DoD/DOE QSM 6.0 M1/M2 Checklist

Technical Module Checklists used for this assessment activity:

- ☐ **M3 Asbestos Testing**
- ☐ **M4 Chemical Testing**
- ☐ **M5 Microbiological Testing**
- ☐ **M6 Radiochemical Testing**
- ☐ **M7 Toxicity Testing**
- ☐ **M8 Industrial Hygiene Testing**

This checklist is only a tool, and not considered as the requirements of the standard(s)!

If there is a disagreement between this checklist and the standard(s), the standard(s) shall prevail.

Identify conformity for each requirement along with comments/objective evidence for each clause assessed.

A *clarifying statement* provides additional information to help understand a requirement.

A *permission* is an approach that a conformity assessment body can use to achieve compliance.

Assessment Number:

Organization Name:

Physical Address:

Assessment Date(s):

Assessors(s):

Conditions and Criteria	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
Requirement	Does the laboratory have a purchased copy of the 2016 TNI standard?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M1	Proficiency Testing		
M1: 4.0	Requirements for Accreditation		
M1: 4.1	General Requirements		
M1: 4.1.1	Does the laboratory participate in PT studies for each FoA?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M1: 4.1.1 Supplemental Information: 03/11/2024	Does the laboratory perform proficiency testing (PT) for individual isomers if the isomers are listed individually on the laboratory's Certificate of Accreditation?		
M1: 4.1.1 Supplemental Information: 03/11/2024	For example, if the laboratory lists m and p-xylene and o-xylene separately on the Certificate, the analytes shall be reported separately during PT, but If the laboratory only lists total xylene on the Certificate, only total xylenes shall be reported.		Clarifying Statement
M1: 4.1.2	For methods where the laboratory analyzes a suite of compounds (e.g., EPA methods 8260, 8270, 8081, 8082), and all the FoA compounds are not included in the PT Studies, are the requirements for the additional FoA compounds met by the successful analysis of a FoPT study for that method, unless there are separate PT studies specifically for the analytes not included in the PT studies (e.g., 1,4-dioxane)?		
M1: 4.1.3	Are aqueous PT used as an acceptable substitute for the AFFF matrix?		
M1: 4.1.4	Prior to the closing date of a PT study, do laboratory personnel, including corporate personnel not:		
M1: 4.1.4.a	send a PT study, or a portion of a PT study, in which it is participating, to another laboratory for the analysis of a FoA for which it seeks accreditation or is accredited;		
M1: 4.1.4.b	knowingly receive and analyze any PT sample or portion of a PT sample from another laboratory for which the results of the PT sample are intended for use for initial or continued accreditation of that laboratory;		
M1: 4.1.4.c	communicate with any individual at another laboratory, including other laboratories under common ownership, concerning the analysis of the PT sample; or		
M1: 4.1.4.d	attempt to obtain the assigned value of any portion of the PT study from the PT Provider?		
M1: 4.1.5	When a regulatory program has additional PT requirements not covered by this module, does the laboratory follow those requirements?		
M1: 4.2	Sample Handling, Preparation, and Analysis Requirements		
M1: 4.2.1	Does the laboratory handle and prepare the PT samples in accordance with the instructions provided by the PT Provider?		
M1: 4.2.2	Are PT samples analyzed in accordance with the laboratory's routine procedures using the same quality control (QC), acceptance criteria and staff as used for the analysis of routine environmental samples?		
M1: 4.3	Reporting Requirements		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M1: 4.3.1	Does the laboratory report PT study results to the PT Provider on or before the closing date of the study using the reporting format offered by the PT Provider?		
M1: 4.3.2	Does the laboratory, on or before the closing date of the study, direct the PT Provider to report the PT study performance results directly to the AB(s) designated by the laboratory.		
M1: 4.3.2	For initial accreditation, does the laboratory direct the PT Provider to provide all relevant PT study results to the AB to support its accreditation application?		
M1: 4.3.3	Does the laboratory report results in such a way that there is a specific match between the analytical result for the PT Study and the corresponding FoA for which the PT sample was analyzed?		
M1: 4.3.4	Except for drinking water analytes referenced in 40 CFR Part 141, a laboratory may choose to analyze and report a single method to represent a technology in a single PT study for a particular analyte. If the laboratory analyzes and reports PT studies by “technology,” the score obtained for the reported method shall be applied to all methods in that technology for which the laboratory seeks to obtain or maintain accreditation in that matrix. If a laboratory reports PT results for multiple methods using the same analytical technology, an evaluation of “not acceptable” for one method shall be applied to all methods reported with that technology.		Permission
M1: 4.3.5	If a laboratory chooses to analyze and report a single method to represent a technology, and multiple combinations of preparation/analytical methods are used for analysis of field samples, does the laboratory follow a documented schedule and rotate the combinations used for analysis of field samples each PT study?		
M1: 4.3.5	Is every combination used a minimum of once every three years for each matrix?		
M1: 4.4	Record Retention		
M1: 4.4	Does the laboratory retain all records necessary to facilitate reconstruction of the preparation, processing, and reporting of analytical results for PT samples for a minimum of five years from the PT Study Closing Date. Does the laboratory make these records available for review upon request by the AB?		
M1: 4.5	Requirements When TNI FoPT is Available		
M1: 4.5.1	TNI publishes lists of FoPTs on the TNI website for which PT studies are required, called TNI FoPT Tables. These		Clarifying Statement

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	FoPT tables may be updated, as needed, by publishing revised FoPT tables on the TNI website.		
M1: 4.5.2	Where corresponding FoPTs exist, does the laboratory participate in these PT studies for each FoA?		
M1: 4.5.3	Does the laboratory obtain scheduled PT studies or supplemental studies for the individual FoPT from a PT Provider accredited to Volume 3 of the TNI 2016 Standard by a proficiency testing provider accreditor?		
M1: 4.5.4	Does the laboratory evaluate the analytical result for each chemistry and radiochemistry FoA to the proficiency testing reporting limit (PTRL) as established by the TNI FoPT Tables?		
M1: 4.5.5	For chemistry analyses, if the laboratory's Limit of Quantitation (LOQ) is below the PTRL, the laboratory may evaluate results to its normal LOQ.		Permission
M1: 4.5.6	For chemistry PT results where the concentrations are below the LOQ, the laboratory may re-scale its initial calibration curve to bracket the concentration of the PT sample result.		Permission
M1: 4.5.7	Does the laboratory report chemistry PT study results to the PTRL as established by the TNI FoPT tables, or if the laboratory LOQ is below the PTRL, does the laboratory report results down to its normal LOQ?		
M1: 4.5.8	Are radiochemistry results reported as measured, including zero, negative, and positive results, and not be censored or reported as "less than" values?		
M1: 4.5.8	Are all radiochemistry PT study results reported in association with the measurement uncertainty, as appropriate to the program?		
M1: 4.5.9	Does the laboratory evaluate and report each chemistry FoPT result to the PT Provider as follows:		
M1: 4.5.9.a	If the result is a numeric value above or equal to the PTRL, does the laboratory report the value?		
M1: 4.5.9.a	If the PTRL is less than the laboratory's LOQ, does the laboratory report the result? Qualification of the result is not required.		
M1: 4.5.9.b	If the result is a numeric value below the PTRL, does the laboratory report the result as one of the following:		
M1: 4.5.9.b.i	< PTRL; or		
M1: 4.5.9.b.ii	the numeric value if the result is between the LOQ and the PTRL; or		
M1: 4.5.9.b.iii	< LOQ if the result is below the LOQ and the PTRL?		
M1: 4.5.9.c	If the analytical result is a "non-detect," does the laboratory report the result as one of the following:		
M1: 4.5.9.c.i	< PTRL; or		
M1: 4.5.9.c.ii	< LOQ.		

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M1: 4.5.10	Is the PTRL value not adjusted for sample amount used or percent moisture?		
M1: 4.6	Requirements When No TNI FoPT is Available for a FoA		
M1 4.6	When there is no TNI FoPT table available for a FoA, but there is a United States of America (USA) or Canada-based ISO/IEC 17043 accredited PT provider for that FoA, does the laboratory procure, analyze, and report the PT sample(s) in accordance with criteria established by the PT provider?		
M1: 4.6	Are the same requirements for PT Study Frequency for Accreditation, Corrective Action, Complaint Resolution, and Reinstatement of Accreditation after Suspension or Revocation applied?		
M1: 4.6	If a commercial PT is not available at the required frequency, is the minimum frequency annually?		
M1: 4.7	No Available ISO/IEC 17043 Accredited PT Sample or PT Provider (Chemical and Radiochemical Testing Only)		
M1: 4.7	When PT samples for a chemical or radiochemical testing FoA cannot be obtained from any USA or Canada-based PT Provider that is ISO/IEC 17043 accredited, and the analyte/matrix/method/technology combination is required for a scope of accreditation, does the laboratory meet proficiency testing requirements by performing one of the three following options:		
M1: 4.7.1	Using an ISO/IEC 17043 accredited provider from outside the USA or Canada and reporting the PT sample(s) in accordance with criteria established by the PT provider?		
M1: 4.7.1	Are the same requirements for PT Study Frequency for Accreditation, Corrective Action, Complaint Resolution, and Reinstatement of Accreditation after Suspension or Revocation applied?		
M1: 4.7.1	If a commercial PT is not available at the required frequency, is the minimum frequency annually?		
M1: 4.7.2	Using a non-ISO/IEC 17043 accredited provider and reporting the PT sample(s) in accordance with criteria established by the PT provider?		
M1: 4.7.2	Are the same requirements for PT Study Frequency for Accreditation, Corrective Action, Complaint Resolution, and Reinstatement of Accreditation after Suspension or Revocation applied?		
M1: 4.7.2	If a commercial PT is not available at the required frequency, is the minimum frequency annually?		
M1: 4.7.2	Is there an AB approval for the use of a non-accredited PT provider?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M1: 4.7.3	Determining precision and bias in accordance with the following requirements:		
M1: 4.7.3.a	Does the laboratory submit in writing to its DoD ELAP AB and/or DOECAP-AP AB, a list of items on its scope of accreditation for which no suitable commercial PT is available?		
M1: 4.7.3.a	(DOE-only requirement) Does the laboratory submit this information in writing to all impacted DOE Customers?		
M1: 4.7.3.b	Does the laboratory have procedures for performing precision and bias studies in accordance with this section?		
M1: 4.7.3.c	Does the laboratory maintain records of precision and bias demonstrations for each analyte/matrix/method/technology combination on its scope?		
M1: 4.7.3.d	Are precision and bias studies performed twice per year, meeting the same time requirements as those for commercial proficiency testing?		
M1: 4.7.3.d	Does the laboratory evaluate precision and bias in the relevant quality system matrices and process the samples through the entire measurement system for each analyte of interest?		
M1: 4.7.3.e	Do precision and bias studies include results from no fewer than eight samples performed in the time-period since the last study?		
M1: 4.7.3.e	Are these samples at concentrations less than or equal to the mid-range and not less than the concentration used to verify the Limit of Detection (LOD)?		
M1: 4.7.3.e	Where standard solutions/low-level spiking solutions are not available to prepare quality controls for analysis and the laboratory uses a comparable compound for quality control (e.g., "cold" Selenium for Se-79), does the laboratory collate the results of those analyses to meet this requirement?		
M1: 4.7.3.e	Does the laboratory's procedure describe how many samples will be chosen, how these samples are chosen for inclusion and include a description of how the laboratory ensures the selection is not biased toward evaluating only samples that will be rated "Acceptable"?		
M1: 4.7.3.e	Are appropriate methods used for choosing samples include, but are not limited to, the following:		
M1: 4.7.3.e.i	preparation and analysis of eight or more replicate samples prepared specifically for the semiannual study;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M1: 4.7.3.e.ii	evaluation of at least the last eight quality control samples analyzed in routine work (e.g., LCS, and LOD or LOQ verification); or		
M1: 4.7.3.e.iii	evaluation of a random selection of eight quality control samples analyzed in routine work over the six months since the last study was performed?		
M1: 4.7.3.f	Are results from the analysis of these samples evaluated for recovery and precision?		
M1: 4.7.3.f.i	For each data set, are the average percent recovery and the percent relative standard deviation of the data set calculated?		
M1: 4.7.3.f.ii	Are these results compared to compared to acceptance criteria?		
M1: 4.7.3.g	Are acceptance criteria those provided in the reference method, if available?		
M1: 4.7.3.g	If the reference method does not provide criteria, does the laboratory use criteria provided in a similar method or develop its own criteria based on statistical limits?		
M1: 4.7.3.h	If results of the precision and bias study do not meet the acceptance criteria, does the laboratory implement its nonconforming work procedure?		
M1: 4.7.3.i	Are the results of each precision and bias study reported to the laboratory's AB and to any customer that requests the results?		
M1: 5.0	PT Study Frequency Requirements for Accreditation		
M1: 5.1	Initial Accreditation		
M1: 5.1.1	Chemical Testing, Radiochemical Testing, Asbestos, and Microbiology		
M1: 5.1.1.a	Does the laboratory achieve a history of two successful (acceptable scores) PT studies out of the most recent three attempts for each FoA for which the laboratory seeks accreditation?		
M1: 5.1.1.b	Are the two PT studies identified in M1 5.1.1.a performed no more than 18 months prior to obtaining initial accreditation from an AB?		
M1: 5.1.1.c	Is the opening date of the second study at least seven calendar days after the closing date of the first study?		
M1: 5.1.1.d	Is the closing date of the most recent successful PT study no more than six months prior to the application for initial accreditation, and does the laboratory continue to participate in PT studies at least semi-annually (no more than seven months apart between consecutive attempts) from that point on?		
M1: 5.1.2	Whole Effluent Toxicity (WET) testing		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M1: 5.1.2	Does the laboratory demonstrate to the AB that it has received an acceptable evaluation for at least one PT study to obtain initial accreditation?		
M1: 5.1.2	Is the study closing date of the most recent successful PT study no more than 12 months prior to obtaining initial accreditation from an AB, and does the laboratory continue to participate in PT studies annually from that point on?		
M1: 5.2	Continued Accreditation		
M1: 5.2.1	Chemical Testing, Radiochemical Testing, Asbestos, and Microbiology		
M1: 5.2.1.a	Does the laboratory maintain a history of two successful (acceptable scores) PT studies out of the most recent three attempts for each FoA for which the laboratory holds accreditation?		
M1: 5.2.1.a	Failure to do so may result in suspension of the affected FoA. The laboratory's accreditation for a FoA can be revoked for failure of three consecutive PT studies, either by failure to participate in the required PT study or by failure to obtain acceptable results.		Clarifying Statement
M1: 5.2.1.b	Does the laboratory analyze and report a PT study at least twice per year for each FoA for which it seeks to maintain accreditation, in accordance with the following criteria:		
M1: 5.2.1.b.i	Are the closing dates of subsequent PT studies for a particular FoA no more than seven months apart?		
M1: 5.2.1.b.ii	Is the opening date of PT studies for a particular FoA at least seven calendar days after the closing date of a PT study for the same FoA?		
M1: 5.2.1.b.iii	A laboratory that analyzes and reports PT study results with an opening date of subsequent PT studies for the same FoA that are closer than seven days from the closing date of the previous PT study are invalid for the purposes of compliance with this module and are not counted toward the laboratory's PT history of the most recent three attempts.		Clarifying Statement
M1: 5.2.2	Whole Effluent Toxicity (WET) testing		
M1: 5.2.2.a	To maintain accreditation, does the laboratory participate in one WET PT study per calendar year for each FoA for which the laboratory is accredited?		
M1: 5.2.2.b	This annual requirement may be met by annual participation in the Environmental Protection Agency (EPA) Discharge Monitoring Report-Quality Assurance (DMR- QA) studies for WET, or		Permission

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M1: 5.2.2.c	If the laboratory is not participating in an EPA DMR-QA study for WET, are the closing dates of subsequent WET testing PT studies no more than 14 months apart?		
M1: 5.2.3	A laboratory that fails to analyze and report PT studies for a particular FoA for which it seeks to maintain accreditation within the specified frequency for that FoA is charged with a failed PT study.		Permission
M1: 6.0	Requirements for Corrective Action		
M1: 6.1	Does a laboratory that fails to successfully analyze a PT study for a particular FoA implement its nonconforming work procedure?		
M1: 6.2	Does the laboratory provide the nonconforming work investigation records to the AB within 30 calendar days of a request from the AB?		
M1: 6.3	Failure to submit requested records to the AB within 30 calendar days of the request from the Primary AB is due cause for suspension of accreditation for a particular FoA.		Clarifying Statement
M1: 6.4	Do records for WET corrective actions include:		
M1: 6.4.a	a copy of the raw data used for the study; and		
M1: 6.4.b	a copy of the current Standard Reference Toxicant (SRT) control chart relevant to the PT study?		
M1: 7.0	Requirements for Complaint Resolution		
M1: 7.1	Does the laboratory submit questions about PT samples or performance evaluations made by the PT Provider to the PT Provider?		
M1: 7.2	Does the laboratory submit questions about the AB's PT evaluation to its AB?		
M1: 8.0	Requirements for Reinstatement of Accreditation after Suspension or Revocation		
M1: 8.1	Does a laboratory seeking to have its accreditation reinstated for a FoA after suspension meet the requirements for continued accreditation?		
M1: 8.2	Does a laboratory seeking to have its accreditation reinstated for a FoA after revocation meet the requirements for initial accreditation?		
M1: 8.3	Does a laboratory seeking to have its accreditation reinstated for a FoA after suspension due to not supplying a requested corrective action report meet the requirements for continued accreditation?		
M2	Quality System General Requirements		
M2: 4	*General requirements*		
M2: 4.1	*Impartiality*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 4.1.1	*Are laboratory activities undertaken impartially, and structured and managed to safeguard impartiality?*		
M2: 4.1.2	*Is the laboratory management committed to impartiality?*		
M2: 4.1.3	*Is the laboratory responsible for the impartiality of its laboratory activities and not allow commercial, financial, or other pressures to compromise impartiality?*		
M2: 4.1.4	*Does the laboratory identify risks to its impartiality on an on-going basis?*		
M2: 4.1.4	*Does this include those risks that arise from its activities, or from its relationships, or from the relationships of its personnel?*		
M2: 4.1.4	However, such relationships do not necessarily present a laboratory with a risk to impartiality.		Clarifying Statement
M2: 4.1.5	*If a risk to impartiality is identified, is the laboratory able to demonstrate how it eliminates or minimizes such risk?*		
M2: 4.1.6	Does the laboratory establish and maintain a documented program to detect and deter improper, inappropriate, or prohibited actions?		
M2: 4.1.6	Do laboratory personnel refrain from improper, inappropriate, or prohibited actions?		
M2: 4.1.6.a	Is this program reviewed annually by management?		
M2: 4.1.6.a	Are records of this review maintained?		
M2: 4.1.6.a	Does management indicate their commitment to the program by signature?		
M2: 4.1.6.b	Does the program include requirements for the following:		
M2: 4.1.6.b.i	annual training of all laboratory personnel on their obligations under the program;		
M2: 4.1.6.b.ii	signed commitment of all laboratory personnel to their obligations under the program, including to act impartially and to refrain from improper, inappropriate, or prohibited actions;		
M2: 4.1.6.b.iii	periodic, in-depth monitoring for improper, inappropriate, or prohibited actions; and		
M2: 4.1.6.b.iv	investigations into potential or suspected improper, inappropriate, or prohibited actions.		
M2: 4.1.6.c	Do the requirements for periodic, in-depth monitoring for improper, inappropriate, or prohibited actions include a schedule of items to be reviewed?		

