



Work Instruction (WI)

DIRECTIVE NO. 250-WI-8500.0.5F
EFFECTIVE DATE: 07/17/2019
EXPIRATION DATE: 07/17/2024

APPROVED BY Signature: Original signed by
NAME: Kimberly Finch, P.E.
TITLE: Chief, Medical and Environmental Management Division

COMPLIANCE IS MANDATORY

Responsible Office: 250 / Medical and Environmental Management Division

Title: Laboratory Audit Inspection

PREFACE

P.1 PURPOSE

This work instruction (WI) provides procedures for auditing the laboratories that Goddard Space Flight Center (GSFC) Medical and Environmental Management Division (MEMD) uses to perform environmental analytical services. Specifically, this WI outlines steps to critically evaluate a laboratory's quality assurance program and management practices to identify potential areas of weakness.

P.2 APPLICABILITY

This WI is applicable to the MEMD at Greenbelt only.

- a. In this document, all document citations are assumed to be the latest version unless otherwise noted.
- b. In this document, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms "may" or "can" denote discretionary privilege or permission; "should" denotes a good practice and is recommended but not required; "will" denotes expected outcome; and "are/is" denotes descriptive material.

P.3 APPLICABLE DOCUMENTS AND FORMS

Guidance on Technical Audits and Related Assessments for Environmental Data Operations, Environmental Protection Agency (EPA) QA/G-7, January 2000

P.4 CANCELLATION

250-WI-8500.0.5E

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P.5 TOOLS, EQUIPMENT, AND MATERIALS

- Laboratory Desktop Audit Checklist, available in Appendix C.
- Laboratory Site Audit Checklist, available in Appendix D.

P.6 SAFETY PRECAUTIONS AND WARNINGS

All MEMD representatives shall follow the laboratory's safety procedures when visiting and conducting a laboratory audit.

P.7 TRAINING

None.

P.8 RECORDS

Record Title	Record Custodian	Retention
Laboratory Audit Memoranda (including checklists)	MEMD	*NRRS 8/23.5A4 - Cut off annually. Destroy 3 years after cutoff.

* *NRRS 1441.1 – NASA Records Retention Schedule*

P.9 MEASUREMENT/VERIFICATION

None.

Instructions

1.0 Method Summary

MEMD shall first perform a desktop audit of the laboratory to be used for services. If the service provided is accredited in accordance with The NELAC Institute (TNI) National Environmental Laboratory Accreditation Program (NELAP) for the matrix and method being tested, there is no need for further evaluation.

The laboratory's accreditations will be evaluated as part of the audit to determine the extent of audit needed. The Quality Assurance/Quality Control (QA/QC) program should be well documented and include a proficiency testing protocol. The desktop audit will be documented using the Laboratory Desktop Audit Checklist and may result in a site audit. A site audit may be waived by MEMD on a case-by-case basis in consideration of planned volume usage, third party certifications, and other risk management factors. The Laboratory Site Audit Checklist will be used to document the site audit. The checklists will be used to document the audit process and are available in Appendix C and D of this WI. Answering the questions on the checklists will ensure that all intended areas of compliance are evaluated. The checklist or checklists will become an appendix of the final written memorandum, and will be maintained as a facility record.

For any laboratory where business is being solicited, an audit of the laboratory shall be conducted by a representative of MEMD before the laboratory is selected to analyze samples. The audit should be repeated every two years for continued service or as needed when management, accreditation status, or performance changes occur at the laboratory.

2.0 Procedures

2.1 Complete the desktop audit (found in Appendix C) and determine if a site audit is recommended. When a site audit is not going to be performed, proceed to paragraph 3.

2.2 Coordinate an appropriate time in which to conduct an inspection with laboratory personnel. The laboratory's QA/QC Manager (or similar) should be present or available during the laboratory audit. MEMD should confirm the appointment one day before the scheduled appointment. A field visit for validation of a laboratory's QA/QC program may be waived by the Contracting Officer's Representative (COR) on a case-by-case basis in consideration of planned volume usage, third party certifications and other risk management factors.

2.3 The laboratory site audit shall be conducted using the Laboratory Site Audit Checklist (found in Appendix D). Where a question is not applicable to the lab, an "N/A" will be used to show that the question was considered. If a question is applicable to the laboratory and the laboratory is deficient, a checkmark will be placed in the "NO" column. Provide an explanation in the comments column. If the procedure or policy warrants any concern or corrective action, it will be treated as a noncompliance. If the noncompliance violates any permit, regulatory, or GSFC requirement, a plan for corrective action must be in place before laboratory services can be continued. Additional questions, comments, or notes

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may be indicated in the “Additional observations, comments, or problems” block at the end of the checklist.

