

## Control of Measurement and Test Equipment

SSFL SOP 16  
Revision: 0  
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Prepared: R. Kaspzyk

Technical Review: C. Zakowski

QA Review: J. Oxford

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Signature/Date

### 1.0 Objective

The objective of this technical standard operating procedure (SOP) is to establish the baseline requirements, procedures, and responsibilities inherent to the control and use of all measurement and test equipment (M&TE; e.g., hand-held field monitoring equipment, global positioning system (GPS) unit) for the Santa Susana Field Laboratory (SSFL) site.

### 2.0 Background

#### 2.1 Definitions

**Requisitioner** – The person responsible for ordering the leased or purchased equipment.

**Traceability** – The ability to trace the history, application, or location of an item and like items or activities by means of recorded identification.

#### 2.2 Associated Procedures

- SSFL SOP 6, *Field Measurement of Total Organic Vapors*
- SSFL SOP 7, *Field Measurement of Residual Radiation*
- SSFL SOP 8, *Field Data Collection Documents, Content, and Control*
- Manufacturer's operating and maintenance and calibration procedures

#### 2.3 Discussion

All M&TE used will be rented or leased from an outside vendor, or purchased. It is essential that measurements and tests resulting from the use of equipment be of the highest accountability and integrity. The equipment user should completely understand the operational instructions and comply with the specifications in the manufacturer's operations and maintenance manual and follow calibration procedures and in accordance with the Field Sampling Plan (FSP) Addendum.

### 3.0 Responsibilities

All staff with direct control and/or use of M&TE are responsible for being knowledgeable of and understanding and implementing the requirements contained herein. In addition, all field staff will be required to review the FSP Addendum, particularly as where the Addendum affects this SOP. It is possible that a variance from this SOP be identified as part of the Data Gap Investigation which would be described in the FSP Addendum.

The field team leader (FTL) or designee (equipment coordinator, quality assurance coordinator, etc.) is responsible for initiating and tracking the requirements contained herein.

### 4.0 Requirements for M&TE

- Determine and implement M&TE-related project-specific requirements.
- Follow the maintenance and calibration procedures when using M&TE.
- Obtain the maintenance and calibration procedures if they are missing or incomplete.
- Attach or include the maintenance and calibration procedures with the M&TE.
- Prepare and record maintenance and calibration in an equipment log or a field log as appropriate (Attachment A).
- Maintain M&TE records.
- Label M&TE requiring routine or scheduled calibration (when required).
- Perform calibration using the appropriate procedure and calibration standards; maintenance will be discussed with the supplier before conduct.

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- Identify and take action on nonconforming M&TE.

### 5.0 Procedures

#### 5.1 Obtain the Operating and Maintenance and Calibration Documents

For leased equipment, the requisitioner will request the maintenance and calibration procedures, the latest calibration record, and the calibration standards certification be provided to CDM Smith. If this information is not delivered with the M&TE, ask the procurement division to request it from the vendor.

#### 5.2 Prepare and Record Maintenance and Calibration Records

The FTL or designee will record the initial daily maintenance and calibration events in a field logbook. Subsequent maintenance and calibration events will be reported to the FTL and recorded at the end of the each day.

#### 5.3 Operating, Maintaining, or Calibrating an M&TE Item

The FTL or designee and user must operate, maintain, and calibrate M&TE in accordance with the maintenance and calibration procedures. Record maintenance and calibration actions in the equipment log or field log.

#### 5.4 Shipment

The rental equipment supplier must inspect the item to ensure that the maintenance and calibration procedures and latest calibration and standards certification records are included before shipment. If any documentation is missing or incomplete, the item should not be shipped.

The receiver (FTL or field requisitioner) will communicate all documentation requirements to the shipper. They must also inspect and confirm the requested equipment and records were provided upon receipt. If documentation is missing, immediately contact the procurement division and request that they obtain the documentation from the vendor.

#### 5.5 Records Maintenance

The receiver must also forward the packing slip to the procurement division.

The user must:

- Forward the completed field log to the FTL and SSFL project manager for inclusion in the project files.
- Retain the most current maintenance and calibration record and calibration standards certifications with the M&TE item and forward previous versions to the FTL and project manager for inclusion in the project files.

#### 5.6 Traceability of Calibration Standards

The FTL or designee and user must:

- Order calibration standards designated by the supplier.
- Request and obtain certifications for standards that clearly state the traceability.
- Request and obtain material safety data sheets for the standards.
- Monitor standards that are perishable and consume or dispose of them on or before the expiration date.

#### 5.7 M&TE That Fails Calibration

The FTL or designee must:

- Immediately discontinue use of the equipment and segregate the item from other equipment. Notify the FTL and take immediate action to replace the item.
- Review the current and previous maintenance and calibration records to determine if the validity of current or previous measurement and test results could have been affected and notify the FTL of the results of the review.

#### 5.8 Determine if Other Related Project Requirements Apply

In the event a different or unique piece of equipment is needed on short notice for site-specific activity, the FTL or designee

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will determine if other M&TE project-related requirements could apply. If M&TE-related requirements apply, obtain a copy of them and review and implement as appropriate.

### 6.0 Restrictions/Limitations

Calibration and maintenance for field instruments are critical to collecting reputable data. If field monitoring equipment is not working properly, it should not be used. Work will be suspended until functional monitoring equipment is available.

### 7.0 References

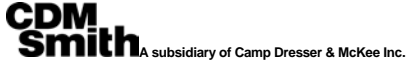
No references used to develop this SOP.

### 8.0 Attachments

Attachment A – Maintenance and Calibration Form

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**Attachment A**

	<b>Maintenance and Calibration</b>
Date: _____ Time: (a.m./p.m.) _____	
Employee Name: _____	Equipment Description: _____
Contract/Project: _____	Equipment ID No.: _____
Activity: _____	Equipment Serial No.: _____
<b>Maintenance</b>	
Maintenance Performed: _____	
Comments: _____	
Signature: _____	Date: _____
<b>Calibration/Field Check</b>	
Calibration Standard: _____	Concentration of Standard: _____
Lot No. of Calibration Standard: _____	Expiration Date of Calibration Standard: _____
Pre-Calibration Reading: _____	Post-Calibration Reading: _____
Additional Readings: _____	Additional Readings: _____
Additional Readings: _____	Additional Readings: _____
Pre-Field Check Reading: _____	Post-Field Check Reading: _____
Adjustment(s): _____	
Calibration: <input type="checkbox"/> Passed <input type="checkbox"/> Failed	
Comments: _____	
Signature: _____	Date: _____