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M2: 4.1.6.c	Are records maintained to demonstrate compliance with the schedule?		
M2: 4.1.6.d	Do the requirements for investigation include a procedure for reporting of potential or suspected improper, inappropriate, or prohibited actions in the laboratory, and a process whereby laboratory management is informed of the Issues?		
M2: 4.1.6.e	Does laboratory management ensure a receptive environment in which all employees may privately discuss potential issues or report items of concern?		
M2: 4.1.6.e	Does management maintain confidentiality to the extent practicable?		
M2: 4.1.6.e	Does laboratory management ensure no retaliation, interference, coercion, or intimidation of employees reporting concerns or potential issues?		
M2: 4.1.6.f	Does the laboratory management evaluate any reports of potential or suspected improper, inappropriate, or prohibited actions?		
M2: 4.1.6.f	Where laboratory management determines the need for further investigation, are appropriate personnel with technical and quality assurance (QA) capability assigned to perform the investigation?		
M2: 4.1.6.f	Are findings of improper, inappropriate, or prohibited actions considered nonconforming work?		
M2: 4.1.6.f	Are records of evaluations and investigations maintained, including any notifications made to customers receiving any affected data?		
M2: 4.1.6.g	Does the laboratory report any occurrences of improper, inappropriate, or prohibited actions to its AB within 15 business days of discovery? Discovery includes identification of such practices by laboratory staff or customer stakeholders.		
M2: 4.1.6.g	Does the laboratory submit records of associated corrections taken or proposed corrective actions to its AB within 30 business days of discovery?		
M2: 4.1.6.h	Examples of Inappropriate Practices Refer directly to QSM 6.0, pp 25-27 for examples. (4.1.6.h.i to 4.1.6.h.xxv)		Clarifying Statement
M2: 4.2	*Confidentiality*		
M2: 4.2.1	*Is the laboratory responsible, through legally enforceable commitments, for the management of all information obtained or created during the performance of laboratory activities?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 4.2.1	*Does the laboratory inform the customer in advance of the information it intends to place in the public domain?*		
M2: 4.2.1	*Except for information that the customer makes publicly available, or when agreed between the laboratory and the customer (e.g., for the purpose of responding to complaints), is all other information considered proprietary information and regarded as confidential?*		
M2: 4.2.2	*When the laboratory is required by law or authorized by contractual arrangements to release confidential information, is the customer or individual concerned, unless prohibited by law, notified of the information provided?*		
M2: 4.2.3	*Is information about the customer obtained from sources other than the customer (e.g., complainant, regulators) confidential between the customer and the laboratory?*		
M2: 4.2.3	*Is the provider (source) of this information confidential to the laboratory and not be shared with the customer, unless agreed by the source?*		
M2: 4.2.4	*Do personnel, including any committee members, contractors, personnel of external bodies, or individuals acting on the laboratory's behalf, keep confidential all information obtained or created during the performance of laboratory activities, except as required by law?*		
M2: 4.2.5	Does the laboratory establish procedures to protect its customers' confidential information?		
M2: 4.2.5	Do these procedures address records storage, transmission of results, and define personnel authorized to access the records?		
M2: 5	*Structural requirements*		
M2: 5.1	*Is the laboratory a legal entity, or a defined part of a legal entity, that is legally responsible for its laboratory activities?*		
M2: 5.2	*Does the laboratory identify management that has overall responsibility for the laboratory?*		
M2: 5.2.1	(DOE-Only Requirement) Is the laboratory's Technical Manager, however named, available to laboratory personnel for technical consultation for laboratory operations for the fields of accreditation which they manage within a time-frame adequate to address		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	needs of the laboratory without negative impacts to results?		
M2: 5.2.1	(DOE-Only Requirement) Do the Technical Manager duties and responsibilities include:		
M2: 5.2.1.a	(DOE-Only Requirement) ensuring the quality of data generated by the laboratory through participation in laboratory management review, review of QA records and quality control (QC) data, review of data packages, and authorizing reports;		
M2: 5.2.1.b	(DOE-Only Requirement) defining the minimum qualifications, experience, and skills necessary for all positions in the laboratory;		
M2: 5.2.1.c	(DOE-Only Requirement) ensuring that all laboratory technical staff have demonstrated capability in the activities for which they are responsible;		
M2: 5.2.1.d	(DOE-Only Requirement) providing for on-going training opportunities for all technical staff and ensuring on-going competence demonstrations;		
M2: 5.2.1.e	(DOE-Only Requirement) ensuring adequate supervision of all personnel employed by the laboratory; and		
M2: 5.2.1.f	(DOE-Only Requirement) appointing a qualified member of staff to temporarily perform these functions in the event of an extended absence greater than 15 calendar days?		
M2: 5.2.2	(DOE-Only Requirement) Does the Quality Manager, however named, who, irrespective of other duties and responsibilities, have defined responsibility and authority for ensuring that the management system related to quality is implemented and always followed? Where staffing is limited, the Quality Manager may also be the Technical Manager.		
M2: 5.2.2	(DOE-Only Requirement) Are the roles and responsibilities of technical management and the Quality Manager, including their responsibility for ensuring compliance with this standard, defined in the quality manual?		
M2: 5.2.2	(DOE-Only Requirement) Furthermore, do the laboratory's Quality Manager and any designees:		
M2: 5.2.2.a	(DOE-Only Requirement) have direct access to the highest level of management at which decisions are made on laboratory policy or resources;		
M2: 5.2.2.b	(DOE-Only Requirement) serve as the focal point for QA and QC and be responsible for the oversight and/or review of QC data;		

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M2: 5.2.2.c	(DOE-Only Requirement) function independently from laboratory operations for which they have QA oversight;		
M2: 5.2.2.d	(DOE-Only Requirement) evaluate data objectively and perform assessments without outside (e.g., managerial) influence;		
M2: 5.2.2.e	(DOE-Only Requirement) arrange for or conduct internal audits annually;		
M2: 5.2.2.f	(DOE-Only Requirement) notify laboratory management of deficiencies in the quality system; and monitor corrective actions;		
M2: 5.2.2.g	(DOE-Only Requirement) plan and organize audits as required by the schedule and requested by management.		
M2: 5.2.2.g	(DOE-Only Requirement) Are such audits carried out by trained and qualified personnel who are, wherever resources permit, independent of the activity to be audited; and		
M2: 5.2.2.h	(DOE-Only Requirement) review (or oversee the review of) the quality manual at least annually and update it if needed?		
M2: 5.3	*Does the laboratory define and document the range of laboratory activities for which it conforms with this document?*		
M2: 5.3	*Does the laboratory only claim conformity with this document for this range of laboratory activities, which excludes externally provided laboratory activities on an ongoing basis?*		
M2: 5.4	*Are laboratory activities carried out in such a way as to meet the requirements of this document, the laboratory's customers, regulatory authorities, and organizations providing recognition?*		
M2: 5.4	*Does this include laboratory activities performed in all its permanent facilities, at sites away from its permanent facilities, in associated temporary or mobile facilities or at a customer's facility?*		
M2: 5.5	*Does the laboratory:*		
M2: 5.5.a	*define the organization and management structure of the laboratory, its place in any parent organization, and the relationships between management, technical operations, and support services;*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 5.5.b	*specify the responsibility, authority and interrelationship of all personnel who manage, perform, or verify work affecting the results of laboratory activities;*		
M2: 5.5.c	*document its procedures to the extent necessary to ensure the consistent application of its laboratory activities and the validity of the results?*		
M2: 5.6	*Does the laboratory have personnel who, irrespective of other responsibilities, have the authority and resources needed to carry out their duties, including:*		
M2: 5.6.a	*implementation, maintenance, and improvement of the management system;*		
M2: 5.6.b	*identification of deviations from the management system or from the procedures for performing laboratory activities;*		
M2: 5.6.c	*initiation of actions to prevent or minimize such deviations;*		
M2: 5.6.d	*reporting to laboratory management on the performance of the management system and any need for improvement;*		
M2: 5.6.e	*ensuring the effectiveness of laboratory activities?*		
M2: 5.7	*Does the laboratory management ensure that:*		
M2: 5.7.a	*communication takes place regarding the effectiveness of the management system and the importance of meeting customers' and other requirements;*		
M2: 5.7.b	*the integrity of the management system is maintained when changes to the management system are planned and implemented?*		
M2: 6	*Resource requirements*		
M2: 6.1	*General*		
M2: 6.1	*Does the laboratory have available the personnel, facilities, equipment, systems, and support services necessary to manage and perform its laboratory activities?*		
M2: 6.2	*Personnel*		
M2: 6.2.1	*Do all personnel of the laboratory, either internal or external, that could influence the laboratory activities act impartially, are competent and work in accordance with the laboratory's management system?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.2.2	*Does the laboratory document the competence requirements for each function influencing the results of laboratory activities, including requirements for education, qualification, training, technical knowledge, skills, and experience?*		
M2: 6.2.3	*Does the laboratory ensure that the personnel have the competence to perform laboratory activities for which they are responsible and to evaluate the significance of deviations?*		
M2: 6.2.4	*Does the management of the laboratory communicate to personnel their duties, responsibilities, and authorities?*		
M2: 6.2.4.a	Are records of communications identified in ISO/IEC 17025:2017 Clause 6.2.4 maintained?		
M2: 6.2.5	*Does the laboratory have procedure(s) and retain records for:*		
M2: 6.2.5.a	*determining the competence requirements;*		
M2: 6.2.5.b	*selection of personnel;*		
M2: 6.2.5.c	*training of personnel;*		
M2: 6.2.5.d	*supervision of personnel;*		
M2: 6.2.5.e	*authorization of personnel;*		
M2: 6.2.5.f	*monitoring competence of personnel?*		
M2: 6.2.6	*Does the laboratory authorize personnel to perform specific laboratory activities, including but not limited to, the following:*		
M2: 6.2.6.a	*development, modification, verification, and validation of methods;*		
M2: 6.2.6.b	*analysis of results, including statements of conformity or opinions and interpretations;*		
M2: 6.2.6.c	*report, review, and authorization of results?*		
M2: 6.2.7	Does each employee training record contain a certification that the employee has read, understands, and is using the latest version of the management system documents relating to his/her job responsibilities?		
M2: 6.2.8	(DOE-Only Requirement) Does the Technical Manager, however named, have educational and experience qualifications developed, recorded, and required by the		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	laboratory management?		
M2: 6.2.9	(DOE-Only Requirement) Does the Quality Manager, however named, have records of training and/or experience in QA and QC procedures and the laboratory's quality system, and have a general knowledge of the analytical methods for which data review is performed?		
M2: 6.2.10	Do personnel dealing with radioactive samples have records they are trained in radioactive sample receipt, radioactive waste management, radioactive materials shipping, and handling (49 CFR Part 172), and radioactive material control, as applicable to their duties?		
M2: 6.2.10 Supplemental Information: 03/11/2024	"Radioactive samples" are samples sent by a customer for radiological testing.		Clarifying Statement
M2: 6.2.11	Upon employment, do laboratory employees have initial training in computer security awareness and have ongoing refresher training on an annual basis?		
M2: 6.2.11	Are records of the training maintained?		
M2: 6.2.12	Is data integrity training provided as a formal part of new employee orientation and provided on an annual basis for all current employees?		
M2: 6.2.12	Do the initial data integrity training and the annual refresher training have a signature attendance sheet or other records demonstrating all staff have participated and understand their obligations related to data integrity?		
M2: 6.2.13	Does data integrity training encompass requirements for complete records supporting all reported data, including data with QC outliers, and requirements to refrain from improper, inappropriate, and prohibited actions?		
M2: 6.2.13	Are employees informed that evidence of participation in improper, inappropriate, or prohibited actions shall result in an investigation?		
M2: 6.2.13	The outcome of such an investigation could have serious consequences for involved personnel including immediate termination, debarment, or civil/criminal prosecution.		Clarifying Statement
M2: 6.2.13	Is a record of the topics covered in such training provided to all trainees?		
M2: 6.2.13	At a minimum, are the following topics addressed:		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.2.13.a	the relationship of laboratory-generated data to public health concerns and the need for known and documented quality;		
M2: 6.2.13.b	review of data integrity procedures;		
M2: 6.2.13.c	how and when to report data integrity issues;		
M2: 6.2.13.d	requirements for keeping analytical records;		
M2: 6.2.13.e	requirements for reporting qualified data;		
M2: 6.2.13.f	prohibited actions; and		
M2: 6.2.13.g	potential consequences of engaging in improper, inappropriate, or prohibited actions?		
M2: 6.3	*Facilities and environmental conditions*		
M2: 6.3.1	*Are facilities and environmental conditions suitable for the laboratory activities and not adversely affect the validity of results?*		
M2: 6.3.2	*Are the requirements for facilities and environmental conditions necessary for the performance of the laboratory activities documented?*		
M2: 6.3.3	*Does the laboratory monitor, control and record environmental conditions in accordance with relevant specifications, methods, or procedures or where they influence the validity of the results?*		
M2: 6.3.4	*Are measures to control facilities implemented, monitored, and periodically reviewed and include, but not be limited to:*		
M2: 6.3.4.a	*access to and use of areas affecting laboratory activities;*		
M2: 6.3.4.b	*prevention of contamination, interference, or adverse influences on laboratory activities;*		
M2: 6.3.4.c	*effective separation between areas with incompatible laboratory activities?*		
M2: 6.3.4.d	Are standards and reference materials stored separately from samples, extracts, and digestates?		
M2: 6.3.4.e	(DOE-Only Requirement) Does the laboratory have a safety inspection program in place that includes routine inspections of laboratory areas for safety-related concerns?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.3.5	*When the laboratory performs laboratory activities at sites or facilities outside its permanent control, does it ensure that the requirements related to facilities and environmental conditions of this document are met?*		
M2: 6.4	*Equipment*		
M2: 6.4.1	*Does the laboratory have access to equipment (including, but not limited to, measuring instruments, software, measurement standards, reference materials, reference data, reagents, consumables, or auxiliary apparatus) that is required for the correct performance of laboratory activities and that can influence the results?*		
M2: 6.4.2	*When the laboratory uses equipment outside its permanent control, does it ensure that the requirements for equipment of this document are met?*		
M2: 6.4.3	*Does the laboratory have a procedure for handling, transport, storage, use and planned maintenance of equipment to ensure proper functioning and to prevent contamination or deterioration?*		
M2: 6.4.4	*Does the laboratory verify that equipment conforms to specified requirements before being placed or returned into service?*		
M2: 6.4.5	*Is the equipment used for measurement capable of achieving the measurement accuracy and/or measurement uncertainty required to provide a valid result?*		
M2: 6.4.6	*Is measuring equipment calibrated when:* *- the measurement accuracy or measurement uncertainty affects the validity of the reported results, and/or* *- calibration of the equipment is required to establish the metrological traceability of the reported results?*		
M2: 6.4.7	*Does the laboratory establish a calibration program, which is reviewed and adjusted as necessary to maintain confidence in the status of calibration?*		
M2: 6.4.8	*Is all equipment requiring calibration or which has a defined period of validity labeled, coded, or otherwise identified to allow the user of the equipment to readily identify the status of calibration or period of validity?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.4.9	*Is equipment that has been subjected to overloading or mishandling, gives questionable results, or has been shown to be defective or outside specified requirements, taken out of service?*		
M2: 6.4.9	*Is it isolated to prevent its use or clearly labeled or marked as being out of service until it has been verified to perform correctly?*		
M2: 6.4.9	*Does the laboratory examine the effect of the defect or deviation from specified requirements and initiate the management of nonconforming work procedure (see M2: 7.10)?*		
M2: 6.4.10	*When intermediate checks are necessary to maintain confidence in the performance of the equipment, are these checks carried out according to a procedure?*		
M2: 6.4.11	*When calibration and reference material data include reference values or correction factors, does the laboratory ensure the reference values and correction factors are updated and implemented, as appropriate, to meet specified requirements?*		
M2: 6.4.12	*Does the laboratory take practicable measures to prevent unintended adjustments of equipment from invalidating results?*		
M2: 6.4.13	*Are records retained for equipment which can influence laboratory activities?*		
M2: 6.4.13	*Do the records include the following, where applicable:*		
M2: 6.4.13.a	*the identity of equipment, including software and firmware version;*		
M2: 6.4.13.b	*the manufacturer's name, type identification, and serial number or other unique identification;*		
M2: 6.4.13.c	*evidence of verification that equipment conforms with specified requirements;*		
M2: 6.4.13.d	*the current location;*		
M2: 6.4.13.e	*calibration dates, results of calibrations, adjustments, acceptance criteria, and the due date of the next calibration or the calibration interval;*		
M2: 6.4.13.f	*documentation of reference materials, results, acceptance criteria, relevant dates, and the period of validity;*		
M2: 6.4.13.g	*the maintenance plan and maintenance carried out to date, where relevant to the performance of the equipment;*		
M2: 6.4.13.h	*details of any damage, malfunction, modification to, or repair of, the equipment?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.4.13.i	Do records retained for equipment include instrument configuration and settings?		
M2: 6.4.14	The following requirements apply specifically to equipment used for auxiliary activities. Such equipment may include balances, weight/mass sets, temperature measuring devices, volumetric measuring and dispensing devices, refrigerators, freezers, incubators, water baths, ovens, water purification systems, timers, radiological survey equipment, etc.		Clarifying Statement
M2: 6.4.14	Where these items are used as the measurement system for a method, does the item meet any method-defined calibration requirements?		
M2: 6.4.14.a	Does the laboratory implement its nonconforming work procedure when a performance check for auxiliary equipment is outside acceptance criteria?		
M2: 6.4.14.b	Are calibration and verification performed in the expected use range using calibrated equipment?		
M2: 6.4.14.b	Where metrological traceability is required, are these calibrations traceable to the International System of Units (SI) through an accredited calibration laboratory or a United States National Metrology Institute (NMI) (e.g., National Institute of Standards and Technology (NIST))?		
M2: 6.4.15	Are the results of calibration and verification of auxiliary equipment within the specifications required of the application for which this equipment is used, or is the equipment removed from service until repaired?		
M2: 6.4.15	Are calibration and verification records, including those of established correction factors, maintained? In the absence of more stringent method-specific requirements, the minimum requirements are as follows:		