3.0 Record Keeping and Reporting

Upon completion of the audit, a memorandum (memo) for the record shall be written summarizing the audit and indicating any noncompliances found and required follow-up actions. The checklist or checklists will be filled out in its entirety and will become an attachment to the final memo. These memos will be kept in MEMD files (under E-0.3 Reports) in compliance with the established record retention schedule. See section P.8 Records.

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Appendix A – Definitions

None.

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Appendix B – Acronyms

COR Contracting Officer’s Representative
EPA Environmental Protection Agency
GSFC Goddard Space Flight Center
MEMD Medical and Environmental Management Division
NELAP National Environmental Laboratory Accreditation Program
QA/QC Quality Assurance/Quality Control
SOP Standard Operating Procedure
TNI The NELAC Institute
WI Work Instruction

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Appendix C –Laboratory Desktop Audit Checklist

Lab Name and Location:	
Auditor(s):	
Date of Audit:	

1. Is this lab accredited in accordance with the NELAC Institute (TNI) National Environmental Laboratory Accreditation Program (NELAP)? Yes No
2. Is the lab accredited for the methods being used? Yes No
3. If yes, list the methods verified:

-
4. Is the lab accredited for the matrix ((i.e., drinking water, non-potable water, solid and chemical material) being tested? Yes No
 5. If yes, indicate which one(s).
 Drinking water Non-potable water Solid/chemical material

If the answer to questions 1, 2, and 4 are yes, no further evaluation is needed.

If the answer to any of these questions is no, proceed with questions below.

6. Does the lab have other accreditation (e.g., state agencies that are not a NELAP accreditation body)? Yes No
7. Has the lab specified and documented the responsibility, authority, and relationship of all personnel who manage, perform, or verify work affecting the quality system and its implementation?
 Yes No
8. Does the lab have a Quality Assurance (QA) Officer who has responsibility for the quality system and its implementation? Yes No
9. Is the QA Officer familiar with all test procedures and Quality Control (QC) requirements?
 Yes No
10. Does the QA Officer have direct access to the highest level of management at which decisions are taken on lab policy or resources? Yes No
11. Does the lab nominate deputies in case of absence of the QA Officer? Yes No
12. Does the lab have a QA manual or similar procedural document? Yes No
13. Does the lab have documented protocol for training and proficiency testing? Yes No
14. Are minimum qualifications including education and experience described for key personnel including those producing or reporting data for testing methods? Yes No
15. Does the lab have documented policy and procedures to ensure the protection of client's confidential information and proprietary rights? Yes No
16. Is calibration and maintenance of equipment such as thermometers, pipettes, and balances documented in the QA plan? Yes No

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17. If yes, indicate the frequency below.

18. Have a Standard Operating Procedures (SOP) been developed for receipt and storage of samples?

Yes No

a) If so, does the SOP include providing sample receipt documentation to client?

Yes No

b) If yes, indicate turnaround for sample receipt documents below.

19. Does the lab have a Chemical Hygiene Plan or equivalent? Yes No

20. Are chemical waste disposal policies and procedures well-defined? Yes No

21. Have SOPs been developed for preparation and analysis of samples? Yes No

22. Are all SOPs appropriately documented and controlled? Yes No

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Appendix D –Laboratory Site Audit Checklist

Lab Name and Location:	
Auditor(s):	
Date of Audit:	

Facilities Questions

	ITEM	YES	NO	N/A	COMMENTS
1	Does the lab building have a security system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Is access to the test and sample storage area controlled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Is a guest logbook available and used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Is equipment protected and environment monitored as needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Does the lab have adequate work space, ventilation, light, and access to stable power sources at workstations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Is the lab clean and organized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Is the lab free of dust, drifts, and temperature extremes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Are solvent storage cabinets appropriately vented to prevent possible lab contamination?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	Are exhaust hoods provided to allow contamination-free work with volatile and hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	Is the air flow of the hoods periodically checked and recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	Are adequate facilities, including cold storage, provided for separate storage of samples, extracts, reagents, solvents, reference materials, and standards to preserve their identity, concentration, purity, and stability?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	Is adequate chemical storage space available and are chemicals properly segregated according to compatibility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	Does the lab have adequate safety devices such as eye wash stations, spill control stations, showers, first-aid stations, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14	Are these safety devices checked routinely to ensure that they are still working properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	ITEM	YES	NO	N/A	COMMENTS
15	Is adequate filing space available for storage of manuals, Standard Operating Procedures (SOPs), raw data, and reports?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Personnel Questions

