



Field Audit Details





Sampling Performance Audit Assessment of Current Field Practices - Typical Audit Topics

- Selection of appropriate equipment and supplies
 - Operating condition of all equipment
- Attention to contamination prevention
- Selection of sampling locations (surface water)
- Sample collection technique
 - Direct sampling using sample containers
 - Use of intermediate sampling devices
 - Sampling using depth samplers or pumps
 - Sampling requirements specific to applicable DEP SOPs
- Sample preservation and checks
 - Preservation per DEP SOP FS 1000 Tables
- Collection of field-QC blanks





EXAMPLES

Audit checklists & performance audit findings





Sampling Performance Audit – Examination of field documents created for sampling event

- **Audit criteria based on DEP SOP FD 1000**
- Documentation requirements common to all sampling
 - Sample collection information
 - Location, date, time, analytes, preservation, matrices, collection equipment & procedures
 - Groundwater purging information
 - Information transmitted to laboratory
- Field-testing sample measurements
 - Linkage to field-testing instrument calibration records
- Decontamination of equipment
- Preservative sources
- Equipment or instrument maintenance and repair
 - Includes cleaning, maintenance and replacement of field-testing sensors/probes





Sampling Performance Audit Field Event Documents (cont'd.)

- **Field Testing instrument calibration**
 - Demonstration of calibration verification “bracketing” per DEP SOP requirements
 - Calibration standard sources, specifications and preparation
 - Unique identification of field-testing instruments
 - Linkage to sample measurement records





Field-Testing Calibration Verification Acceptance Criteria FT 1000-1

Parameter	Acceptance Criteria
pH	± 0.2 Standard pH Units of calibration buffer
Specific Conductance	± 5% of calibration standard value
Dissolved Oxygen	± 0.3 mg/L of theoretical value
Temperature	± 0.5 °C. of NIST-traceable value (w/correction factors) Verification over range of sample values
Turbidity	0.1-10 NTU : ± 10% of standard value 11-40 NTU : ± 8% of standard value 41-100 NTU : ± 6.5% of standard value > 100 NTU : ± 5% of standard value
Total residual chlorine	0.995 calibration curve correlation coefficient ± 10% of primary standard value ± 10% of secondary standard value Color comparator acceptance criterion ± 10% of primary standard value



Field Records Project Audit – per DEP SOP FD 1000

- Project- or program-specific selection of records
 - Typically:
 - Evaluation to determine *data usability* for a project or specified calendar period
 - Overall assessment of field quality system for project, permit, monitoring, etc.
- Inspection of Records – Major Audit Topics
 - Documentation linkage between all associated records
 - Sample collection, including identification of sample source
 - Collection dates and times (verification of holding times)
 - Sample preservation
 - Field testing measurements & instrument calibration





EXAMPLES

Field Records Audit