Performance Check	Minimum Frequency	Acceptance Criteria	Conformity C | NC | NA
Balance verification check Use two standard weights that bracket the measured masses	Daily before use	Top-loading balance: ± 0.2% or ± 0.02 g, whichever is greater. Analytical balance: ± 0.1% or ± 0.5 mg, whichever is greater.	
Balance Calibration	Annually	Unexpired and Endorsed Certificate of Calibration from	

DoD/DOE QSM 6.0 Clause	Requirement		Conformity C / NC / NA	Comments/Objective Evidence
			ISO/IEC 17025 accredited calibration laboratory or a NMI.	
	Calibration of standard masses Use weights traceable to the International System of Units (SI) through a NMI	Every 5 years	Unexpired and Endorsed Certificate of Calibration from ISO/IEC 17025 accredited calibration laboratory or a NMI.	
	Verification of working standard masses (i.e., masses used for daily balance verification) Option 1: comparison to calibrated reference weights not in daily use. Option 2: check on balance immediately (same day) after required balance calibration from accredited calibration provider.	Annually	± 0.1% or ± 0.2 mg, whichever is greater	
	Monitoring of refrigerator/freezer temperatures Metrological Traceability not required for sample and standard storage	Daily (i.e., 7 days per week) When personnel or an automated system are not available to record daily, use MIN/MAX thermometers or data loggers to monitor. Evaluate the data from devices upon return to the laboratory. The laboratory shall implement its nonconforming work procedure within 24 hours of detecting any excursion noted on MIN/MAX thermometers or data loggers with longer than 2 hours between measurements. For data loggers recording more	Refrigerators: 0 ˚C to 6 ˚C Freezers: ≤ -10 ˚C	

DoD/DOE QSM 6.0 Clause	Requirement			Conformity C / NC / NA	Comments/Objective Evidence
		frequently, action shall be taken for any excursion of > 2 ˚C or any excursion > 2 hours.			
	Monitoring of other equipment requiring temperature checks Metrological Traceability is required when it impacts the uncertainty of the result (e.g., methods for flashpoint, ignitability, pH, and conductivity, and when monitoring incubator temperatures)	Daily before use, or as required by reference method, whichever is more frequent	Per reference method, requirements document, or laboratory procedure, whichever is more stringent		
	Thermometer verification check Use a calibrated reference thermometer (not required for sample and standard storage thermometers) Perform multiple measurements at each of two temperatures that bracket the measured temperatures; if the range of use is ≤ 10 ˚C (e.g., 0 °C to 6 °C), verification may be at a single temperature within the range of use	Liquid in glass and electronic: Before first use and annually Hand-held infrared: Before first use and quarterly	Per reference method, requirements document, or laboratory procedure, whichever is more stringent Apply correction factors or replace thermometer as appropriate		
	Calibration of Reference Thermometer	Every 5 years	Unexpired and Endorsed Certificate of Calibration from ISO/IEC 17025 accredited calibration laboratory or a NMI		
	Volumetric labware	Class B: By lot before first use Class A and B: Upon evidence of deterioration	Bias: Mean ± 2% of nominal volume Precision: RSD ≤ 1% of nominal volume (based on 10 replicate measurements)		
	Non-volumetric labware, (i.e., labware used for critical volumetric measurements that is not Class A or Class B, for example, volumetrically marked	By lot before first use and upon evidence of deterioration	Bias: Mean ± 3% of nominal volume Precision: RSD ≤ 3% of nominal volume (based on 10 replicate measurements)		

DoD/DOE QSM 6.0 Clause	Requirement		Conformity C / NC / NA	Comments/Objective Evidence
	digestion vessels.) Required only when used for volumetric measurements impacting the uncertainty of the result			
	Mechanical volumetric pipette For variable volume pipettes, verify at the volume of use or using two volumes that bracket the range of use	Daily before use	Bias: Mean ± 2% of nominal volume Precision: RSD ≤ 1% of nominal volume (based on minimum of 3 replicate measurements)	
	Glass gas-tight syringe	Upon evidence of deterioration	Per reference method, requirements document, or laboratory procedure, whichever is more stringent Discard syringe if deterioration is evident	
	Drying oven temperature check (applicable only when used as part of an analytical procedure)	Daily before and after use	± 5% of set temperature	
	Water purification system	Daily before use	Per reference method, requirements document, or laboratory procedure, whichever is more stringent	
	Radiological survey equipment The battery is checked and a background reading is taken; and operation verified with a radiological source	Daily before use	Per laboratory procedure	
	Timer Metrological traceability is required when it impacts the validity of the result.	Annually	Per laboratory procedure, ensure timer is fit for propose.	
	All other auxiliary equipment Metrological traceability is required when it impacts the validity of the result.	Calibrate or verify at least annually	Per laboratory procedure	

Note: The table above does not replace the requirement for the laboratory to maintain

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
traceability per its respective Accreditation Body requirements.			
M2: 6.5	*Metrological traceability*		
M2: 6.5.1	*Does the laboratory establish and maintain metrological traceability of its measurement results by means of a documented unbroken chain of calibrations, each contributing to the measurement uncertainty, linking them to an appropriate reference?*		
M2: 6.5.2	*Does the laboratory ensure that measurement results are traceable to the International System of Units (SI) through:*		
M2: 6.5.2.a	*calibration provided by a competent laboratory; or*		
M2: 6.5.2.b	*certified values of certified reference materials provided by a competent producer with stated metrological traceability to the SI; or*		
M2: 6.5.2.c	*direct realization of the SI units ensured by comparison, directly or indirectly, with national or international standards?*		
M2: 6.5.2.d	Does the laboratory use Certified Reference Materials specifically identified as such in an accompanying Certificate of Analysis from a Reference Material Producer (RMP) accredited to ISO 17034 or Standard Reference Materials from a NMI? If such standards are used, verification of initial calibrations from a second source is not required. If no such material is available from an accredited RMP based in the USA or Canada, then the laboratory shall use standards from an authoritative source and verify all initial calibrations with a standard from an authoritative independent second source.		
M2: 6.5.2.e	When establishing traceability through reference materials, the certified values provided on the certificates are only considered traceable to the SI for		Permission

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	reference materials used before the expiration date indicated on the certificate. This stated expiration date also applies to any solutions prepared from the primary reference material. If the manufacturer or vendor provides an extended expiration date on a certificate for a particular lot of the product, the extended date may be used.		
M2: 6.5.2.f	Do all storage containers of prepared standards, reference materials, and reagents bear an expiration date and unique identifier that provides traceability to the preparation record?		
M2: 6.5.2.g	For original containers, if an expiration date is provided by the manufacturer or vendor, is it recorded on the container? If an expiration date is not provided by the manufacturer or vendor, it is not required. (TNI 2016 V1M2 5.6.4.2.b)		
M2: 6.5.3	*When metrological traceability to the SI units is not technically possible, does the laboratory demonstrate metrological traceability to an appropriate reference,*		
M2: 6.5.3.a	*certified values of certified reference materials provided by a competent producer;*		
M2: 6.5.3.b	*results of reference measurement procedures, specified methods or consensus standards that are clearly describ and accepted as providing measurement results fit for their intended use and ensured by suitable comparison?*		
M2: 6.6	*Externally provided products and services*		
M2: 6.6.1	*Does the laboratory ensure that only suitable externally provided products and services that affect laboratory activities are used, when such products and services:*		
M2: 6.6.1.a	*are intended for incorporation into the laboratory's own activities;*		
M2: 6.6.1.b	*are provided, in part or in full, directly to the customer by the laboratory, as received from the external provider;*		
M2: 6.6.1.c	*are used to support the operation of the laboratory?*		
M2: 6.6.2	*Does the laboratory have a procedure and retain records for:*		
M2: 6.6.2.a	*defining, reviewing, and approving the laboratory's requirements for externally provided products and services;*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.6.2.b	*defining the criteria for evaluation, selection, monitoring of performance and re-evaluation of the external providers;*		
M2: 6.6.2.c	*ensuring that externally provided products and services conform to the laboratory's established requirements, or when applicable, to the relevant requirements of this document, before they are used or directly provided to the customer;*		
M2: 6.6.2.d	*taking any actions arising from evaluations, monitoring of performance and re-evaluations of the external providers?*		
M2: 6.6.2.e	Does the laboratory have procedures describing how services and supplies affecting laboratory activities are selected, purchased, received, and stored?		
M2: 6.6.2.f	Do records for services and supplies that may affect the quality of environmental tests include the following, as applicable:		
M2: 6.6.2.f.i	date of receipt;		
M2: 6.6.2.f.ii	expiration date;		
M2: 6.6.2.f.iii	purchase source;		
M2: 6.6.2.f.iv	unique identifier (e.g., lot, serial, source, batch numbers);		
M2: 6.6.2.f.v	calibration and verification records;		
M2: 6.6.2.f.vi	accreditation or certification scopes/certificates; and		
M2: 6.6.2.f.vii	(DOE-Only Requirement) date opened.		
M2: 6.6.2.g	If the laboratory provides sample containers to its customers, does the laboratory maintain records demonstrating that each lot of those containers, along with any included preservatives, are free of likely contaminants exceeding ½ the LOQ for the associated analysis (e.g., vendor certificate or result from laboratory testing)?		
M2: 6.6.3	*Does the laboratory communicate its requirements to external providers for:*		
M2: 6.6.3.a	*the products and services to be provided;*		
M2: 6.6.3.b	*the acceptance criteria;*		
M2: 6.6.3.c	*competence, including any required qualification of personnel;*		
M2: 6.6.3.d	*activities that the laboratory, or its customer, intends to perform at the external provider's premises?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 6.6.4	Does the laboratory only place subcontracted work with a subcontractor who is accredited for that work?		
M2: 6.6.4	Does the laboratory maintain records of the subcontractor's accreditation?		
M2: 6.6.5	Do reported results clearly indicate the subcontractor that performed the testing?		
M2: 6.6.5	If not provided with the laboratory's report, does the laboratory provide a copy of the subcontractor's report to the customer upon request?		
M2: 6.6.6	Does the laboratory receive approval for use of subcontracted laboratories from the customer before any samples are analyzed and maintain records of approval?		
M2: 6.6.7	The requirements for subcontracting laboratories also apply to the use of any laboratory under the same corporate umbrella, but at a different facility or location.		Clarifying Statement
M2: 6.6.8	Do all subcontracted or outsourced management system elements (such as data review, data processing, project management, and IT support), or outsourced personnel meet the requirements of accreditation?		
M2: 7	*Process requirements*		
M2: 7.1	*Review of requests, tenders, and contracts*		
M2: 7.1.1	*Does the laboratory have a procedure for the review of requests, tenders, and contracts?*		
M2: 7.1.1	*Does the procedure ensure that:*		
M2: 7.1.1.a	*the requirements are adequately defined, documented, and understood;*		
M2: 7.1.1.b	*the laboratory has the capability and resources to meet the requirements;*		
M2: 7.1.1.c	*where external providers are used, the requirements of 6.6 are applied and the laboratory advises the customer of the specific laboratory activities to be performed by the external provider and gains the customer's approval;*		
M2: 7.1.1.c.i	Does the laboratory maintain records of customer approval for use of an external provider to perform any of the following:		
M2: 7.1.1.c.i.a	sampling or subsampling;		
M2: 7.1.1.c.i.b	sample preparation;		
M2: 7.1.1.c.i.c	sample analysis;		
M2: 7.1.1.c.i.d	data reduction;		
M2: 7.1.1.c.i.e	data review; or		

