



ARKANSAS

ENERGY & ENVIRONMENT

January 26, 2022

Mr. David Vondran
General Manager
City of Benton
1827 Dale Avenue
Benton, AR 72015

via email: dvondran@bentonutilities.com

RE: City of Benton WWTP Laboratory Data Audit
AFIN: 63-00063 Permit No.: AR0036498

Dear Mr. Vondran,

Thank you for responding to our request for laboratory documents for a Lab Records Audit of your facility laboratory. The Division of Environmental Quality has completed its review of the submitted documents. The Lab Records Audit Report details the findings of the audit. Please provide a written response to each finding that includes, but is not limited to, the corrective action to be taken, the estimated time to complete the corrective action, and a demonstration, if necessary, that the corrective action was sufficient to resolve the finding. The corrective actions response to the findings is due by February 28, 2022, and may be emailed to WaterLab@adeq.state.ar.us or mailed to the attention of Office of Water Quality Enforcement, 5301 Northshore Drive, North Little Rock, AR 72118.

If you have any questions, please contact Lessie Redican at 501.682.0937 or by email at redican@adeq.state.ar.us or Stacie Wassell at 501.682.0886 or by email at wassell@adeq.state.ar.us.

Sincerely,

Stacie Wassell
Deputy Associate Director
Division of Environmental Quality, Office of Water Quality
5301 Northshore Drive, North Little Rock, AR 72118

cc: Richard Healey, Enforcement Branch Manager, Office of Water Quality
Lessie Redican, Laboratory Branch Manager, Office of Water Quality



LABORATORY DATA AUDIT REPORT

Introduction

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) Office of Water Quality Laboratory conducted a data audit of the City of Benton WWTP in-house laboratory (Permittee) pursuant to Part III, Section B, Condition 1 and Part III, Section C, Condition 3 of Permit AR0036498 and 40 C.F.R. § 136. The purpose of the audit was to verify that Permittee is complying with Part III, Section B, Condition 1 and Part III, Section C, Condition 3 of Permit AR0036498 and 40 C.F.R. § 136, and correctly implementing approved analytical methods, including acceptable quality control, and maintaining adequate laboratory documentation.

Data Audit Description

DEQ staff requested the following documents for review:

- Laboratory data for the previous three (3) months including:
 - Quality Control and Quality Assurance records;
 - Bench sheets and recorded data;
 - Daily and/or weekly calibration reports;
 - Flow measurements; and
 - Temperature records for instrumentation.
- All NIST certificates for laboratory instrumentation.
- Certifications and/or training documents for technicians.
- Last two (2) proficiency tests for each technician.
- All standard operating procedures.

DEQ reviewed the documents submitted by Permittee, and its findings, questions, and comments are set forth below.

This Laboratory Data Audit Report reports only on the documents submitted to DEQ for review and in no way constitutes a complete laboratory audit. This report may not include all deficiencies in the provided documents. No representation is made as to any documents not specifically commented upon.

STANDARD OPERATING PROCEDURES (SOP)

Parameter	Finding
BOD/CBOD	<ul style="list-style-type: none"> Method and SOP do not match. Method referenced on bench sheet does not match SOP.
	The SOP lacks detail.
	The SOP does not provide a method to handle excursions.
	The SOP does not provide any details regarding calibration of the DO probe or barometric pressure.
	How many mLs of seed is used for seeded samples and GGA?
	Provide sample calculations for seed.
	What corrective actions are taken when dilution water is greater than 0.2 mg/L?
TSS	The SOP lacks detail.
	Method referenced on bench sheet does not match the SOP.
	No units for the filter weights on bench sheet.
	The bench sheets do not have two initial weights for filters.
	How often do you run blanks and QC samples?
	What is the QC material?
NH ₄	Explain the large variation in duplicate samples.
	Are samples preserved at collection?
	Is ISA added to slope check and standard curve?
	Calibration details—Curve reports generated?
	Explain standards: 1, 5x, 10x.
pH	What is TNT?
	What are QC requirements?
	Update methods.
Fecal Coliform Bacteria	Any QC besides duplicates?
	Water bath incubation is required. The SOP does not specify use of a water bath for incubation.
	Water bath temperature must be recorded two times during the analysis with the readings a minimum of four hours apart.
	Monthly verification of at least ten blue colonies is required.
	Are sterility checks performed? Provide details.
	Are monthly positive checks with known value performed?
Please provide your procedures for calculating fecal coliform.	

TRAINING

Documentation of training was submitted for one laboratory technician. The most recent laboratory training was dated 2014.

- How are analysts trained to perform analyses? How is training documented?
- Are analysts re-trained on changes to methods and SOPs?
- Does your lab have data ethics requirements?

- How often do you perform QAQC review?

SUPPORT DOCUMENTS

- Balance Calibrations
 - Daily logs should report an actual weight, not a range.
- Temperature Logs
 - The temperature logs provided do not identify the equipment for which the temperature was logged.
 - Temperatures should be recorded to the highest degree of accuracy for each thermometer in use.
- Certified Thermometer Check
 - Temperatures should be recorded to the highest degree of accuracy for each thermometer. A thermometer check with a recorded temperature of >18 does not indicate the accuracy of the thermometer.

BENCH SHEETS

- Bench sheets are not complete.
- Method citations do not match the SOPs.
- Sources of standards, QCs, reagents, chemicals, etc. should be recorded on the bench sheets.
- All calculations should be shown on bench sheets with the formulas for each calculation included in the respective SOP.

SOP, IN GENERAL

- What criteria are used to evaluate duplicates?
- DEQ recommends using a standard format for all SOPs. DEQ can provide a template.