	ITEM	YES	NO	N/A	COMMENTS
1	Has the lab provided supervision by persons familiar with the test methods, the objective of the test, and the assessment of the results?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Does each analyst, who is responsible for performing tasks in any of the following areas, meet the specified minimum experience:				
	a) Inorganic sample preparation - 6 months;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	b) Organic sample preparation - 1 year;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	c) Classical analysis - 1 year;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	d) Trace metal analysis - 1 year;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	e) Gas chromatography - 1 year;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	f) Pesticide residue analysis - 2 years;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	g) Mass spectrometry - 1 year;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	h) Spectrum interpretation - 2 years; and/or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i) Radiochemical analysis - 2 years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Is each analyst's performance audited and approved by a senior chemist prior to working without close supervision?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Is there documented evidence of analyst proficiency for each test method performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Are staff's qualification, training, and experience recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Is backup provided for technical staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Management Practices

	ITEM	YES	NO	N/A	COMMENTS
Sample Management/Custody					
1	Is a system in place to prioritize analysis? Who determines priority? What criteria are used (e.g., holding times, penalty, total \$ workload, volume, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Is a system in place to ensure proper analyte lists, detection limits, QC, and deliverables are transmitted to the analysts? Describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	ITEM	YES	NO	N/A	COMMENTS
3	Is there a project management system in place to assure proper transmittal of GSFC requirements to laboratory personnel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Is there a primary and backup contact for GSFC to notify for sample scheduling, sample status, report status, invoice resolution, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Is there a notification system in place to contact GSFC for resolution of sample discrepancy issues affecting data quality in a real-time manner (e.g., hold time excursions, improper preservation, broken or lost samples, QC criteria not met, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Is there a system in place to flag QC excursions, blank contaminants, and other analytical problems in the case narrative which accompanies the data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standard Operating Procedures					
1	Is the lab using approved test methods for various media testing (i.e., 40 CFR 136 for water samples or 40 CFR 260 for waste and soils.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Is the appropriate portion of the SOP available to the employee performing the respective function?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Receipt					
1	Are the sample shipping containers opened in a manner, which prevents possible laboratory and sample contamination?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Are radiological samples processed at the lab? If yes, answer questions a and b below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a)	Are coolers/samplers surveyed for radiation levels, and segregated if levels are elevated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b)	Is the survey meter in the Shipping/Receiving area calibrated by the manufacturer at prescribed intervals, as well as checked at the laboratory prior to use with an appropriate documented source? Is this recorded in a permanent notebook? Describe source used for calibration check.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Are sample conditions at time of receipt documented? If yes, indicate how in comments column.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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4	Are samples that require preservation stored in such a way as to maintain their preservation (e.g. 4° C, acidified/basified as required with pH documented, temperature verified)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Is the storage location of the samples noted in the Chain Of Custody (COC)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Are all COCs, shipping documents, analysis request forms, etc., properly executed and maintained in a retrievable file?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Is a copy of appropriate sample receipt documentation forwarded to GSFC within one business day of sample receipt?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Was the COC properly executed for all sample transfers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage					
1	Are adequate facilities provided for <u>secure</u> storage of samples, including cold storage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Are standards stored separately from the samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Is the integrity of unused portions of the samples, and any final preparations with which measurements are made maintained sixty days after receipt of completed data package by the client?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Is GSFC notified prior to sample destruction or disposal of residuals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Is the temperature of the cold storage recorded daily in a logbook, with readings corrected for National Institute of Standards and Technology (NIST) calibration of the thermometer, if necessary?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Are temperature excursions noted and appropriate actions taken when required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Are corrective action SOPs available in cold storage areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Are the sample receipt/storage and temperature logbooks completed in a manner consistent with the laboratory's SOP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	Are samples maintained in secure storage area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	Is there evidence of a secondary review of all documents and logbooks by someone other than the person generating the documents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	ITEM	YES	NO	N/A	COMMENTS
Documentation/Notebooks					
1	Is the logbook a custom made hardbound version?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Did everyone who wrote in the logbook sign the first page?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Was only indelible ink used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Are all corrections made by putting a line through the incorrect entry, writing the correct entry, initialed, dated, and reason for correction given (no white out, write-overs, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Was all information filled out on each page?				
a)	All header/footer spaces?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b)	Notebook # on page?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c)	All data recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d)	Client ID's recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e)	Observations recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f)	Final results recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g)	Analyst signed page?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h)	Supervisor or designee signed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Is traceability evident in the logbooks?				
a)	Surrogate, spike, and calibration standards back to the certified stock standard; and/or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b)	Disposal records corresponding to extracts or unused samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Is all information in the logbooks up to and including yesterday's?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Was a supervisory review done of all logbooks within the past seven calendar days?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	At the end of the day were the unused lines at the bottom of the page "Z'ed" or similarly crossed out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	Was all data taped to pages in the notebook signed and dated across the seam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	Can the analysts demonstrate using the logbooks and that corrective actions have been taken when extraction problems arise (spills, loss of extracts during procedure, analyst errors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Instrumentation, Equipment, and Maintenance					
1	What type of instrument is used (manufacturer/model)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	What type of column(s) is used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Are manufacturer's operating manuals readily available to the operator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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4	Does the laboratory purchase a service contract for all/some instruments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Are extensive in-house replacement parts available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Are instrumentation problems, corrections, or changes documented in a maintenance notebook?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Does the laboratory perform regular preventive maintenance on the instruments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Is the prepared maintenance schedule available for inspections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	Is this maintenance documented as a permanent service record maintained in a logbook? Who performs it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	Is maintenance performed by an outside service vendor documented in a permanent service record maintained in a logbook? Who performs it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	Does service in the maintenance log include: who performed service, date, description of reason for service, service performed, documentation that corrective action fixed the problem, approximate time/duration of instrument down time as a result of service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	Are the analytical instruments in a room with an atmosphere shown to be free of all potential contaminants which will interfere with the analyses (verify by blank data, is room positive or negative pressure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	Is raw instrument data being archived properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14	Can the instrument maintenance log be audited against the respective analysis run log without discrepancy (e.g., no samples analyzed on days instrument is down for maintenance)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15	Is a corrective action plan in place for when reagent water (used for blanks and standard preparations) does not demonstrate to be free from contamination?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16	Is the conductivity of water checked and recorded on a daily basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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17	Is a separate conductivity meter (capable of being calibrated) used to measure the conductivity of the reagent water? (This does not include meters that are built into the water purification system.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18	Is a corrective action taken when the conductivity of the reagent water is two microohm or greater at 25° C?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19	Is support equipment (e.g., glassware, thermometers, balances, pipettes, etc.) maintained and calibrated in accordance with Quality Assurance Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional observations, comments, or problems related to management practices.