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M2: 7.1.1.c.i.f	reporting?		
M2: 7.1.1.d	*the appropriate methods or procedures are selected and can meet the customers' requirements?*		
M2: 7.1.2	*Does the laboratory inform the customer when the method requested by the customer is inappropriate or out of date?*		
M2: 7.1.3	*When the customer requests a statement of conformity to a specification or standard for the test or calibration (e.g. pass/fail, in-tolerance/out-of-tolerance), is the specification or standard and the decision rule clearly defined?*		
M2: 7.1.3	*Unless inherent in the requested specification or standard, is the decision rule selected communicated to, and agreed with, the customer?*		
M2: 7.1.4	*Are any differences between the request or tender and the contract resolved before laboratory activities commence?*		
M2: 7.1.4	*Is each contract acceptable both to the laboratory and the customer?*		
M2: 7.1.4	*Do deviations requested by the customer not impact the integrity of the laboratory or the validity of the results?*		
M2: 7.1.5	*Is the customer informed of any deviation from the contract?*		
M2: 7.1.5.a	Are waivers from QSM requirements obtained in writing from the customer-identified technical point of contact on a project-specific basis and include project-specific technical justification for the waiver?		
M2: 7.1.5.a	Are records of approval for the waiver maintained by the laboratory and included in all affected data packages?		
M2: 7.1.6	*If a contract is amended after work has commenced, is the contract review repeated and any amendments communicated to all affected personnel?*		
M2: 7.1.7	*Does the laboratory cooperate with customers or their representatives in clarifying the customer's request and in monitoring the laboratory's performance in relation to the work performed?*		
M2: 7.1.8	*Are records of reviews, including any significant changes retained?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.1.8	*Are records retained of pertinent discussions with a customer relating to the customer's requirements or the results of the laboratory activities?*		
M2: 7.1.9	Is customer clarification or feedback sought immediately for the following situations:		
M2: 7.1.9.a	methods which require modifications to ensure achievement of customer objectives contained in planning documents (e.g., difficult matrix, poor performing analyte);		
M2: 7.1.9.b	project planning documents (e.g., Quality Assurance Project Plan or Sampling and Analysis Plan) are missing or requirements (e.g., action levels, detection, and quantification capabilities) in the documents require clarification; or		
M2: 7.1.9.c	the laboratory has encountered problems with sampling that may impact results (e.g., improper preservation of sample)?		
M2: 7.2	*Selection, verification and validation of methods*		
M2: 7.2.1	*Selection and verification of methods*		
M2: 7.2.1.1	*Does the laboratory use appropriate methods and procedures for all laboratory activities and, where appropriate, for evaluation of the measurement uncertainty as well as statistical techniques for analysis of data?*		
M2: 7.2.1.2	*Are all methods, procedures and supporting documentation, such as instructions, standards, manuals, and reference data relevant to the laboratory activities, kept up to date and made readily available to personnel (see M2: 8.3)?*		
M2: 7.2.1.2.a	Does the laboratory maintain documents that accurately reflect all current laboratory activities?		
M2: 7.2.1.2.a.i	Collectively, do these documents provide instruction for implementing management system requirements and test method requirements where the absence of instruction could jeopardize the defensibility of results?		
M2: 7.2.1.2.a.ii	These documents may be from external sources or internally prepared. For example, the documents may be equipment manuals provided by the manufacturer, published reference methods, or internal procedures. External documents that contain sufficient information to perform the activity do not need to be supplemented or rewritten as internal procedures		Clarifying Statement
M2: 7.2.1.2.b	Do the laboratory's test method documents include instructions for all accredited methods?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.2.1.2.b.i	In cases where modifications to published reference methods have been made by the laboratory, are these modifications clearly identified and described in the method instructions?		
M2: 7.2.1.2.b.ii	In cases where the published reference method provides options, is ambiguous, or provides insufficient detail, are the choices and/or clarifications made by the laboratory clearly identified and described in the method instructions?		
M2: 7.2.1.2.c	Do these instructions include or reference the following topics where applicable:		
M2: 7.2.1.2.c.i	Are these topics included in the instructions:		
M2: 7.2.1.2.c.i	The following topics are not intended to provide any document formatting requirements.		Clarifying Statement
M2: 7.2.1.2.c..i.a	identification of the method;		
M2: 7.2.1.2.c..i.b	applicable matrix or matrices;		
M2: 7.2.1.2.c..i.c	scope and application, including analytes to be analyzed;		
M2: 7.2.1.2.c..i.d	summary of the method;		
M2: 7.2.1.2.c..i.e	interferences;		
M2: 7.2.1.2.c..i.f	safety measures for hazards specific to the test method beyond general safety measures covered below;		
M2: 7.2.1.2.c..i.g	equipment and supplies;		
M2: 7.2.1.2.c..i.h	reagents and standards;		
M2: 7.2.1.2.c..i.i	sample collection, preservation, shipment, and storage;		
M2: 7.2.1.2.c..i.j	complete list of quality controls to be analyzed and preparation instructions for those quality controls;		
M2: 7.2.1.2.c..i.k	type of calibration to be analyzed and calibration instructions;		
M2: 7.2.1.2.c..i.l	prescribed techniques and steps;		
M2: 7.2.1.2.c..i.m	data analysis and calculations; and		
M2: 7.2.1.2.c..i.n	references?		
M2: 7.2.1.2.c.ii	Are these topics addressed, but may be included by reference to other documents or records:		
M2: 7.2.1.2.c.ii.a	definitions;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.2.1.2.c.ii.b	limits of detection and quantitation;		
M2: 7.2.1.2.c.ii.c	calibration evaluation and acceptance criteria;		
M2: 7.2.1.2.c.ii.d	data assessment and acceptance criteria for quality controls;		
M2: 7.2.1.2.c.ii.e	actions for handling out-of-control or unacceptable data;		
M2: 7.2.1.2.c.ii.f	general laboratory safety;		
M2: 7.2.1.2.c.ii.g	(DOE-Only Requirement) cleaning labware; and		
M2: 7.2.1.2.c.ii.h	(DOE-Only Requirement) approaches to address background corrections when quantitation requires adjustments or intended algorithms are overridden, when applicable.		
M2: 7.2.1.2.d	Are all technical instructions (e.g., sample preparation, analytical procedures, sample storage, or sample receipt) reviewed for accuracy and adequacy at least annually and updated if necessary?		
M2: 7.2.1.2.d	Are all such reviews conducted by personnel having the pertinent background, recorded, and made available for assessment?		
M2: 7.2.1.2.e	(DOE-Only Requirement) Does the laboratory track authorized departures from procedures and periodically evaluate if formal procedure revision is appropriate?		
M2: 7.2.1.3	*Does the laboratory ensure that it uses the latest valid version of a method unless it is not appropriate or possible to do so?*		
M2: 7.2.1.3	*When necessary, is the application of the method supplemented with additional details to ensure consistent application?*		
M2: 7.2.1.4	*When the customer does not specify the method to be used, does the laboratory select an appropriate method and inform the customer of the method chosen?*		
M2: 7.2.1.4	*Are methods published either in international, regional, or national standards, or by reputable technical organizations, or in relevant scientific texts or journals, or as specified by the manufacturer of the equipment, recommended? (Laboratory-developed or modified methods can also be used.)*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.2.1.5	*Does the laboratory verify that it can properly perform methods before introducing them by ensuring that it can achieve the required performance?*		
M2: 7.2.1.5	*Are records of the verification retained?*		
M2: 7.2.1.5	*If the issuing body revises the method, is the verification repeated to the extent necessary?*		
M2: 7.2.1.6	*When method development is required, is this a planned activity and assigned to competent personnel equipped with adequate resources?*		
M2: 7.2.1.6	*As method development proceeds, is periodic review carried out to confirm that the needs of the customer are still being fulfilled?*		
M2: 7.2.1.6	*Are any modifications to the development plan approved and authorized?*		
M2: 7.2.1.7	*Do deviations from methods for all laboratory activities occur only if the deviation has been documented, technically justified, authorized, and accepted by the customer?*		
M2: 7.2.2	*Validation of methods*		
M2: 7.2.2.1	*Does the laboratory validate non-standard methods, laboratory-developed methods and standard methods used outside their intended scope or otherwise modified?*		
M2: 7.2.2.1	*Is the validation as extensive as is necessary to meet the needs of the given application or field of application?*		
M2: 7.2.2.2	*When changes are made to a validated method, are the influence of such changes determined and where they are found to affect the original validation, a new method validation performed?*		
M2: 7.2.2.3	*Are the performance characteristics of validated methods, as assessed for the intended use, relevant to the customers' needs and consistent with specified requirements?*		
M2: 7.2.2.4	*Does the laboratory retain the following records of validation:*		
M2: 7.2.2.4.a	*the validation procedure used;*		
M2: 7.2.2.4.b	*specification of the requirements;*		
M2: 7.2.2.4.c	*determination of the performance characteristics of the method;*		
M2: 7.2.2.4.d	*results obtained;*		
M2: 7.2.2.4.e	*a statement on the validity of the method, detailing its fitness for the intended use?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.3	*Sampling*		
M2: 7.3.1	*Does the laboratory have a sampling plan and method when it carries out sampling of substances, materials or products for subsequent testing or calibration?*		
M2: 7.3.1	*Does the sampling method address the factors to be controlled to ensure the validity of subsequent testing or calibration results?*		
M2: 7.3.1	*Is the sampling plan and method available at the site where sampling is undertaken?*		
M2: 7.3.1	*Are sampling plans, whenever reasonable, based on appropriate statistical methods?*		
M2: 7.3.1.a	Do subsampling procedures address recording the presence of extraneous materials (e.g., rocks, twigs, vegetation) present in samples?		
M2: 7.3.1.a	To avoid preparing non-representative subsamples, does the laboratory not "target" within a relatively small mass range (e.g., 10.00 ± 0.01 g) because such targeting will produce non-representative subsamples if the sample has high heterogeneity?		
M2: 7.3.1.a	Is the handling of multiphase samples addressed in procedures, as applicable?		
M2: 7.3.1.a	Do the laboratory's subsampling procedures comply with recognized consensus standards (e.g., ASTM standards, or EPA's Guidance for Obtaining Representative Laboratory Analytical Subsamples from Particulate Laboratory Samples (EPA/600/R-03/027)) where applicable?		
M2: 7.3.2	*Does the sampling method describe:*		
M2: 7.3.2.a	*the selection of samples or sites;*		
M2: 7.3.2.b	*the sampling plan;*		
M2: 7.3.2.c	*the preparation and treatment of sample(s) from a substance, material, or product to yield the required item for subsequent testing or calibration?*		
M2: 7.3.3	*Does the laboratory retain records of sampling data that forms part of the testing or calibration that is undertaken?*		
M2: 7.3.3	*Do these records include, where relevant:*		
M2: 7.3.3.a	*reference to the sampling method used;*		
M2: 7.3.3.b	*date and time of sampling;*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.3.3.c	*data to identify and describe the sample (e.g., number, amount, name);*		
M2: 7.3.3.d	*identification of the personnel performing sampling;*		
M2: 7.3.3.e	*identification of the equipment used;*		
M2: 7.3.3.f	*environmental or transport conditions;*		
M2: 7.3.3.g	*diagrams or other equivalent means to identify the sampling location, when appropriate;*		
M2: 7.3.3.h	*deviations, additions to or exclusions from the sampling method and sampling plan?*		
M2: 7.4	*Handling of test and calibration items*		
M2: 7.4.1	*Does the laboratory have a procedure for the transportation, receipt, handling, protection, storage, retention, and disposal or return of test or calibration items, including all provisions necessary to protect the integrity of the test or calibration item, and to protect the interests of the laboratory and the customer?*		
M2: 7.4.1	*Are precautions taken to avoid deterioration, contamination, loss, or damage to the item during handling, transporting, storing/waiting, and preparation for testing or calibration?*		
M2: 7.4.1	*Are handling instructions provided with the item followed?*		
M2: 7.4.1.a	Are individuals dealing with radioactive samples trained in radioactive sample receipt, radioactive waste management, radioactive materials shipping and handling (49 CFR Part 172), and radioactive material control?		
M2: 7.4.2	*Does the laboratory have a system for the unambiguous identification of test or calibration items?*		
M2: 7.4.2	*Is the identification retained while the item is under the responsibility of the laboratory?*		
M2: 7.4.2	*Does the system ensure that items will not be confused physically or when referred to in records or other documents?*		
M2: 7.4.2	*Does the system, if appropriate, accommodate a sub-division of an item or groups of items and the transfer of items?*		
M2: 7.4.3	*Upon receipt of the test or calibration item, are deviations from specified conditions recorded?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.4.3	*When there is doubt about the suitability of an item for test or calibration, or when an item does not conform to the description provided, does the laboratory consult the customer for further instructions before proceeding and record the results of this consultation?*		
M2: 7.4.3	*When the customer requires the item to be tested or calibrated acknowledging a deviation from specified conditions, does the laboratory include a disclaimer in the report indicating which results may be affected by the deviation?*		
M2: 7.4.3.a	Does the laboratory have a procedure for communicating to all affected laboratory personnel when samples that require non-routine analysis, additional sample preparation steps, or customer-required deviations are received?		
M2: 7.4.3.a	Are records of these communications maintained?		
M2: 7.4.4	*When items need to be stored or conditioned under specified environmental conditions, are these conditions maintained, monitored, and recorded?*		
M2: 7.4.5	Does the laboratory have a documented system for uniquely identifying the samples to be tested to ensure that there can be no confusion regarding the identity of such samples at any time (i.e., a laboratory ID code)? (TNI 2016 V1M2 5.8.5.a)		
M2: 7.4.5	Does this system include identification for all samples, sub-samples, preservations, sample containers, tests, and subsequent extracts and/or digestates? (TNI 2016 V1M2 5.8.5.a)		
M2: 7.4.6	Does this laboratory ID code maintain an unequivocal link with the unique field ID code assigned to each sample? (TNI 2016 V1M2 5.8.5.b)		
M2: 7.4.7	Is the laboratory ID code placed as a durable mark on the sample container? (TNI 2016 V1M2 5.8.5.c)		
M2: 7.4.8	Is the laboratory ID code entered into the laboratory records and the link that associates the sample with related laboratory activities such as sample preparation? (TNI 2016 V1M2 5.8.5.d)		
M2: 7.4.9	Does the laboratory have procedures for sample acceptance?		
M2: 7.4.9	Do these include requirements for:		
M2: 7.4.9.a	sample identification, location, date and time of collection, collector's name, sample matrix, and any preservation included;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.4.9.b	proper sample labeling to ensure readability and unique identity;		
M2: 7.4.9.c	proper sample container material and volume;		
M2: 7.4.9.d	calculating holding times;		
M2: 7.4.9.e	sample preservation verification;		
M2: 7.4.9.f	actions needed if samples are damaged, contaminated or improperly preserved;		
M2: 7.4.9.g	how data are qualified for any deviations from requirements; and		
M2: 7.4.9.h	sample rejection?		
M2: 7.4.10	Are sample temperature measurements verified through the use of one or more temperature blanks for each shipping container, if provided?		
M2: 7.4.10	If a temperature blank is not available, are other temperature measurement techniques used?		
M2: 7.4.11	Is chemical preservation checked at the time of sample receipt for all samples, unless it is not technically acceptable to check preservation upon receipt (e.g., VOA and Oil and Grease samples)?		
M2: 7.4.11	If any of the following conditions exist, is chemical preservation rechecked:		
M2: 7.4.11.a	continued preservation of the sample is in question (e.g., the sample may not be compatible with the preservation); or		
M2: 7.4.11.b	deterioration of the preservation is suspected?		
M2: 7.4.12	If the sample does not meet the sample receipt acceptance criteria, does the laboratory either retain correspondence and/or records of conversations concerning the final disposition of rejected samples or maintain detailed records of any decision to proceed with the analysis of samples not meeting acceptance criteria? (TNI 2016 V1M2 5.8.7.2)		
M2: 7.4.13	Is the condition of samples that do not meet sample receipt acceptance criteria recorded on the chain of custody or transmittal form, and laboratory receipt records, and sample results appropriately qualified on the final report? (TNI 2016 V1M2 5.8.7.2)		
M2: 7.4.14	Does the laboratory utilize a permanent record such as a logbook or electronic database to record receipt of all sample containers? (TNI 2016 V1M2 5.8.7.3)		
M2: 7.4.14	Does this sample receipt log record the following: (TNI 2016 V1M2 5.8.7.3)		
M2: 7.4.14.a	customer/project name;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.4.14.b	date and time of laboratory receipt;		
M2: 7.4.14.c	unique laboratory ID code; and		
M2: 7.4.14.d	identity of the person making the entries?		
M2: 7.4.15	During the login process, is the following information unequivocally linked to the log record or included as a part of the log? (TNI 2016 V1M2 5.8.7.3.b)		
M2: 7.4.15	If such information is recorded elsewhere, are the records part of the laboratory's permanent records, easily retrievable upon request and available to individuals who will process the sample? (TNI 2016 V1M2 5.8.7.3.b)		
M2: 7.4.15.a	Is the field ID code, which identifies each sample, linked to the laboratory ID code in the sample receipt log? (TNI 2016 V1M2 5.8.7.3.b.i)		
M2: 7.4.15.b	Are the date and time of sample collection linked to the sample and to the date and time of receipt in the laboratory? (TNI 2016 V1M2 5.8.7.3.b.ii)		
M2: 7.4.15.c	Are the requested analyses (including applicable approved method numbers) linked to the laboratory ID code? (TNI 2016 V1M2 5.8.7.3.b.iii)		
M2: 7.4.15.d	Are any comments resulting from inspection for sample rejection linked to the laboratory ID code? (TNI 2016 V1M2 5.8.7.3.b.iv)		
M2: 7.4.16	Are all records, such as memos, chain of custody, or transmittal forms that are transmitted to the laboratory by the sample transmitter, retained? (TNI 2016 V1M2 5.8.7.4)		
M2: 7.4.17	Is a complete chain of custody record, if utilized, maintained? (TNI 2016 V1M2 5.8.7.5)		
M2: 7.4.18	Is a legal chain of custody used for evidentiary or legal purposes? (TNI 2016 V1M2 5.8.8)		
M2: 7.4.18	If a customer specifies that a sample will be used for evidentiary purposes, then does a laboratory have a procedure for how that laboratory will carry out legal chain of custody? (TNI 2016 V1M2 5.8.8)		
M2: 7.4.18.a	When a legal chain of custody is specified, is the procedure for legal chain of custody agreed upon by the laboratory and customer before samples are accepted?		
M2: 7.4.18.a	Are records of the agreement maintained?		
M2: 7.4.18.b	Do legal chain of custody procedures follow any applicable state or federal program and establish an intact, continuous record of the physical possession,		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	storage and disposal of used sample containers, collected samples, sample aliquots, and sample extracts or digestates?		
M2: 7.4.18.c	Do the legal chain of custody records identify all individuals who physically handled individual samples?		
M2: 7.4.19	Are samples stored according to the conditions specified by preservation procedures? (TNI 2016 V1M2 5.8.9.a)		
M2: 7.4.20	Are samples that require thermal preservation stored under refrigeration that is ± 2 °C of the specified preservation temperature unless regulatory or method specific acceptance criteria exist?		
M2: 7.4.20	For samples with a specified storage temperature of 4 °C, storage at a temperature 0 °C to 6 °C shall be acceptable.		Clarifying Statement
M2: 7.4.20.a	Samples that are delivered to the laboratory on the same day they are collected are considered acceptable if the samples were received on ice or with evidence the cooling process has begun.		Clarifying Statement
M2: 7.4.20.b	If sample analysis is begun within 15 minutes of collection, thermal preservation is not required.		Clarifying Statement
M2: 7.4.20.c	If the laboratory receives and refrigerates the sample within 15 minutes of collection, thermal preservation is not required in transit unless required by method or regulation.		Clarifying Statement
M2: 7.4.21	Are samples stored away from all standards, reagents, and food? (TNI 2016 V1M2 5.8.9.a.ii)		
M2: 7.4.21	Are samples stored in such a manner to prevent cross contamination? (TNI 2016 V1M2 5.8.9.a.ii)		
M2: 7.4.22	Are sample fractions, extracts, leachates, and other sample preparation products stored according to above or according to specifications in the method? (TNI 2016 V1M2 5.8.9.b)		
M2: 7.4.23	Does the laboratory have procedures for the disposal of samples, digestates, leachates and extracts or other sample preparation products? (TNI 2016 V1M2 5.8.9.c)		
M2: 7.4.23.a	Does disposal of the physical sample occur only with the concurrence of the customer who submitted the sample if those samples are disposed of before any project-specified time limit?		
M2: 7.4.23.a	Are samples that are completely consumed during analysis recorded as such for their final disposition?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.4.23.b	Are all conditions of disposal and all records and correspondence concerning the final disposition of the physical sample recorded and retained?		
M2: 7.4.23.c	(DOE-Only Requirement) Do records indicate the date of disposal, the nature of disposal (such as sample depleted, sample disposed in hazardous waste facility, or sample returned to customer), and the name of the individual who performed the task?		
M2: 7.5	*Technical records*		
M2: 7.5.1	*Does the laboratory ensure that technical records for each laboratory activity contain the results, report, and sufficient information to facilitate, if possible, identification of factors affecting the measurement result and its associated measurement uncertainty and enable the repetition of the laboratory activity under conditions as close as possible to the original?*		
M2: 7.5.1	*Do the technical records include the date and the identity of personnel responsible for each laboratory activity and for checking data and results?*		
M2: 7.5.1	*Are original observations, data and calculations recorded at the time they are made and identifiable with the specific task?*		
M2: 7.5.2	*Does the laboratory ensure that amendments to technical records can be tracked to previous versions or to original observations?*		
M2: 7.5.2	*Are both the original and amended data and files retained, including the date of alteration, an indication of the altered aspects and the personnel responsible for the alterations?*		
M2: 7.5.2.a	Does laboratory include the reason for the alteration in the amended technical record?		
M2: 7.5.2.b	Does the laboratory apply the requirements for amendments to technical records to changes to the original output of the automated software algorithms such as manual integrations and eliminating laboratory determined “false positives” (e.g., “Q delete”)?		
M2: 7.5.2.b	Are these changes to the original output of the automated software algorithms reviewed by a technically qualified supervisor or data review specialist?		
M2: 7.5.2.b	Are records of this review maintained?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.5.3	Are the records considered critical to be maintained for historical reconstruction of laboratory activities include but are not limited to:		
M2: 7.5.3.a	all raw and processed data for calibrations, sample analyses and QC measures, including analysts' worksheets and instrument output;		
M2: 7.5.3.b	all sample receiving records;		
M2: 7.5.3.c	dates and times of sample collection if available, preparation, and analysis;		
M2: 7.5.3.c.i	For preparation batch processing, are the start and stop dates and times of the preparation batch preparation recorded?		
M2: 7.5.3.c.i	The start time of sample preparation is the time when analytes from the first sample in a batch of samples begin to be removed from the matrix (e.g., extraction, digestion, distillation, etc.). The stop time of sample preparation is the time when the last sample extract or digestate is ready for additional clean up or analysis.		Clarifying Statement
M2: 7.5.3.d	all sample preparation records;		
M2: 7.5.3.e	dates of sample receipt by the laboratory;		
M2: 7.5.3.f	dates of sample result reporting;		
M2: 7.5.3.g	all instrumentation identification and operating conditions/parameters used for analysis;		
M2: 7.5.3.h	all information necessary to reconstruct calculations;		
M2: 7.5.3.i	final test reports;		
M2: 7.5.3.j	all standard and reagent origin, including associated Certificates of Analysis or purity and recommended storage conditions;		
M2: 7.5.3.k	Do all standard and reagent receipt, preparation, and use records, include:		
M2: 7.5.3.k.i	lot numbers allowing traceability to purchased stocks or neat compounds;		
M2: 7.5.3.k.ii	constituents and quantities;		
M2: 7.5.3.k.iii	dates of preparation; and		
M2: 7.5.3.k.iv	expiration dates.		
M2: 7.5.3.l	all QC results and assessment;		
M2: 7.5.3.m	method performance/QC acceptance limits with supporting data if generated by the laboratory;		
M2: 7.5.3.n	proficiency test results;		
M2: 7.5.3.o	records of demonstrations of capability for each method, instrument, and analyst;		
M2: 7.5.3.p	names, initials, and signatures of all individuals who sign or initial laboratory records;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.5.3.q	obsolete versions of all procedures used to support laboratory activities; and		
M2: 7.5.3.r	all other records required under this standard?		
M2: 7.5.4	Are all records maintained for five years from last use?		
M2: 7.5.5	When laboratory notebooks (logbooks) are utilized, do the notebooks have measures to prevent the removal or addition of pages?		
M2: 7.5.5	A record is considered in use when it supports current laboratory activities.		Clarifying Statement
M2: 7.5.5	When laboratory notebooks (logbooks) are utilized, does the laboratory have measures to prevent the removal or addition of pages?		
M2: 7.5.5	Electronic notebooks are acceptable.		Clarifying Statement
M2: 7.5.5	For laboratory notebooks, does the following apply:		
M2: 7.5.5.a	Are laboratory notebook pages pre-numbered, all entries signed or initialed and dated by the person responsible for performing the activity at the time the activity is performed, and all entries recorded in chronological order?		
M2: 7.5.5.b	Are all laboratory notebook pages closed when the activities recorded are completed or carried over to another page?		
M2: 7.5.5.b	Is the person responsible for performing the closure the one who performed the last activity recorded?		
M2: 7.5.5.b	Does closure occur at the end of the last activity recorded on a page, as soon as practicable, thereafter?		
M2: 7.5.5.b	Do records of closure include analyst initials and date?		
M2: 7.5.5.c	Does each laboratory notebook have a unique serial number clearly displayed?		
M2: 7.5.6	Are records that are stored only on electronic media supported by the hardware and software necessary for their retrieval? (TNI 2016 V1M2 4.13.3.d)		
M2: 7.5.7	Are all generated data, except those that are generated electronically, recorded legibly in permanent ink? (TNI 2016 V1M2 4.13.3.g)		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.5.8	Does the laboratory have a plan to ensure that records are maintained or transferred according to the customers' instructions in the event that a laboratory transfers ownership or ceases operations? (TNI 2016 V1M2 4.13.3.h)		
M2: 7.5.8	In addition, are appropriate regulatory and state legal requirements concerning laboratory records followed? (TNI 2016 V1M2 4.13.3.h)		
M2: 7.6	*Evaluation of measurement uncertainty*		
M2: 7.6.1	*Does the laboratory identify the contributions to measurement uncertainty?*		
M2: 7.6.1	*When evaluating measurement uncertainty, are all contributions that are of significance, including those arising from sampling, taken into account using appropriate methods of analysis?*		
M2: 7.6.2	*Does the laboratory performing calibrations, including of its own equipment, evaluate the measurement uncertainty for all calibrations?*		
M2: 7.6.3	*Does the laboratory performing testing evaluate measurement uncertainty?*		
M2: 7.6.3	*Where the test method precludes rigorous evaluation of measurement uncertainty, is an estimation made based on an understanding of the theoretical principles or practical experience of the performance of the method?*		
M2: 7.7	*Ensuring the validity of results*		
M2: 7.7.1	*Does the laboratory have a procedure for monitoring the validity of results?*		
M2: 7.7.1	*Is the resulting data recorded in such a way that trends are detectable and, where practicable, statistical techniques applied to review the results?*		
M2: 7.7.1	*Is this monitoring planned and reviewed and include, where appropriate, but not be limited to:*		
M2: 7.7.1	Items listed in 7.7.1 not specifically required by reference method, Modules 3-8, or Appendix B are not considered applicable for the purposes of the QSM.		Clarifying Statement
M2: 7.7.1.a	*use of reference materials or quality control materials;*		
M2: 7.7.1.b	*use of alternative instrumentation that has been calibrated to provide traceable results;*		
M2: 7.7.1.c	*functional check(s) of measuring and testing equipment;*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.7.1.d	*use of check or working standards with control charts, where applicable;*		
M2: 7.7.1.e	*intermediate checks on measuring equipment;*		
M2: 7.7.1.f	*replicate tests or calibrations using the same or different methods;*		
M2: 7.7.1.g	*retesting or recalibration of retained items;*		
M2: 7.7.1.h	*correlation of results for different characteristics of an item;*		
M2: 7.7.1.i	*review of reported results;*		
M2: 7.7.1.j	*Intra-laboratory comparisons;*		
M2: 7.7.1.k	*testing of blind sample(s)?*		
M2: 7.7.2	*Does the laboratory monitor its performance by comparison with results of other laboratories, where available and appropriate?*		
M2: 7.7.2	*Is this monitoring planned and reviewed and include, but not be limited to, either or both of the following:*		
M2: 7.7.2.a	*participation in proficiency testing;*		
M2: 7.7.2.b	*participation in inter-laboratory comparisons other than proficiency testing?*		
M2: 7.7.3	*Is data from monitoring activities analyzed, used to control and, if applicable, improve the laboratory's activities?*		
M2: 7.7.3	*When the results of the analysis of data from monitoring activities are found to be outside pre-defined criteria, is appropriate action taken to prevent incorrect results from being reported?*		
M2: 7.7.4	Does the laboratory have detailed procedures in place to monitor the following quality controls:		
M2: 7.7.4.a	positive and negative controls (e.g., as described in Modules 3-8); (TNI 2016 V1M2 5.9.3.a.i)		
M2: 7.7.4.b	tests to define the variability and/or repeatability of the laboratory results such as replicates; (TNI 2016 V1M2 5.9.3.a.ii)		
M2: 7.7.4.c	measures to assure the accuracy of the method including calibration and/or continuing calibrations, use of certified reference materials, proficiency test samples, or other measures; (TNI 2016 V1M2 5.9.3.a.iii)		
M2: 7.7.4.d	measures to evaluate method capability, such as limit of detection and limit of quantitation or range of applicability such as linearity; (TNI 2016 V1M2 5.9.3.a.iv)		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.7.4.e	selection of appropriate formulas to reduce raw data to final results such as regression analysis, comparison to internal/external standard calculations, and statistical analyses; (TNI 2016 V1M2 5.9.3.a.v)		
M2: 7.7.4.f	selection and use of reagents and standards of appropriate quality; (TNI 2016 V1M2 5.9.3.a.vi)		
M2: 7.7.4.g	measures to assure the selectivity of the test for its intended purpose; and (TNI 2016 V1M2 5.9.3.a.vii)		
M2: 7.7.4.h	measures to assure constant and consistent test conditions (both instrumental and environmental) where required by the method such as temperature, humidity, light, or specific instrument conditions? (TNI 2016 V1M2 5.9.3.a.viii)		
M2: 7.7.5	Does the laboratory have procedures for the development of QC acceptance criteria where no method or regulatory acceptance criteria exist?		
M2: 7.7.5	Are the QC acceptance criteria specified by the laboratory's procedures followed?		
M2: 7.7.5	Does the laboratory incorporate the acceptance criteria outlined in Modules 3-8, Appendix B, reference method, or regulation, whichever are more stringent, into the test method Procedures?		
M2: 7.7.5	When it is not apparent which is more stringent, is the QC in the reference method or regulation followed? (TNI 2016 V1M2 5.9.3.c)		
M2: 7.7.6	Are quality control samples processed in the same manner as field samples and analyzed and reported with their associated field samples?		
M2: 7.7.7	Does the laboratory have procedures to ensure validity of reported results which include the following:		
M2: 7.7.7.a	requirements that internal data reviews consist of a tiered or sequential system of verification with at least three tiers: 100% review by the analyst, 100% verification review by a technically qualified supervisor or data review specialist, and a final administrative review;		
M2: 7.7.7.b	specification of which records shall be reviewed;		
M2: 7.7.7.c	determination of whether the results meet the laboratory-specific QC acceptance criteria before results are reported;		
M2: 7.7.7.d	checks to determine consistency with customer-provided acceptance criteria, if available;		
M2: 7.7.7.e	checks to ensure that reported data are free from transcription errors;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.7.7.f	checks to ensure that the appropriate sample preparatory and analytical procedures and methods were followed, calculations were performed correctly, and that chain of custody and holding time requirements were met; and		
M2: 7.7.7.g	checks for complete and accurate explanations of anomalous results, corrections, and the use of data qualifiers in the case narrative?		
M2: 7.7.8	Are records of these activities maintained?		
M2: 7.7.9	For a test method with a maximum holding time measured in hours, is the holding time tracked by the hour?		
M2: 7.7.9	For a test method with a maximum holding time measured in days, is the holding time tracked by the day?		
M2: 7.7.9	For a test method with a maximum holding time measured in months, is the holding time converted to days and tracked by day, with a month equal to thirty days?		
M2: 7.7.10	If time of sample collection is not provided by the customer, does the laboratory contact the customer to obtain the time or use the most conservative time (i.e., 12:00 a.m. on the day of collection) for the purposes of calculating holding time?		
M2: 7.8	*Reporting of Results*		
M2: 7.8.1	*General*		
M2: 7.8.1.1	*Are results reviewed and authorized prior to release?*		
M2: 7.8.1.2	*Are results provided accurately, clearly, unambiguously, and objectively, usually in a report (e.g., a test report or a calibration certificate or report of sampling), and include all the information agreed with the customer and necessary for the interpretation of the results and all information required by the method used?*		
M2: 7.8.1.2	*Are all issued reports retained as technical records?*		
M2: 7.8.1.3	*When agreed with the customer, the results may be reported in a simplified* way.		Permission
M2: 7.8.1.3	*Is any information listed in 7.8.2 to 7.8.7 that is not reported to the customer readily available?*		
M2: 7.8.2	*Common requirements for reports (test, calibration or sampling)*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.2.1	*Does each report include at least the following information, unless the laboratory has valid reasons for not doing so, thereby minimizing any possibility of misunderstanding or misuse:*		
M2: 7.8.2.1.a	*a title (e.g., "Test Report", "Calibration Certificate" or "Report of Sampling");*		
M2: 7.8.2.1.b	*the name and address of the laboratory;*		
M2: 7.8.2.1.c	*the location of performance of the laboratory activities, including when performed at a customer facility or at sites away from the laboratory's permanent facilities, or in associated temporary or mobile facilities;*		
M2: 7.8.2.1.d	*unique identification that all its components are recognized as a portion of a complete report and a clear identification of the end;*		
M2: 7.8.2.1.e	*the name and contact information of the customer;*		
M2: 7.8.2.1.f	*identification of the method used;*		
M2: 7.8.2.1.g	*a description, unambiguous identification, and, when necessary, the condition of the item;*		
M2: 7.8.2.1.h	*the date of receipt of the test or calibration item(s), and the date of sampling, where this is critical to the validity and application of the results;*		
M2: 7.8.2.1.i	*the date(s) of performance of the laboratory activity;*		
M2: 7.8.2.1.j	*the date of issue of the report;*		
M2: 7.8.2.1.k	*reference to the sampling plan and sampling method used by the laboratory or other bodies where these are relevant to the validity or application of the results;*		
M2: 7.8.2.1.l	*a statement to the effect that the results relate only to the items tested, calibrated, or sampled;*		
M2: 7.8.2.1.m	*the results with, where appropriate, the units of measurement;*		
M2: 7.8.2.1.n	*additions to, deviations, or exclusions from the method;*		
M2: 7.8.2.1.o	*identification of the person(s) authorizing the report;*		
M2: 7.8.2.1.p	*clear identification when results are from external providers?*		
M2: 7.8.2.1.q	All required information listed in ISO/IEC 17025:2017 Clause 7.8.2.1 a-p;		
M2: 7.8.2.1.r	an index or a table of contents;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.2.1.s	a table summarizing samples received, providing a correlation between field sample identification and laboratory sample identification;		
M2: 7.8.2.1.t	a case narrative that includes the following information, if applicable;		
M2: 7.8.2.1.t.1	additions to, deviations, or exclusions from the method;		
M2: 7.8.2.1.t.2	information on any non-standard conditions that may have affected the quality of the results;		
M2: 7.8.2.1.t.3	Identification of sample results reported under a non-accredited method;		
M2: 7.8.2.1.t.4	a description of extractions or analyses that were performed outside of holding times;		
M2: 7.8.2.1.t.5	identification of deviations of any calibration standards or QC sample results from acceptance limits and a discussion of the associated actions taken by the laboratory to address the deviations;		
M2: 7.8.2.1.t.6	a list of preparation batches for which no matrix spike and/or duplicate were performed due to lack of adequate sample material; and		
M2: 7.8.2.1.t.7	occurrence of analytes for which manual integration occurred?		
M2: 7.8.2.1.u	LOQ and associated precision and bias at the LOQ, where the determination of precision & bias at the LOQ is required;		
M2: 7.8.2.1.v	before and after chromatographs of analytes for which manual integration occurred including the justification for the change;		
M2: 7.8.2.1.w	the LOD and LOQ verification data when the infrequent method option described in Module 4 is used;		
M2: 7.8.2.1.x	Are records of customer approval and technical justification for any waiver from QSM requirements included in all affected reports;		
M2: 7.8.2.1.y	all QC required by the method and specified in the applicable Appendix B Table, including acceptance criteria used by the laboratory;		
M2: 7.8.2.1.z	chain of custody records;		
M2: 7.8.2.1.aa	records generated by the laboratory which detail the condition of the samples upon receipt at the laboratory (e.g., sample cooler receipt forms, cooler temperature, and sample pH);		
M2: 7.8.2.1.bb	records of communication with the customer associated with actions taken or quality issues;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.2.1.cc	records of sample compositing done by the laboratory;		
M2: 7.8.2.1.dd	sample preparation records, including start time and date of the first and last sample;		
M2: 7.8.2.1.ee	standard traceability;		
M2: 7.8.2.1.ff	instrument output (raw data);		
M2: 7.8.2.1.gg	instrument run logs or sequence run logs; and		
M2: 7.8.2.1.hh	a sample result summary form for each field sample reported by the laboratory that includes the following information:		
M2: 7.8.2.1.hh.1	field sample identification as written on custody form;		
M2: 7.8.2.1.hh.2	laboratory sample identification;		
M2: 7.8.2.1.hh.3	preparation batch unique identifier;		
M2: 7.8.2.1.hh.4	matrix;		
M2: 7.8.2.1.hh.5	date and time sample collected if the laboratory performs sampling or if provided by the customer;		
M2: 7.8.2.1.hh.6	date and time sample prepared;		
M2: 7.8.2.1.hh.7	date and time sample analyzed;		
M2: 7.8.2.1.hh.8	data file name;		
M2: 7.8.2.1.hh.9	method identification for all preparation, cleanup, and analytical methods including the version number;		
M2: 7.8.2.1.hh.10	unique instrument identification;		
M2: 7.8.2.1.hh.11	DL, LOD, and LOQ; if determined and applicable, adjusted for sample- specific factors which impact calculation of sample results;		
M2: 7.8.2.1.hh.12	sample-specific factors (e.g., sample aliquot or weight of soil/sediment, final extraction volume, dilution factor, and percent moisture or percent solids);		
M2: 7.8.2.1.hh.13	identification when reported results are converted from the as-sampled basis (e.g., dry weight);		
M2: 7.8.2.1.hh.14	surrogate recovery with control limits;		
M2: 7.8.2.1.hh.15	concentration units;		
M2: 7.8.2.1.hh.16	the result for each target analyte from the lowest dilution that met all QC acceptance criteria; and		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.2.1.hh.17	analyte or parameter with the Chemical Abstracts Service (CAS) Registry Number, if available, for all requested analytes including non-detects?		
M2: 7.8.2.2	*Is the laboratory responsible for all the information provided in the report, except when information is provided by the customer?*		
M2: 7.8.2.2	*Are data provided by a customer clearly identified?*		
M2: 7.8.2.2	*In addition, is a disclaimer put on the report when the information is supplied by the customer and can affect the validity of results?*		
M2: 7.8.2.2	*Where the laboratory has not been responsible for the sampling stage (e.g., the sample has been provided by the customer), is it stated in the report that the results apply to the sample as received?*		
M2: 7.8.3	*Specific requirements for test reports*		
M2: 7.8.3.1	*In addition to the requirements listed in 7.8.2, do test reports, where necessary for the interpretation of the test results, include the following:*		
M2: 7.8.3.1.a	*information on specific test conditions, such as environmental conditions;*		
M2: 7.8.3.1.b	*where relevant, a statement of conformity with requirements or specifications (see M2: 7.8.6);*		
M2: 7.8.3.1.c	*where applicable, is the measurement uncertainty presented in the same unit as that of the measurand or in a term relative to the measurand (e.g., percent) when:* *- it is relevant to the validity or application of the test results;* *- a customer's instruction so requires, or* *- the measurement uncertainty affects conformity to a specification limit;*		
M2: 7.8.3.1.d	*where appropriate, opinions and interpretations (see M2: 7.8.7):*		
M2: 7.8.3.1.e	*additional information that may be required by specific methods, authorities, customers, or groups of customers?*		
M2: 7.8.3.1.f	When analytical nonconformances occur, and samples cannot be reanalyzed, does the laboratory qualify associated sample results in the report?		
M2: 7.8.3.1.f	Does the laboratory unambiguously define the data qualifiers used within the report, and their use consistent with any project-specific requirements (e.g., the contract, and project-planning documents)?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.3.1.f	Within the report, are data qualifiers located immediately adjacent to the analyte results to which they apply?		
M2: 7.8.3.2	*Where the laboratory is responsible for the sampling activity, do test reports meet the requirements listed in 7.8.5 where necessary for the interpretation of test results?*		
M2: 7.8.4	*Specific requirements for calibration certificates*		
M2: 7.8.4.1	*In addition to the requirements listed in 7.8.2, do calibration certificates include the following:*		
M2: 7.8.4.1.a	*the measurement uncertainty of the measurement result presented in the same unit as that of the measurand or in a term relative to the measurand (e.g., percent);*		
M2: 7.8.4.1.b	*the conditions (e.g., environmental) under which the calibrations were made that have an influence on the measurement results;*		
M2: 7.8.4.1.c	*a statement identifying how the measurements are metrologically traceable*		
M2: 7.8.4.1.d	*the results before and after any adjustment or repair, if available;*		
M2: 7.8.4.1.e	*where relevant, a statement of conformity with requirements or specifications (see M2: 7.8.6);*		
M2: 7.8.4.1.f	*where appropriate, opinions and interpretations (see M2: 7.8.7)?*		
M2: 7.8.4.2	*Where the laboratory is responsible for the sampling activity, do calibration certificates meet the requirements listed in M2: 7.8.5 where necessary for the interpretation of calibration results?*		
M2: 7.8.4.3	*Do calibration certificates or calibration labels not contain any recommendation on the calibration interval, except where this has been agreed with the customer?*		
M2: 7.8.5	*Reporting sampling - specific requirements*		
M2: 7.8.5	*Where the laboratory is responsible for the sampling activity, in addition to the requirements listed in 7.8.2 do the reports include the following, where necessary for the interpretation of results:*		
M2: 7.8.5.a	*the date of sampling;*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.5.b	*unique identification of the item or material sampled (including the name of the manufacturer, the model or type of designation and serial numbers, as appropriate);*		
M2: 7.8.5.c	*the location of sampling, including any diagrams, sketches, or photographs;*		
M2: 7.8.5.d	*a reference to the sampling plan and sampling method;*		
M2: 7.8.5.e	*details of any environmental conditions during sampling that affect the interpretation of the results;*		
M2: 7.8.5.f	*information required to evaluate measurement uncertainty for subsequent testing or calibration?*		
M2: 7.8.6	*Reporting statements of conformity*		
M2: 7.8.6.1	*When a statement of conformity to a specification or standard is provided, does the laboratory document the decision rule employed, considering the level of risk (such as false accept and false reject and statistical assumptions) associated with the decision rule employed, and apply the decision rule?*		
M2: 7.8.6.2	*Does the laboratory report on the statement of conformity, such that the statement clearly identifies:*		
M2: 7.8.6.2.a	*to which results the statement of conformity applies;*		
M2: 7.8.6.2.b	*which specifications, standards or parts thereof are met or not met;*		
M2: 7.8.6.2.c	*the decision rule applied (unless it is inherent in the requested specification or standard)?*		
M2: 7.8.7	*Reporting opinions and interpretations*		
M2: 7.8.7.1	*When opinions and interpretations are expressed, does the laboratory ensure that only personnel authorized for the expression of opinions and interpretations release the respective statement?*		
M2: 7.8.7.1	*Does the laboratory document the basis upon which the opinions and interpretations have been made?*		
M2: 7.8.7.2	*Are the opinions and interpretations expressed in reports based on the results obtained from the tested or calibrated item and clearly identified as such?*		
M2: 7.8.7.3	*When opinions and interpretations are directly communicated by dialogue with the customer, is a record of the dialogue retained?*		
M2: 7.8.7.4	Are opinions and interpretations expressed in reports contained in the case narrative?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.8.8	*Amendments to reports*		
M2: 7.8.8.1	*When an issued report needs to be changed, amended, or re-issued, is any change of information clearly identified and, where appropriate, the reason for the change included in the report?*		
M2: 7.8.8.2	*Are amendments to a report after issue made only in the form of a further document, or data transfer, which includes the statement "Amendment to Report, serial number... [or as otherwise identified)", or an equivalent form of wording?*		
M2: 7.8.8.2	*Do such amendments meet all the requirements of this document?*		
M2: 7.8.8.3	*When it is necessary to issue a complete new report, is this uniquely identified and contain a reference to the original that it replaces?*		
M2: 7.9	*Complaints*		
M2: 7.9.1	*Does the laboratory have a documented process to receive, evaluate and make decisions on complaints?*		
M2: 7.9.2	*Is a description of the handling process for complaints available to any interested party on request?*		
M2: 7.9.2	*Upon receipt of a complaint, does the laboratory confirm whether the complaint relates to laboratory activities that it is responsible for and, if so, deal with it?*		
M2: 7.9.2	*Is the laboratory responsible for all decisions at all levels of the handling process for complaints?*		
M2: 7.9.3	*Does the process for handling complaints include at least the following elements and methods:*		
M2: 7.9.3.a	*description of the process for receiving, validating, investigating the complaint, and deciding what actions are to be taken in response to it?*		
M2: 7.9.3.b	*tracking and recording complaints, including actions undertaken to resolve them?*		
M2: 7.9.3.c	*ensuring that any appropriate action is taken?*		
M2: 7.9.4	*Is the laboratory receiving the complaint responsible for gathering and verifying all necessary information to validate the complaint?*		
M2: 7.9.5	*Whenever possible, does the laboratory acknowledge receipt of the complaint, and provide the complainant with progress reports and the outcome?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.9.6	*Are the outcomes communicated to the complainant made by, or reviewed and approved by, individuals not involved in the original laboratory activities in question?*		
M2: 7.9.7	*Whenever possible, does the laboratory give formal notice of the end of the complaint handling to the complainant?*		
M2: 7.10	*Nonconforming work*		
M2: 7.10.1	*Does the laboratory have a procedure that is implemented when any aspect of its laboratory activities or results of this work do not conform to its own procedures or the agreed requirements of the customer (e.g., equipment or environmental conditions are out of specified limits, results of monitoring fail to meet specified criteria)?*		
M2: 7.10.1	*Does the procedure ensure that:*		
M2: 7.10.1.a	*the responsibilities and authorities for the management of nonconforming work are defined;*		
M2: 7.10.1.b	*actions (including halting or repeating of work and withholding of reports, as necessary) are based upon the risk levels established by the laboratory;*		
M2: 7.10.1.c	*an evaluation is made of the significance of the nonconforming work, including an impact analysis on previous results;*		
M2: 7.10.1.d	*a decision is taken on the acceptability of the nonconforming work;*		
M2: 7.10.1.e	*where necessary, the customer is notified, and work is recalled;*		
M2: 7.10.1.f	*the responsibility for authorizing the resumption of work is defined?*		
M2: 7.10.2	*Does the laboratory retain records of nonconforming work and actions as specified in 7.10.1, bullets b) to f)?*		
M2: 7.10.3	*Where the evaluation indicates that the nonconforming work could recur, or that there is doubt about the conformity of the laboratory's operations with its own management system, does the laboratory implement corrective action?*		
M2: 7.10.4	Does the laboratory upon discovery of potential data quality issues resulting from nonconforming work, notify all affected customers within 15 business days?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.10.4	For data reported to affected customers more than 90 days prior to the discovery of the potential data quality issue, is the AB also be notified?		
M2: 7.10.4	Is notification performed according to a procedure?		
M2: 7.10.4	Are records of corrections taken or proposed corrective actions to resolve the nonconformance submitted to the customer within 30 business days of discovery?		
M2: 7.11	*Control of data and information management*		
M2: 7.11.1	*Does the laboratory have access to the data and information needed to perform laboratory activities?*		
M2: 7.11.2	*Is the laboratory information management system(s) used for the collection, processing, recording, reporting, storage, or retrieval of data validated for functionality, including the proper functioning of interfaces within the laboratory information management system(s) by the laboratory before introduction?*		
M2: 7.11.2	*Whenever there are any changes, including laboratory software configuration or modifications to commercial off-the-shelf software, are they authorized, documented, and validated before implementation?*		
M2: 7.11.3	*Are the laboratory information management system(s):*		
M2: 7.11.3.a	*protected from unauthorized access;*		
M2: 7.11.3.b	*safeguarded against tampering and loss;*		
M2: 7.11.3.c	*operated in an environment that complies with provider or laboratory specifications or, in the case of non-computerized systems, provides conditions which safeguard the accuracy of manual recording and transcription;*		
M2: 7.11.3.d	*maintained in a manner that ensures the integrity of the data and information;*		
M2: 7.11.3.e	*include recording system failures and the appropriate immediate and corrective actions?*		
M2: 7.11.4	*When a laboratory information management system is managed and maintained off-site or through an external provider, does the laboratory ensure that the provider or operator of the system complies with all applicable requirements of this document?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.11.5	*Does the laboratory ensure that instructions, manuals, and reference data relevant to the laboratory information management system(s) are made readily available to personnel?*		
M2: 7.11.6	*Are calculations and data transfers checked in an appropriate and systematic manner?*		
M2: 7.11.7	Does the laboratory have procedures that address all requirements of ISO/IEC 17025:2017 7.11.2?		
M2: 7.11.8	Does the laboratory maintain records of LIMS validation that include:		
M2: 7.11.8.a	LIMS description, version, and functional requirements;		
M2: 7.11.8.b	listing of algorithms and formulas; and		
M2: 7.11.8.c	installation, operation, and maintenance records?		
M2: 7.11.9	Does the laboratory maintain records of LIMS versions, procedures, and changes so analytical data can be unequivocally associated with the LIMS version used to generate the data?		
M2: 7.11.10	Does the laboratory have a procedure to ensure all LIMS users have unique login authentication credentials?		
M2:7.11.10	The mechanism employed may be a unique username and password combination, or biometric authentication.		Statement
M2: 7.11.10	Where passwords are used, are the passwords changed a minimum of once per year?		
M2: 7.11.11	Are spreadsheets used for calculations verified before initial use and after any changes to equations or formulas, or software revision upgrades?		
M2: 7.11.11	Are records of verification maintained?		
M2: 7.11.11	Are formula cells write-protected to minimize inadvertent changes to the formulas?		
M2: 7.11.11	Do printouts from any spreadsheets include all information used to calculate the data?		
M2: 7.11.12	Do Electronic Data Security measures ensure:		
M2: 7.11.12.a	system events, such as log-on failures or break-in attempts, are monitored and recorded;		
M2: 7.11.12.b	the electronic data management system is protected from the introduction of computer viruses;		
M2: 7.11.12.c	system backups occur on a regular and published schedule and may be performed by more than one person within the laboratory;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 7.11.12.d	system backups are recorded and demonstrate that the backup systems contain all required data; and		
M2: 7.11.12.e	physical access to the servers is limited by security measures such as locating the system within a secured facility or room and/or utilizing cipher locks or key cards?		
M2: 7.11.13	Does the laboratory have procedures that address how manual integrations are performed and how records are maintained?		
M2: 8	*Management System Requirements*		
M2: 8.1	*Options*		
M2: 8.1.1	*General*		
M2: 8.1.1	*Does the laboratory establish, document, implement and maintain a management system that can support and demonstrating the consistent achievement of the requirements of this document and assuring the quality of the laboratory results?*		
M2: 8.1.1	*In addition to meeting the requirements of Clauses 4 to 7, does the laboratory implement a management system in accordance with Option A or Option B?*		
M2: 8.1.2	*Option A*		
M2: 8.1.2	*As a minimum, does the management system of the laboratory address the following:* *- management system documentation (see M2: 8.2);* *- control of management system documents (see M2: 8.3);* *- control of records (see M2: 8.4);* *- actions to address risks and opportunities (see M2: 8.5);* *- improvement (see M2: 8.6);* *- corrective actions (see M2: 8.7);* *- internal audits (see M2: 8.8);* *- management reviews (see M2: 8.9)?*		
M2: 8.1.3	*Option B*		
M2: 8.1.3	*Has the laboratory established, and does it maintain a management system, in accordance with the requirements of ISO 9001, and that it is capable of supporting and demonstrating the consistent fulfillment of the requirements of Clauses 4 to 7 of this International Standard (ISO/IEC 17025), and also fulfills the management system clause requirements in M2: 8.2 to 8.9?*	NA	
M2: 8.1.4	A laboratory may only gain and maintain DoD ELAP and/or DOECAP-AP accreditation using Option A.		Statement
M2: 8.2	*Management system documentation (Option A)*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.2.1	*Does the laboratory management establish, document, and maintain policies and objectives for the fulfillment of the purposes of this document and ensure that the policies and objectives are acknowledged and implemented at all levels of the laboratory organization?*		
M2: 8.2.1.a	Does the laboratory have a quality manual which addresses or refers to:		
M2: 8.2.1.a.i.	procedures and policies that support the management system;		
M2: 8.2.1.a.ii	test methods, however named, under which the laboratory performs testing;		
M2: 8.2.1.a.iii	impartiality requirements;		
M2: 8.2.1.a.iv	confidentiality requirements;		
M2: 8.2.1.a.v	organizational structural requirements, including its place in any parent organization, and relevant organizational charts;		
M2: 8.2.1.a.vi	personnel requirements;		
M2: 8.2.1.a.vii	facility and environmental condition requirements;		
M2: 8.2.1.a.viii	equipment requirements;		
M2: 8.2.1.a.ix	metrological traceability requirements;		
M2: 8.2.1.a.x	requirements for externally provided products and services;		
M2: 8.2.1.a.xi	requirements for review of requests, tenders, and contracts;		
M2: 8.2.1.a.xii	requirements for the selection and verification of methods;		
M2: 8.2.1.a.xiii	requirements for the validation of methods;		
M2: 8.2.1.a.xiv	sampling and subsampling requirements;		
M2: 8.2.1.a.xv	requirements for the handling of test or calibration items;		
M2: 8.2.1.a.xvi	requirements for technical records;		
M2: 8.2.1.a.xvii	evaluation of measurement uncertainty requirements;		
M2: 8.2.1.a.xviii	requirements for ensuring the validity of results;		
M2: 8.2.1.a.xix	reporting requirements;		
M2: 8.2.1.a.xx	requirements for handling complaints;		
M2: 8.2.1.a.xxi	nonconforming work requirements;		
M2: 8.2.1.a.xxii	control of data and information management requirements;		
M2: 8.2.1.a.xxiii	management system documentation requirements;		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.2.1.a.xxiv	requirements for the control of management system documents;		
M2: 8.2.1.a.xxv	requirements for the control of records;		
M2: 8.2.1.a.xxvi	requirements for actions to address risks and opportunities;		
M2: 8.2.1.a.xxvii	requirements for improvement;		
M2: 8.2.1.a.xxviii	requirements for corrective actions;		
M2: 8.2.1.a.xxix	requirements for internal audits;		
M2: 8.2.1.a.xxx	requirements for management reviews;		
M2: 8.2.1.a.xxxi	procedures for permitting deviations from management system requirements or standard specifications, including which personnel may approve the deviation;		
M2: 8.2.1.a.xxxii	(DOE-Only Requirement) materials (waste) management; and		
M2: 8.2.1.a.xxxiii	(DOE-Only Requirement) health and safety (e.g., Chemical Hygiene Plan, Radiation Safety Plan)?		
M2: 8.2.1.b	Does the quality manual contain a table of contents or equivalent guide to navigate the document?		
M2: 8.2.2	*Do the policies and objectives address the competence, impartiality, and consistent operation of the laboratory?*		
M2: 8.2.3	*Does laboratory management provide evidence of commitment to the development and implementation of the management system and to continually improving its effectiveness?*		
M2: 8.2.3.a	(DOE-Only Requirement) Does the quality manual contain the signed and dated concurrence (with appropriate names and titles) of all responsible parties, including the Quality Manager, Technical Manager, and the agent in charge of all laboratory activities, such as the Laboratory Director or Laboratory Manager? (TNI 2016 V1M2 4.2.8.3.f)		
M2: 8.2.4	*Are all documentation, processes, systems, records, related to the fulfillment of the requirements of this document included in, referenced from, or linked to the management system?*		
M2: 8.2.5	*Do all personnel involved in laboratory activities have access to the parts of the management system documentation and related information that are applicable to their responsibilities?*		
M2: 8.3	*Control of management system documents (Option A)*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.3.1	*Does the laboratory control the documents (internal and external) that relate to the fulfillment of this document?*		
M2: 8.3.1.a	Does the laboratory have procedures for how all internally generated and externally sourced documents relating to the laboratory's management system are controlled?		
M2: 8.3.2	*Does the laboratory ensure that:*		
M2: 8.3.2.a	*documents are approved for adequacy prior to issue by authorized personnel;*		
M2: 8.3.2.b	*documents are periodically reviewed, and updated as necessary;*		
M2: 8.3.2.c	*changes and the current revision status of documents are identified;*		
M2: 8.3.2.d	*relevant versions of applicable documents are available at points of use and, where necessary, their distribution is controlled;*		
M2: 8.3.2.e	*documents are uniquely identified;*		
M2: 8.3.2.f	*the unintended use of obsolete documents is prevented, and suitable identification is applied to them if they are retained for any purpose;*		
M2: 8.3.2.g	affected personnel are notified of changes to management systems documents and supporting procedures, including technical documents;		
M2: 8.3.2.h	internal or external reviews of management system documentation are maintained and made available for assessment;		
M2: 8.3.2.i	any documents providing instructions to laboratory personnel (e.g., operator aids) are considered part of the management system and are subject to document control procedures;		
M2: 8.3.2.j	documents contain date of issue, pagination, and the identification of the authorized approver; and		
M2: 8.3.2.k	all document versions are retained, suitably marked, and archived for a minimum of five years after retirement or revision of the procedure, or longer if required by regulation or customer contract agreements?		
M2: 8.4	*Control of records (Option A)*		
M2: 8.4.1	*Does the laboratory establish and retain legible records to demonstrate fulfillment of the requirements in this document?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.4.2	*Does the laboratory implement the controls needed for the identification, storage, protection, back-up, archive, retrieval, retention time, and disposal of its records?*		
M2: 8.4.2	*Does the laboratory retain records for a period consistent with its contractual obligations?*		
M2: 8.4.2	*Is access to these records consistent with the confidentiality commitments, and are records readily available?*		
M2: 8.4.3	Does the laboratory have procedures for creation, maintenance, storage, and disposal of quality and technical records?		
M2: 8.4.4	Do the records control system procedures address the requirements for access to and control of the files including accountability for any records removed from storage?		
M2: 8.4.5	(DOE-Only Requirement) Do the records disposal procedures address the requirements for obtaining written approval from all affected customers before disposal of records relevant to testing performed for them?		
M2: 8.5	*Actions to address risks and opportunities (Option A)*		
M2: 8.5.1	*Does the laboratory consider the risks and opportunities associated with the laboratory activities to:*		
M2: 8.5.1.a	*give assurance that the management system achieves its intended results;*		
M2: 8.5.1.b	*enhance opportunities to achieve the purpose and objectives of the laboratory;*		
M2: 8.5.1.c	*prevent, or reduce, undesired impacts and potential failures in the laboratory activities;*		
M2: 8.5.1.d	*achieve improvement?*		
M2: 8.5.2	*Does the laboratory plan:*		
M2: 8.5.2.a	*actions to address these risks and opportunities;*		
M2: 8.5.2.b	*how to:* *- integrate and implement these actions into its management system;* *- evaluate the effectiveness of these actions?*		
M2: 8.5.3	*Are actions taken to address risks and opportunities proportional to the potential impact on the validity of laboratory results?*		
M2: 8.5.4	Does the laboratory consider and plan mitigation for the risks and opportunities associated with the following laboratory activities:		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.5.4.a	determining any effects of the matrix may have when validating modifications to the analytical portion of a method;		
M2: 8.5.4.b	determining the need for metrological traceability and the impact to data validity and uncertainty;		
M2: 8.5.4.c	use of externally provided products and services;		
M2: 8.5.4.d	identifying likely contaminants which may be encountered in the laboratory facilities or supplies;		
M2: 8.5.4.e	determining minimum qualifications for technical, supervisory, and quality management personnel;		
M2: 8.5.4.f	ensuring alternate personnel are designated, trained, and authorized for key roles and responsibilities;		
M2: 8.5.4.g	determining which methods LOD and LOQ verifications will be performed quarterly, and which will be performed with each batch analyzed;		
M2: 8.5.4.h	use of electronic signatures;		
M2: 8.5.4.i	determining which versions of methods best fit the needs of the laboratory's customers;		
M2: 8.5.4.j	determining frequency and content of periodic in-depth monitoring for improper, inappropriate, or prohibited actions;		
M2: 8.5.4.k	determining frequency and content of periodic quality record reviews to ensure data integrity;		
M2: 8.5.4.l	determining the need for procedures when not specifically required for accreditation;		
M2: 8.5.4.m	determining acceptance criteria for auxiliary equipment verification and calibration, where acceptance criteria are not specified;		
M2: 8.5.4.n	application of correction factors, including how differing correction factors resulting from verification across a range of values will be applied to auxiliary equipment; and		
M2: 8.5.4.o	selecting a subset of analytes for validation of method modifications?		
M2: 8.5.5	Are records of the identification and mitigation of risk maintained?		
M2: 8.5.6	When a risk is identified, does the laboratory act in a timely fashion to address the risk?		
M2: 8.5.7	Are identified risks and any mitigation plans reviewed annually and updated as applicable?		
M2: 8.5.8	Are records of the annual review of risks and mitigation plans maintained?		
M2: 8.6	*Improvement (Option A)*		
M2: 8.6.1	*Does the laboratory identify and select opportunities for improvement and implement any necessary actions?*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.6.2	*Does the laboratory seek feedback, both positive and negative, from its customers?*		
M2: 8.6.3	*Is the feedback analyzed and used to improve the management system, laboratory activities and customer service?*		
M2: 8.7	*Corrective actions (Option A)*		
M2: 8.7.1	*When a nonconformity occurs, does the laboratory:*		
M2: 8.7.1.a	*react to the nonconformity and, as applicable:* *- take action to control and correct it;* *- address the consequences;*		
M2: 8.7.1.b	*evaluate the need for action to eliminate the cause (s) of the nonconformity, in order that it does not recur or occur elsewhere, by:* *- reviewing and analyzing the nonconformity;* *- determining the causes of the nonconformity;* *- determining if similar nonconformities exist, or could potentially occur;*		
M2: 8.7.1.c	*implement any action needed;*		
M2: 8.7.1.d	*review the effectiveness of any corrective action taken;*		
M2: 8.7.1.e	*update risks and opportunities determined during planning, if necessary;*		
M2: 8.7.1.f	*make changes to the management system, if necessary?*		
M2: 8.7.2	*Are corrective actions appropriate to the effects of the nonconformities encountered?*		
M2: 8.7.3	*Does the laboratory retain records as evidence of:*		
M2: 8.7.3.a	*the nature of the nonconformities, cause(s) and any subsequent actions taken;*		
M2: 8.7.3.b	*the results of any corrective action?*		
M2: 8.7.4	Does the laboratory have procedures for performing corrective actions when nonconforming work or departures from management system or technical operation procedures have been identified?		
M2: 8.7.4	Do these procedures:		
M2: 8.7.4.a	address the requirements in ISO/IEC 17025:2017 Clauses 8.7.1.a – f;		
M2: 8.7.4.b	identify individuals or positions responsible for each of the requirements;		
M2: 8.7.4.c	define the records to be maintained; and		
M2: 8.7.4.d	include a system for tracking corrective actions to completion?		
M2: 8.8	*Internal audits (Option A)*		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.8.1	*Does the laboratory conduct internal audits at planned intervals to provide information on whether the management system:*		
M2: 8.8.1.a	*conforms to:* *- the laboratory's own requirements for its management system, including the laboratory activities;* *- the requirements of this document;*		
M2: 8.8.1.b	*is effectively implemented and maintained?*		
M2: 8.8.2	*Does the laboratory:*		
M2: 8.8.2.a	*plan, establish, implement, and maintain an audit program including the frequency, methods, responsibilities, planning requirements and reporting, which take into consideration the importance of the laboratory activities concerned, changes affecting the laboratory, and the results of previous audits;*		
M2: 8.8.2.b	*define the audit criteria and scope for each audit;*		
M2: 8.8.2.c	*ensure that the results of the audits are reported to relevant management;*		
M2: 8.8.2.d	*implement appropriate correction and corrective actions without undue delay;*		
M2: 8.8.2.e	*retain records as evidence of the implementation of the audit program and the audit results?*		
M2: 8.8.3	Does the laboratory have procedures that ensure any activity that has the potential to affect the validity of results or is required for compliance to this standard is audited, including technical and quality management systems?		
M2: 8.8.4	Does the internal audit schedule ensure that all areas of the laboratory are reviewed over the course of one year, with no area exceeding a period of 18 months between audit events?		
M2: 8.8.5	Are internal audits conducted by personnel independent of the activity being audited?		
M2: 8.8.5	Do personnel conducting independent assessments have sufficient authority, access to work areas, and organizational freedom necessary to observe all activities affecting quality and to report the results of such assessments to laboratory management?		
M2: 8.8.6	When an internal audit casts doubt on the validity of results, does the laboratory notify affected customers within 15 business days of discovery?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 8.8.7	(DOE-Only Requirement) Does the laboratory QA program identify the required internal distribution of internal audit reports and all related records?		
M2: 8.9	*Management reviews (Option A)*		
M2: 8.9.1	*Does the laboratory management review its management system at planned intervals, to ensure its continuing suitability, adequacy, and effectiveness, including the stated policies and objectives related to the fulfillment of this document?*		
M2: 8.9.2	*Are the inputs to management review recorded and include information related to the following:*		
M2: 8.9.2.a	*changes in internal and external issues that are relevant to the laboratory;*		
M2: 8.9.2.b	*fulfillment of objectives;*		
M2: 8.9.2.c	*suitability of policies and procedures;*		
M2: 8.9.2.d	*status of actions from previous management reviews;*		
M2: 8.9.2.e	*outcome of recent internal audits;*		
M2: 8.9.2.f	*corrective actions;*		
M2: 8.9.2.g	*assessments by external bodies;*		
M2: 8.9.2.h	*changes in the volume and type of the work or in the range of laboratory activities;*		
M2: 8.9.2.i	*customer and personnel feedback;*		
M2: 8.9.2.j	*complaints;*		
M2: 8.9.2.k	*effectiveness of any implemented improvements;*		
M2: 8.9.2.l	*adequacy of resources;*		
M2: 8.9.2.m	*results of risk identification;*		
M2: 8.9.2.n	*outcomes of the assurance of the validity of results; and*		
M2: 8.9.2.o	*other relevant factors, such as monitoring activities and training?*		
M2: 8.9.3	*Do the outputs from the management review record all decisions and actions related to at least:*		
M2: 8.9.3.a	*the effectiveness of the management system and its processes;*		
M2: 8.9.3.b	*improvement of the laboratory activities related to the fulfillment of the requirements of this document;*		
M2: 8.9.3.c	*provision of required resources;*		
M2: 8.9.3.d	*any need for change?*		
M2: 8.9.4	Does the laboratory have procedures that address the requirements in ISO/IEC 17025:2017 Clauses 8.9.1 – 8.9.3?		
M2: 8.9.5	Are management reviews completed on an annual basis? (TNI 2016 V1M2 4.15.3)		
M2: 8.9.6	(DOE-Only Requirement) Do management reviews also include laboratory radiation health and safety,		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	radioactive hazardous waste, and radioactive materials management functions, where applicable (i.e., when radioactive samples are analyzed)?		
M2: 8.9.7	Are findings from management reviews and the actions that arise from them recorded?		
M2: 8.9.7	Does the management ensure that those actions are carried out within an appropriate and agreed timescale? (TNI 2016 V1M2 4.15.2)		
M2: 8.9.8	(DOE-Only Requirement) Does the laboratory QA program identify the required internal distribution of management review reports and all related documentation?		
M2: 9	(DOE-Only Requirement) Hazardous and Radioactive Materials Management and Health and Safety Practices		
M2: 9.1	(DOE-Only Requirement) Radioactive Materials Management Plan		
M2: 9.1	Does this plan include, but not be limited to the following subject requirements detailed in the sections listed below:		
M2: 9.1.1	Radioactive Materials Management		
M2: 9.1.2	Radioactive Materials License (RML) Requirements		
M2: 9.1.3	Identification of Radiation Safety Personnel		
M2: 9.1.4	Radiation Safety Training		
M2: 9.1.5	Radiation Survey Plan and Equipment		
M2: 9.1.6	Radioactive Material Receipt and Control		
M2: 9.1.1	(DOE-Only Requirement) Radioactive Materials Management		
M2: 9.1.1.a	For a laboratory accepting, receiving, or handling radioactive samples, or potential radioactive samples, does the laboratory develop and implement a radioactive materials management plan or radiation safety plan?		
M2: 9.1.1.a	Does this plan, however named, comply with, identify, and address all applicable site-specific related federal and state regulations governing radioactive materials control and radiological protection?		
M2: 9.1.1.b	Does the laboratory review, at least annually, the radiation protection program content and implementation?		
M2: 9.1.1.c	Does the laboratory develop and implement an effective radiological controls program and procedures for radioactive material handling, emergency actions, and use of instrumentation?		
M2: 9.1.1.d	Are airborne releases of radioactivity to the environment monitored, evaluated, and controlled?		
M2: 9.1.2	(DOE-Only Requirement) Radioactive Materials License (RML) Requirements		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 9.1.2.a	Does the laboratory describe how they address, implement, and manage the requirements of its site-specific radioactive materials license?		
M2: 9.1.2.a	Does the license authorize possession of isotopes, quantity, physical form, and use of radioactive material sufficient for the laboratory's scope of work in support of DOE sites?		
M2: 9.1.3	(DOE-Only Requirement) Identification of Radiation Safety Personnel		
M2: 9.1.3.a	Is the Radiation Safety Officer (RSO) listed in the Radioactive Materials License available to monitor the radioactive materials and control programs and provide rapid response to any radiological emergencies?		
M2: 9.1.3.a	Does the laboratory have an alternate or backup RSO with the necessary training and experience to perform the duties of the RSO if the RSO is not available?		
M2: 9.1.3.a	Does a procedure document how and when an alternate RSO will be necessary and available?		
M2: 9.1.3.b	Is initial and refresher training required of the RSO and the alternate RSO identified and completed on an established frequency no less than once every 3 years?		
M2: 9.1.4	(DOE-Only Requirement) Radiation Safety Training		
M2: 9.1.4.a	Does training consist of General Employee Orientation, Radiation Safety Training, Contractor Training and/or special briefings as established for the exposure potential as determined by the RSO?		
M2: 9.1.4.b	Are all individuals entering any portion of a restricted area instructed in the potential health effects of exposure to radioactive materials or radiation, precautions/procedures to minimize exposure, and the purpose and functions of protective devices employed?		
M2: 9.1.5	(DOE-Only Requirement) Radiation Survey Plan and Equipment		
M2: 9.1.5.a	Is a survey and monitoring program developed and implemented to assess the magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and the extent of potential radiological hazards?		
M2: 9.1.5.b	Is radiological survey equipment calibrated according to the manufacturer's recommendation or more frequent procedures as documented by the laboratory?		
M2: 9.1.5.b	Before use, is an operational performance check conducted on radiological survey equipment, including a battery check and measurements of a radiological source and the nominal background?		
M2: 9.1.5.b	Are all performance checks recorded?		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 9.1.6	(DOE-Only Requirement) Radioactive Material Receipt and Control		
M2: 9.1.6	Does the laboratory ensure:		
M2: 9.1.6.a	active use of a radioactive materials inventory program capable of tracking standards, tracers, and all radiological samples and radioactive waste.		
M2: 9.1.6.a	the radioactive material inventory is updated according to the schedule established by the laboratory's Radioactive Material License;		
M2: 9.1.6.a	if no schedule is established by the license, the laboratory updates the inventory within seven days of receipt of radioactive materials;		
M2: 9.1.6.b	low-level and high-level samples shall be identified, segregated, and processed in order to prevent sample cross-contamination;		
M2: 9.1.6.c	at sample receiving, samples from potentially radioactive sites shall be screened to ensure that;		
M2: 9.1.6.c.i	customer identification of radioactivity (or lack of radioactivity) is correct;		
M2: 9.1.6.c.ii	the sample is properly categorized (per the laboratory's definition of radioactivity) for sample handling in the laboratory;		
M2: 9.1.6.c.iii	data input is obtained for the radioactive materials license tracking system in the absence of customer-supplied information;		
M2: 9.1.6.c.iv	the shipping container does not exhibit loose contamination or unacceptable external radiation readings; and		
M2: 9.1.6.c.v	that licensed material is secure from unauthorized access or removal?		
M2: 9.2	(DOE-Only Requirement) Waste Management Plan		
M2: 9.2	Does this plan include, but not be limited to the following subject requirements detailed in the sections listed below:		
M2: 9.2	9.2.1 Waste Management Plan Requirements		
M2: 9.2	9.2.2 Waste Disposal		
M2: 9.2	9.2.3 Waste Storage Areas		
M2: 9.2	9.2.4 Toxic Substances Control Act (TSCA) Material		
M2: 9.2.1	(DOE-Only Requirement) Waste Management Plan Requirements		
M2: 9.2.1	Has the laboratory developed and implemented a waste management plan identifying how it complies with all federal, state, and local regulations governing waste management and disposal?		
M2: 9.2.1	Does the plan:		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
M2: 9.2.1.a	identify all waste streams generated by the laboratory, including universal wastes such as batteries, thermostats, etc.;		
M2: 9.2.1.b	identify the process for management and disposal of the various waste streams;		
M2: 9.2.1.c	track the disposition of waste samples by Sample Delivery Group;		
M2: 9.2.1.d	demonstrate compliance through administrative programs to manage effluent discharges as required by regulatory agencies and applicable DOE Orders;		
M2: 9.2.1.e	provide training procedures, required frequency, and management of training records in waste management, shipping, waste handling, and radioactive materials control;		
M2: 9.2.1.f	communicate radioactive volumetric and surface release policies;		
M2: 9.2.1.g	detail permits and licenses to handle hazardous and radioactive waste;		
M2: 9.2.1.h	give policy or direction on how to conduct waste brokering and treatment, storage, and disposal facility (TSDF) evaluation to ensure proper disposition of DOE waste. This includes waste packaging, control and tracking, labeling, classification identification, and preparing/forwarding manifests;		
M2: 9.2.1.i	provide tracking of individual sample containers from receipt to final disposition;		
M2: 9.2.1.j	address waste minimization and pollution prevention program requirements or plans which include substitution (when permitted), segregation, and recycling; and		
M2: 9.2.1.k	identify how radioactive and mixed wastes are be segregated from non-radioactive waste?		
M2: 9.2.2	(DOE-Only Requirement) Waste Disposal		
M2: 9.2.2	Has the laboratory developed and implemented procedures to address waste disposition resulting from the receipt, analysis, and shipping of DOE samples, which address the following requirements:		
M2: 9.2.2.a	Are waste shipments only be transferred to a qualified facility/person specifically licensed to receive the waste?		
M2: 9.2.2.b	Does the laboratory develop criteria for evaluating waste brokers and TSDFs based upon a site visit to the waste facility or a desktop review that includes information from audits conducted by state or federal agencies?		
M2: 9.2.2.b	Does the evaluation include liability coverage, financial stability, any Notice of Violation from the last three		

