

SAFETY, HEALTH AND ENVIRONMENTAL MANAGEMENT SYSTEM OPERATING PROCEDURE

Performance Measurement, Monitoring, and Instrument Calibration

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TABLE OF CONTENTS

<u>Section</u>	<u>Section Title</u>	<u>Page</u>
A.	PURPOSE AND APPLICABILITY	Page 3 of 5
B.	DEFINITIONS	Page 3 of 5
C.	PROCEDURAL STEPS	Page 3 of 5
D.	RECORDS MANAGEMENT	Page 4 of 5
E.	QUALITY ASSURANCE AND QUALITY CONTROL.....	Page 4 of 5
F.	REFERENCES.....	Page 5 of 5

ATTACHMENTS: None

A. PURPOSE AND APPLICABILITY

The purpose of this operating procedure (OP) is to establish a consistent process for monitoring and measuring the key characteristics of the Region's activities, products, and services (*i.e.*, processes) that could contribute to its significant aspects or impact a worker's health and/or safety. This OP also provides for ensuring equipment used to monitor/measure performance related to the process is properly calibrated. Typically, monitoring and measuring requirements are specified as performance indicators in the various management programs (MPs) and operational controls (OCs) established by the Region. Some of these indicators are established to meet reporting requirements passed down to the Region from higher Headquarters' functions.

This OP applies to all areas within the stated scope of the EPA Region 7 Safety & Health Management System (SHMS) and the Environmental Management System (EMS).

B. DEFINITIONS

All definitions may be found in the document titled *US Environmental Protection Agency Region 7 Safety, Health, and Environmental Management System Terms and Definitions* (SHEMS 1006.9000.02) contained in the SHMS Manual. For the purposes of this OP, the following terms apply:

- Activity, Product, or Service
- Calibrate
- Document
- Environmental Objective
- Environmental Target
- Management Program (MP)
- Operational Control
- Record
- Regional Safety & Health Manager (RSHM)
- Responsible Manager
- Safety & Health Objective
- Target

C. PROCEDURES

1. Monitoring and measuring allows decision makers to determine whether or not a specific process is operating within specific parameters and, if not, where changes need to be made in the process to achieve the desired level of performance. In considering what to measure/monitor relative to EMS and SHMS performance there are generally three categories of requirements that should be considered: 1) things that are monitored through taking quantitative measurements (*i.e.*, number of accidents, injuries or gallons of fuel consumed); 2) things that are monitored through a single assessment (*i.e.*, was a procedure updated on time); and 3) things that are monitored through examining trends (*i.e.*, progress toward achieving objectives and targets). To this end, the SHMS and EMS Coordinators, with assistance from their Associate Coordinators, Management Program Leads, and the Regional Safety & Health Manager (RSHM – SHMS only) will develop and maintain a master list of all monitoring and measuring requirements (a SHMS or EMS document) pertinent to the respective management system that fall within Categories #1 and #2 above. Requirements related to trends (Category #3), particularly the examination of progress toward achieving objectives and targets, are documented on the individual MP forms as needed

(typically quarterly) and do not need to be tracked on the master list.

2. The Master List of Monitoring and Measuring requirements is intended to be a “living document” in that it should be updated whenever new requirements are discerned throughout the management system cycle. In developing the list, the Coordinators and those who assist them should consider the various objectives, targets, tasks, and requirements specified in the various MPs, as well as requirements related to the maintenance of operational controls. In addition, they should consider any underlying activities that “feed into” the processes being monitored or measured to determine if monitoring/measuring at these subordinate levels will enhance the ability of the Region to make better and more informed decisions regarding its performance. Finally, the SHMS Coordinator and RSHM should consider and include any EPA Safety and Sustainability Division (SSD) reporting metrics that are not already being accounted for within one of the Region’s MPs. At a minimum the master list of monitoring and measuring requirements shall include the:
 - MP and/or OC from which the monitoring/measuring requirement is derived;
 - Parameters and/or processes being monitored/measured;
 - Frequency of measuring/monitoring;
 - Person responsible; and
 - Location of the appropriate record.
3. Periodically, but at least once each management system cycle, the Coordinators and others, as appropriate, will review the master list of monitoring and measuring requirements to determine if it is sufficient to adequately track the performance of their system and/or to make adequately informed decisions about the Region’s performance. If it is determined that additional monitoring and/or measurements are needed, the Coordinator will work with the appropriate manager responsible for the process to develop the indicator and then add it to the Master List.
4. The Coordinators, and others as appropriate, shall develop a master list of all equipment that requires calibration and is used to monitor/measure performance within the Region’s SHMS (a SHMS document) and EMS (an EMS document). These lists shall include the name, manufacturer, model number of each piece of equipment; the frequency of calibration; when the last calibration was completed and when the next is due; who is responsible for the calibration; and the location of the calibration record. The list of equipment requiring calibration should be reviewed and updated whenever the Master List of Monitoring and Measuring Requirements is reviewed to ensure any new equipment is identified and added to the calibration list. In addition, the Coordinators should contact the person(s) responsible for ensuring equipment calibrations are completed as needed to update the list with new last and next calibration dates.

D. RECORDS MANAGEMENT

This OP may require the generation of SHMS and EMS records. Any records created will be managed in accordance with the most current version of SHEMS 1006.7210.02, *Document Control*, and SHEMS 1006.7210.17, *Records Management*.

E. QUALITY ASSURANCE AND QUALITY CONTROL

The quality assurance and quality control (QA/QC) success of the monitoring and measuring process, as detailed in this OP, will be determined through the internal and external conformance audit processes.

Deficiencies noted during these audits will be managed through the Region's Corrective/Preventive Action Process as defined in the current version of SHEMS 1006.7210.12.

F. REFERENCES

Current versions of the following references are assumed if no date is provided.

1. ISO 14004:2004(E); *Environmental Management Systems – General Guidelines on Principles, Systems, and Support Techniques*; November 15, 2004
2. OHSAS 18001:2007; *Occupational Health and Safety Management Systems – Requirements*; July 2007
3. US EPA R7, *US Environmental Protection Agency Region 7 Safety, Health, and Environmental Management System Terms and Definitions*, SHEMS 1006.9000.02
4. US EPA R7, *Document Control*, SHEMS 1006.7210.02
5. US EPA R7, *Corrective/Preventive Action Process*, SHEMS 1006.7210.12
6. US EPA R7, *Records Management*, SHEMS 1006.7210.17