Laboratory Name: Date: Completed By: Participants (Name, Title):

## Outline<sup>1</sup>

## **Executive Summary:**

- Changes in Relevant Issues (Internal and External)
- Fulfillment of Objectives
- Short-term/Long-term Goals
- Highlights

## **Suitability of Policies and Procedures:**

### **Quality Management System Documentation**

- Quality Manual
  - Quality Policy and Objectives (e.g., Competence, impartiality, consistent operations)
- Documentation, Process Systems, Procedures, Supporting Documents<sup>2</sup>, and Records
  - Administrative Procedures (SAPs)
  - Good Measurement Practices (GMPs)
  - Operating Procedures (SOPs)
  - Documentary Standards, Technical Procedures, Specifications (External Sources)
  - o Software
  - o Other

## Improvement Opportunities

<sup>&</sup>lt;sup>1</sup> This report template describes the essential elements required by NIST Handbook 143 (2019) for laboratory recognition. A management review must be conducted annually at least 6 months prior to the annual recognition submission cycle, but can occur more frequently.

<sup>&</sup>lt;sup>2</sup> See the Laboratory Master List for approved processes, procedures, and supporting documents.

## **Reports:**

### Previous Management Review(s)

- Outcome
- Status of Actions (Corrective & Improvement)
- Evaluation of Effectiveness of Actions

### **Internal Audits**

(Quality, Technical, Safety)

- Outcome
- Status of Actions (Corrective & Improvement)
- Evaluation of Effectiveness of Actions

### **Other Corrective Actions**

- Outcome
- Status of Actions (Corrective & Improvement)
- Evaluation of Effectiveness of Actions

### External Assessments

(Recognition, Accreditation, Customers)

- Outcome
- Status of Actions (Corrective & Improvement)
- Evaluation of Effectiveness of Actions

## Workload:

### Summary of Work Volume, Type, and Changes

- Customers (New, Returning)
- Areas of Measurement Scope, Number of Artifacts
- Trends (Increases, Decreases)
  - How has your workload changed (increase/decrease)?
  - Are you seeing trends in the workload (measurement area, artifact type)?
  - Are you observing changes in customer requests (frequency, turnaround time needed)?
  - Workload survey. Describe workload comparison with other labs (e.g., with similar scopes, region)?
  - Changes in customers (quantity, industry sector)?
  - Increase/decrease in out of state customers?
- Opportunities for Improvement
  - Expand, improve, or discontinue measurement service(s) offered?

## **Customer and Personnel Feedback:**

- Sources may include: surveys, direct elicitation, benchmarking, focus groups, social media analysis, customer service notes, correspondence, suggestion box, website analytics, feedback/complaint forms, and cancelled services.
- Quantity, Trends (increase/decrease)
- Positive
- Negative (Complaints)
- Status of Actions (Corrective & Improvement)
- Evaluation of Effectiveness of Actions
- Opportunities for Improvement
  - Identified customer needs?
  - Process improvements?

## **Other Relevant Factors:**

### **Resource Adequacy**

(6.1) Describe the level of available resources that enable the laboratory to manage and perform its activities.

- Personnel (6.2 Impartiality, competence requirements, selection, training, supervision, authorized signatories, monitoring of competence, demonstrated proficiency)
- Facilities and Environmental Conditions (6.3 Suitability, monitoring, control, stability, upgrades, repairs, access, contamination, interference, incompatible activities)
- Equipment (6.4 Access, handling, transport, storage, maintenance, purchase, repair, suitability)
- Metrological Traceability (6.5, Annex A)
  - Standards (e.g., Calibrations needed, purchasing new standards for gaps)
  - Measurement Assurance (e.g., Control charts, range charts)
  - Procedures (e.g., Validation of new and laboratory developed)
- Externally Provided Products and Services (6.6 Suitability, defining and reviewing requirements, evaluation, selection, acceptance criteria, competence, monitoring performance, re-evaluation)

### **Risk Identification Results**

- Impartiality (4.1 Activities, organization and personnel relationships, elimination, minimization)
- Actions to Address Risks (8.5 Enhance opportunities, avoid threats, prevent or reduce undesirable impacts and potential failures, achieve improvements)
  - o Identified Risks

- Evaluation of the Probability and Impact of Risks (e.g., Risk, probability, impact)
- Prioritization and Planned Actions
- Define Actions, Treatment of Risks
- Describe Integration and Implementation
- Evaluation of Effectiveness of Actions

### Assurance of the Validity of Results Outcomes

[7.7 - Review of results, detectable trends, monitor performance, proficiency testing (PT), and interlaboratory comparison (ILC)]

- Evaluation and Outcomes
  - o Highlights
  - Internally Obtained Measurement Assurance Data (GLP 1)
  - Externally Obtained Measurement Assurance Data (GLP 1)
    - PT Participation Plan (e.g., 5-year plan)
- Status of Actions (Corrective & Improvement)
- Evaluation of Effectiveness of Actions

### **Other Relevant Factors**

- Monitoring Activities
- Training (e.g., Planned and accomplished training, training application and effectiveness, personnel competency, authorized signatories, succession planning)

## Management Review Outputs:

### **Record all Decisions and Actions Related to:**

- Quality Management System Effectiveness
- Laboratory Processes Effectiveness
- Improvement of Laboratory Activities Related to Fulfillment of ISO/IEC 17025, NIST HB 143 (Recognition), and NIST HB 150 (Accreditation)
- Provision of Required Resources
- Any Need for Change

## Management Review Action Plan<sup>3</sup>

SUMMARY:

Created by			Creation Date	•	Δ	ction # or ID					
Action Type <sup>a</sup>	Select one	Criteria <sup>b</sup>	Select one	Priority <sup>c</sup>	Select one	Source <sup>d</sup>	Select one				
Title/Short Description	Create a title or short description that can easily be referenced										
Finding/ Observation(s)	Describe in clear terms the finding that needs to be addressed										
Risk Assessment	Assess the risk to your laboratory as a result of the finding										
Root Cause	Use a common root cause analysis approach to evaluate why this happened (e.g., five whys)										
Proposed Action(s)	Describe what action(s) is proposed to resolve the finding(s)										
Due Date		Task Assigned To									
Completion Date		Task Verified By									
Final Action(s)	Describe what was the final action(s) taken to resolve the finding										
Action Effectiveness	Describe how was the action evaluated for effectiveness and if it proved to be effective										
Evaluation Date		Task Verified By									

<sup>a</sup>Action Types: Corrective Actions (CA), Risk Minimization (RM), Improvement Actions (IA); <sup>b</sup>Criteria: Meets Criteria (OK), Nonconformity (X), Comment (C); <sup>c</sup>Priority: High = 1, intermediate = 2, Low = 3; <sup>d</sup>Source: Complaint (C), Internal Audit (A), LAP Problems (LAP), Employee Observations (EO)

<sup>&</sup>lt;sup>3</sup> Copy and paste the table as needed for each action item that results from the Management Review. NIST Weights and Measures Page 5 of 6 October 2021

• Action Plan Log<sup>4</sup>

Action # or ID	Action Type	Creation Date	Title	Finding/Observation(s)	Proposed Action(s)	Assigned To	Due Date	Actual Completion Date	Evaluation for Effectiveness Date

<sup>&</sup>lt;sup>4</sup> Action Plan Log may be maintained electronically in a spreadsheet or database format. NIST Weights and Measures Page 6 of 6