DoD/DOE QSM 6.0 Clause	Requirement	Conformity C / NC / NA	Comments/Objective Evidence
	years, applicable permits and licenses to accept the waste, and other relevant information?		
M2: 9.2.2.b	DOECAP TSDF audits can be used in place of onsite visit requirements, provided other requirements not included in these audits are addressed (e.g., financial stability, liability insurance, etc.).		Statement
M2: 9.2.2.c	Does the laboratory remove or deface all sample container labels before container disposal such that they are rendered illegible?		
M2: 9.2.2.d	Is analytical process waste segregated and removed to a designated storage area to minimize the potential for cross-contamination?		
M2: 9.2.2.e	Is laboratory analysis for derived waste characterization repeated at a frequency adequate to account for all known variations in the waste streams?		
M2: 9.2.2.f	Are samples that are consumed during analysis included in the sample accountability tracking?		
M2: 9.2.2.g	Is management of excess samples whether they are bulked, special samples, or drain disposed, in place?		
M2: 9.2.2.h	Does the laboratory address how it manages the requirements for the pre-treatment requirements if disposal includes a Publicly Owned Treatment Works or wastewater treatment system?		
M2: 9.2.2.h	Does the program address how the laboratory demonstrates compliance with these requirements?		
M2: 9.2.2.i	Satellite Accumulation Area-Does the Laboratory not accumulate more than 55 gallons of hazardous and mixed waste or no more than one quart of acutely hazardous waste at, or near, any point of generation?		
M2: 9.2.2.i	Is the labelling of these waste containers properly marked with the words ‘‘Hazardous Waste”?		
M2: 9.2.2.i	Does the container label also indicate the applicable hazard (accepted labels include completed Department of Transportation (DOT) shipping label, National Fire Protection Association (NFPA) label, or Resource Conservation and Recovery Act (RCRA) waste characterization code)?		
M2: 9.2.2.i	When the container is full, is it marked with the accumulation start date and moved to the central accumulation area (CAA) within 3 days?		
M2: 9.2.2.j	Is radioactive and mixed wastes generated during laboratory sample processing labeled as radioactive?		
M2: 9.2.3	(DOE-Only Requirement) Waste Disposal Areas		
M2: 9.2.3	Does the laboratory identify the waste storage area’s, or CAA’s affiliation and requirements for its RCRA status as a very small, small, or large quantity generator and does it identify the locations, storage		

