keeping, reporting procedures, methodology, facilities, equipment, personnel, and analytical techniques for measuring parameters. In lieu of an onsite inspection, the Department may accept copies of on-site inspection reports from EPA, other states, and any other sources. The laboratory's response to any cited deficiencies must also be included.
 7. Copies of certifications from other states complete with dates of certification and specific parameters covered.
 8. Copies of reports of state, federal or NELAC onsite inspections of the laboratory and any corrective actions that followed.

Items 1-8 are required for the initial application package.

***The following information must be made available to ADEQ upon request:

- a. Method Detection Limit studies/verification;
- b. Limit of Quantitation verification;

- c. Information regarding preparation and frequency of analysis of quality control elements such as laboratory reagent blank (method blank), laboratory fortified blank (LCS), matrix spike and matrix spike duplicates;
- d. Information regarding preparation and frequency of analysis of calibration standards such as ICV, CCV, CCB;
- e. Training records including documentation of capability and continued proficiency;
- f. Method Standard Operating Procedures (SOPs) ;
- g. Calibration records and maintenance logs for all instruments and support equipment;
- h. Control charts or other trend analyses of quality control results;
- i. Corrective action policies;
- j. Quality Control (QC) acceptance criteria;
- k. Definitions of preparation and analytical batches that may drive QC frequencies;
- l. Minimum frequency of conducting all QC elements; and
- m. List of all major equipment and instrumentation

CERTIFICATION

Upon completion of the laboratory evaluation and the review of performance evaluation sample results, the Department shall notify the laboratory of its determination to award or deny certification. If the adequacy of the laboratory's capability has been sufficiently established to the Department, an e-mail notification along with an invoice will be sent. Once the fee is received at the Department the laboratory will become certified and a certificate will be issued to the laboratory for the evaluated parameters. If certification is denied, the Department shall set forth, in writing, the reasons for denial. A certificate shall be effective for a period of one (1) year from the date of issuance, after which time the certificate will lapse. Certification may be renewed for additional periods of one year's duration upon application for renewal made to the Department.

CERTIFICATION COSTS

The costs of certification are covered in Chapter 8 of Arkansas Pollution Control and Ecology Commission Regulation 9: Fees. <http://www.adeq.state.ar.us/regs/default.htm>

ANNUAL RENEWAL

The following is a list of the submittals required for annual renewal. **Request for renewal and accompanying documentation MUST be received by ADEQ at least 30 days BEFORE the certificate expiration date in order to ensure there is no lapse* in certification.**

*Lapse in certification results in a time gap between the “expired date” on the old certificate and the “issued date” of the new certificate. In this situation the renewed certificate will be effective for one year from the date of issuance, which will be the date payment is received by ADEQ.

1. Revised Quality Assurance Manual.
2. A list of the parameters in the desired scope of certification with completed parameter sheets for any NEW parameters.
3. Changes in personnel that have occurred in the year. Significant personnel changes will be reported to the Department when they occur.
4. Copies of certifications from other states complete with dates of certification and specific parameters covered.
5. PT Studies:
 - a. To maintain certification, the laboratory must analyze at least two unique PT samples (from TNI approved vendor; different studies or different lot numbers) per calendar year for each parameter for which the lab is certified. The analysis dates of successive PT samples for the same parameter shall be five to seven months apart unless the PT sample is being used for corrective action.
 - b. For organic groups (i.e., herbicides, pesticides, volatile organics, semivolatile organics, explosives), the laboratory must successfully complete two PT samples for each organic group, each with a minimum of (80%) successful results.
 - c. The laboratory must maintain a history of at least two successful performances out of the most recent three for each certified parameter (or organic group) during the past 18 month period.
 - d. Whole Effluent Toxicity (WET) certification requires an annual PT with 100% passing.
 - e. If additional PT samples must be analyzed to achieve the above listed passing percentages the laboratory may purchase any required PT samples, including quick response PT samples,

from any approved PT provider. PT Samples used to make up for missed PT sample results must be analyzed at least fifteen calendar days apart.

6. Copies of reports on both state and federal onsite inspections of the laboratory and any corrective actions that followed.

Items 1-6 are required for the application for annual renewal of certification.

***The following information must be made available to ADEQ upon request:

- a. Method Detection Limit studies/verification;
- b. Limit of Quantitation verification;
- c. Information regarding preparation and frequency of analysis of quality control elements such as laboratory reagent blank (method blank), laboratory fortified blank (LCS), matrix spike and matrix spike duplicates;
- d. Information regarding preparation and frequency of analysis of calibration standards such as ICV, CCV, CCB
- e. Training records including documentation of capability and continued proficiency;
- f. Method Standard Operating Procedures (SOPs);
- g. Calibration records and maintenance logs for all instruments and support equipment;
- h. Control charts or other trend analyses of quality control results;
- i. Corrective action policies;
- j. Quality Control (QC) acceptance criteria;
- k. Definitions of preparation and analytical batches that may drive QC frequencies;
- l. Minimum frequency of conducting all QC elements; and
- m. List of all major equipment and instrumentation

The department is not compelled in any way to notify a laboratory that its certification is about to or has lapsed. It is the responsibility of the laboratory to apply for renewal BEFORE the current certificate expires.

REVOCAION OF CERTIFICATION

Once certified a laboratory certification may be revoked by the Department:

1. For knowingly falsifying any data submitted to the department or any data related to laboratory analysis.
2. For knowingly making any false statement, representation, or certification in any application, record, report, plan, or other document issued by or sent the department or related to laboratory analysis.
3. For knowingly misrepresenting procedures or documentation used in sampling or laboratory analysis.
4. If the laboratory in question is no longer entitled to such certification by reason of its failure to comply with the quality control procedures, records keeping, reporting procedures, methodology, facilities, equipment, personnel, or analytical techniques on which the certification was issued.
5. If the laboratory demonstrably fails to achieve acceptable results for specific parameters for which it has been certified.

APPEAL PROCESS

The appeal of any rulings or decisions made in the administration of this program shall follow the procedure in Arkansas Pollution Control and Ecology Commission Regulation 8: Administrative Procedures.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

LABORATORY CERTIFICATION PROGRAM

APPLICATION FOR CERTIFICATION*

Laboratory Name

Address

City _____ State and Zip

Laboratory Director

Telephone Number

Normal Working Hours of the Laboratory

Services Offered (laboratory only, transportation, sampling)

Media Analyzed

Please include the following additional documentation

1. Resume or summary of qualifications for each manager/supervisor.
2. One "Parameter Sheet" for each parameter requested. Metals can be grouped on a single sheet.
3. A copy of the laboratory's Quality Assurance Manual.
4. A copy of the results of all performance testing samples analyzed within the previous 18 months.

*Alternate formats may be used as long as all the information is covered.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

LABORATORY CERTIFICATION PROGRAM

PARAMETER SHEET*

Parameter _____

Method _____

Reference _____

Primary Analyst _____

Normal Holding Time _____ **Preservative** _____

Type of Container _____ **Type of Sampler** _____

Type and Model of Analytical Equipment used _____

Modifications/Adjustments of Method _____

***Alternate formats may be used as long as all the information is covered.**