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CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline		Initial Release
A	1/25/2010	Safety and Environmental Division (S&E) references changed to Medical and Environmental Management Division (MEMD) due to division reorganization. Updated signature block.
B	3/28/2011	Changed form identification in compliance with current form identification system. Form 250-001 becomes 250-FORM-0001. Updated to current WI template. Updated record retention.
C	3/13/2012	Clarified purpose (P.1). Revised language in section 1.0, Method Summary. Clarified procedures in section 2.2 and modified the frequency or circumstance of audits for continued service. Edited language in section 3.0 so it did not contradict record retention.
D	03/12/13	Removed all references to Organization Form 250-FORM-0001 and moved checklist to Appendix C in the WI. Added reference to EPA Guidance. Updated record retention to reflect approved retention schedule.
E	12/15/2015	Added a header to Contract Laboratory Audit Checklist.
F	07/17/19	Revised language for report and changed it to memorandum (memo) throughout document. (P.8, 1.0, 3.0) Made other minor editorial changes for clarity throughout document. (P.1, P.2, P.5, P.7, 1.0, 2.0, 3.0) Changed to current WI template. Added clarification regarding audit of laboratory QA/QC programs to allow flexibility of an accreditation evaluation and/or desktop audit in lieu of a site visit. (1.0, 2.0) Added two revised checklists; Appendix C for the desktop audit and Appendix D for the site audit.

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For Best Practices refer to:

<https://gs279gdmsias.gsfc.nasa.gov/GDMSv2/downloadFile.htm?docId=28819>

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