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	limitations, and container sizes for each accumulation and storage area identified?		
M2: 9.2.3.a	Does the laboratory record the area's specific site affiliation and generator size, and define central and satellite accumulation, and other requirements in accordance with the applicable federal, state, and local regulations?		
M2: 9.2.3.b	Does the laboratory select and label hazardous waste containers according to the use to include, at a minimum:		
M2: 9.2.3.b.i	labeled with the words “Hazardous Waste”; and		
M2: 9.2.3.b.ii	labeled with an indication of the hazards of the contents?		
M2: 9.2.3.c	Does the laboratory maintain records of weekly inspections of CAAs?		
M2: 9.2.3.c	Does the procedure require inspections to be performed by trained personnel and in accordance with federal, state, and local regulations and containers labeled with the accumulation start date?		
M2: 9.2.3.d	Are ignitable and reactive waste stored at least 50 feet from the property line?		
M2: 9.2.3.e	Are incompatible wastes not stored together?		
M2: 9.2.3.e	Are containers incompatible with any waste or other materials accumulated nearby separated or protected from them by any practical means such as by dike, berm, wall, or other device?		
M2: 9.2.3.e	Does the laboratory refer to the Safety Data Sheet for proper storage requirements and precautions?		
M2: 9.2.3.f	Does the waste storage area provide secondary containment of sufficient capacity for the waste expected to be stored in the areas?		
M2: 9.2.3.g	Are accumulation containers:		
M2: 9.2.3.g.i	in good condition;		
M2: 9.2.3.g.ii	compatible with the waste; and		
M2: 9.2.3.g.iii	kept closed at all times when not in immediate use?		
M2: 9.2.4	(DOE-Only Requirement) Toxic Substances Control Act (TSCA) Material		
M2: 9.2.4.a	Does the laboratory develop and implement a plan or program stating how laboratory operations comply with all federal regulations governing TSCA materials control and protection?		
M2: 9.2.4.b	Does the laboratory segregate all radioactive TSCA materials from all other analytical samples and associated derived wastes?		
M2: 9.2.4.c	Does the laboratory have a procedure for return to the customer of radioactive TSCA materials for which there are no commercial treatment or disposal options?		

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M2: 9.2.4.d	Is TSCA polychlorinated biphenyl (PCB) waste stored for less than one year from the date the material was first placed in storage?		
M2: 9.2.4.e	Are TSCA PCB waste containers labeled with the accumulation start date?		
M2: 9.2.4.f	Does the TSCA one-year waste storage areal meet the storage facility requirements for PCB waste (floor curbing, above the 100-year flood plain, no floor drains, etc.)?		
M2: 9.2.4.g	Are wastes from samples containing PCBs at greater than 50 ppm segregated from other laboratory wastes as TSCA regulated waste?		
M2: 9.2.4.h	Are laboratory-generated TSCA PCB wastes not stored in a Temporary Storage Area for more than 30 days from the time of generation unless the area meets one-year storage facility requirements?		
M2: 9.2.4.i	Are TSCA PCB waste containers and sample storage areas marked with the required TSCA PCB labeling?		
M2: 9.3	(DOE-Only Requirement) Chemical Hygiene Plan (CHP)		
M2: 9.3.1	Is a CHP developed and implemented in the laboratory and available to all employees?		
M2: 9.3.1	Are procedures relating to safety and health considerations developed and implemented?		
M2: 9.3.1	Does the contingency plan address temporary closures by identifying steps to prepare the laboratory before a closure, ramping down operations, and planning for bringing the laboratory back up to operational status?		
M2: 9.3.1	Does the plan include handling of samples, radiation protection, chemical hazards, and waste?		
M2: 9.3.2	Does the laboratory have a written contingency plan and ensure a copy is available at the facility?		
M2: 9.3.3	Is the following information included in the plan and posted next to the phone in the vicinity of the CAA:		
M2: 9.3.3.a	name and number of the emergency coordinator;		
M2: 9.3.3.b	location of fire extinguishers and spill control material; and		
M2: 9.3.3.c	fire department number or a direct alarm?		
M2: 9.3.4	Is required equipment available at the assembly area. Equipment includes, but is not limited to:		
M2: 9.3.4.a	internal communication or alarm system;		
M2: 9.3.4.b	hand-held two-way radio or cell phone;		
M2: 9.3.4.c	portable fire extinguishers/fire control equipment; and		
M2: 9.3.4.d	spill control equipment and water at adequate volume and pressure (i.e., > 15 minutes of continuous pressure)?		
M2: 9.3.5	Is an emergency eyewash located within the		

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	immediate work area, unobstructed, and available to all personnel?		
M2: 9.3.5	Are location requirements and ease of access, frequency for testing, refilling, or restocking as needed, and an emergency shower addressed in the plan?		
M2: 9.3.5	Are all tests and inspections clearly marked by a tag on each device?		
M2: 9.3.6	Does the laboratory provide mounted, located, identified, and inspected portable fire extinguishers to be available to all employees without subjecting the employees to possible injury?		
M2: 9.3.6	Are the location requirements and the frequency for inspection established in the Chemical Hygiene Plan, or equivalent plan?		
M2: 9.3.6	Are all tests and inspections clearly marked by a tag on each device?		
M2: 9.3.7	Does the laboratory have a spill control plan developed and implemented to include a record of spillage of customer samples or significant spillage of chemicals?		
M2: 9.3.8	Is the facility equipped with an alarm system capable of being detected and recognized by the employee in case of an emergency?		
M2: 9.3.9	Are initial and periodic exposure monitoring for hazardous chemicals conducted?		
M2: 9.3.9	Are exposure limits and actions to be taken should an exceedance occur identified or referenced?		
M2: 9.3.10	Are Safety Data Sheets on file for all hazardous chemical substances maintained by the laboratory and readily accessible to all employees?		
M2: 9.3.11	Does the laboratory have a procedure for ongoing verification and maintenance of ventilation hoods?		
M2: 9.3.11.a	Does the procedure include verification of flow rates on a semi-annual basis at a minimum, using a smoke test or flow meter measurement?		
M2: 9.3.11.a	Does the laboratory maintain records of the verification which include the tested flow rate for each hood?		
M2: 9.3.11.b	Does the procedure include monitoring ventilation hoods for radioactive contamination at a prescribed frequency?		
M2: 9.3.11.b	Are records maintained of the monitoring?		
M2: 9.3.12	If respirators are used during sample or waste handling/processing, does the laboratory have an appropriate written respiratory protection program, including:		
M2: 9.3.12.a	procedures governing the fit-testing of personnel using respirators;		

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M2: 9.3.12.b	selection and use of respirators; and		
M2: 9.3.12.c	an annual evaluation to ensure effectiveness?		
M2: 9.3.13	Are chemical hazard labeling on chemical containers in accordance with the laboratory's approved CHP?		
M2: 9.3.14	Is a laboratory safety inspection program developed and implemented that includes routine inspections of laboratory areas for health and safety-related concerns?		
M2: 9.3.15	Are safety orientation briefings required of all visitors, vendors, contractors, maintenance personnel, and auditors before entering the laboratory?		
M2: 9.3.16	Does the laboratory have a designated and alternate Hazardous Waste Operations and Emergency Response (HAZWOPER) trained person on staff?		
M2: 9.3.17	Has the laboratory developed an emergency response plan to include re-entry procedures once the laboratory is safe to return?		
M2: 9.3.18	Does the laboratory require clear posting of signs on doors, workstations, and/or safety devices to indicate use of:		
M2: 9.3.18.a	safety glasses required;		
M2: 9.3.18.b	laboratory coats or protective clothing;		
M2: 9.3.18.c	appropriate footwear;		
M2: 9.3.18.d	safety showers;		
M2: 9.3.18.e	eyewash stations;		
M2: 9.3.18.f	other safety and first aid equipment;		
M2: 9.3.18.g	exits; and		
M2: 9.3.18.h	areas where food and beverage consumption and storage are not permitted?		
M2: 9.3.19	Are areas containing biological hazards appropriately posted?		
M2: 9.3.20	Has the laboratory established and implemented a procedure for identifying hazardous and toxic chemicals located within the laboratory, locations stored, and training of personnel?		
M2: 9.3.20	Does the procedure address the need for precautions of handling and storing all hazardous and toxic chemicals used to include proper identification of storage areas?		
M2: 9.3.21	Are all hazardous or toxic chemical cabinets appropriately labeled with the following:		
M2: 9.3.21.a	identity of the hazardous chemical; and		
M2: 9.3.21.b	appropriate hazard warnings?		
M2: 9.3.22	Are all exits properly identified and unobstructed?		
M2: 9.3.23	Are locations and procedures for personal protective equipment (PPE), (to include laboratory coats, safety glasses, shoes, etc.) established?		

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M2: 9.3.23	Do these procedures identify when, what, and where PPE is required and allowed?		
M2: 9.4	(DOE-Only Requirement) Sample Receiving and Control		
M2: 9.4.1	Does the laboratory have a documented system for uniquely identifying the items (samples) to be tested?		
M2: 9.4.2	Does the laboratory have procedures in place to address the following:		
M2: 9.4.2.a	containers are opened in a manner to prevent worker exposure;		
M2: 9.4.2.b	checking sample preservation (pH);		
M2: 9.4.2.c	proper containers;		
M2: 9.4.2.d	preserving samples when required;		
M2: 9.4.2.e	recording and notifying customers of shipping or sample anomalies;		
M2: 9.4.2.f	checking holding times and notifying laboratory personnel of short holding times;		
M2: 9.4.2.g	use of fume hoods for opening samples and shipping containers;		
M2: 9.4.2.h	how chain of custody is maintained during times when laboratory personnel are not present;		
M2: 9.4.2.i	access to all samples and subsamples is controlled and recorded;		
M2: 9.4.2.j	chain of custody forms remain with the samples during transport or shipment; and		
M2: 9.4.2.k	recording the chronology of sample entry into the laboratory, including, but not limited to, time, date, customer, sample identification numbers, signature, or initials of person making the entry?		
M2: 9.4.3	Are materials submitted to the laboratory for industrial hygiene or asbestos analyses opened in an established manner to prevent worker exposure?		
M2: 9.4.3	Are sample receiving practices developed and implemented for the receipt of beryllium, beryllium oxide, and asbestos materials?		
M2: 9.4.4	Do the sample receipt personnel record anomalies encountered in the sample receiving process?		
M2: 9.4.5	Is a sample receiving logbook or equivalent system used to record the chronology of sample entry into the laboratory, including, but not limited to, time, date, customer, sample identification numbers, signature, or initials of the person making the entry?		
M2: 9.4.6	When the laboratory receives samples, is there an internal chain of custody procedure in place?		
M2: 9.4.6	Is internal custody maintained until final disposition or return of the sample to the customer?		
M2: 9.5	(DOE-Only Requirement) Records		

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M2: 9.5.1	Are the following records maintained for a minimum of five years:		
M2: 9.5.1.a	radioactive material management audit, review, and inspection reports;		
M2: 9.5.1.b	records of airborne release of hazardous materials;		
M2: 9.5.1.c	daily operational checks of radiological survey equipment;		
M2: 9.5.1.d	TSDF waste brokering evaluation or review reports and a list of approved facilities;		
M2: 9.5.1.e	waste disposal certificates of disposal or destruction;		
M2: 9.5.1.f	waste characterization information, including analytical test results and process knowledge determinations; and		
M2: 9.5.1.g	semi-annual ventilation hood and protective equipment contamination control verifications?		
M2: 9.6	(DOE-Only Requirement) Training		
M2: 9.6.1	Is the following training provided to all appropriate laboratory employees and records of training maintained:		
M2: 9.6.1.a	RSO training for both the designated RSO and backup RSO;		
M2: 9.6.1.b	radiation general awareness, security, and safety for those laboratory personnel and contractors dealing with radioactive waste management;		
M2: 9.6.1.c	Hazardous Waste Satellite Accumulation Area management;		
M2: 9.6.1.d	spill detection, cleanup procedures, and spill kit location;		
M2: 9.6.1.e	safety training (annual); and		
M2: 9.6.1.f	HAZWOPER?		