

QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION SERIES	
TITLE	<b>PROCUREMENT AND ACCEPTANCE TESTING PROCEDURES FOR SCENE MONITORING EQUIPMENT</b>
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## **1.0 PURPOSE AND APPLICABILITY**

This standard operating procedure (SOP) describes the steps for procurement and acceptance testing of photographic and video equipment. This equipment is purchased for new installations or as replacement equipment at scene monitoring sites. Acceptance testing is performed to ensure that all systems are fully functional and operating within acceptable limits when shipped to designated sites.

Purchasing, fabrication, and acceptance testing of a full system or individual components of a system are addressed in the following technical instructions (TIs):

- TI 4005-1000      *Procurement and Acceptance Testing Procedures for 35 mm Automatic Camera Systems*
- TI 4005-1001      *Procurement and Acceptance Testing Procedures for 8 mm Automatic Camera Systems*
- TI 4005-1050      *Procurement and Acceptance Testing of SVHS Time-Lapse Video Camera Systems for the Healy Clean Coal Project*
- TI 4005-1090      *Procurement and Acceptance Testing Procedures for the Remote High-Resolution Digital Camera System (RDCS-100)*

## **2.0 RESPONSIBILITIES**

### **2.1 PROJECT MANAGER**

The project manager shall:

- Quote camera specifications, prices, and delivery times to purchasing agents.
- Obtain information regarding specific equipment needed.
- Obtain site information, contact person's name, telephone number, shipping address, and any other special instructions needed to ship equipment to a site.
- Coordinate purchasing with the data coordinator.
- Coordinate acceptance testing with the data coordinator and field specialist.

### **2.2 DATA COORDINATOR**

The data coordinator shall:

- Prepare equipment purchase orders as directed by the project manager and send the orders to appropriate vendors.

- Receive, label, log, and inventory all equipment.
- Maintain inventory information in the equipment database.
- Assemble photographic equipment and perform initial quality assurance checks.
- Ship camera and lenses to a local factory-authorized repair facility for a full system check.
- Take test photographs with the camera to verify exposure and operation.
- Assemble the photographic system (camera, cables, timer, batteries, controller, Palmtop, etc.) and perform acceptance testing procedures.
- Assemble the camera enclosures (including fabricating and installing camera tripods and security plates).
- Verify tripod placement and security of windows and doors in the camera enclosure.
- Assemble a site operator's manual and all necessary photographic monitoring supplies.
- Package and ship the photographic systems according to specifications.

### **2.3 FIELD SPECIALIST**

The field specialist shall:

- Assemble the video equipment (including camera, cables, monitor, and SVHS recorder) and perform acceptance testing procedures.
- Assemble the video enclosures (including heaters, fans, power systems, and any required power systems, camera mounts, and security plates) and perform acceptance testing procedures.
- Assemble a site operator's manual and all necessary time-lapse video monitoring supplies.
- Package and ship the video systems according to specifications.

### **2.4 COMMUNICATIONS TECHNICIAN**

A trained and certified communications technician shall acceptance test any communications system used in connection with a photographic or video monitoring system. These communications systems may include a microwave transmitter/receiver system or other specialized communications system.

### **3.0 REQUIRED EQUIPMENT AND MATERIALS**

#### **3.1 REQUIRED EQUIPMENT AND MATERIALS FOR 35 MM OR 8 MM SYSTEMS**

Equipment and materials required to test a 35 mm or 8 mm photographic system include:

- A camera.
- A lens (for 35 mm camera only).
- A winding system (for 35 mm camera only).
- A camera databack (for 35 mm camera only).
- A UV filter (for 35 mm camera only).
- Programmable timer and cables.
- Batteries.
- Film.
- A documentation chart.
- *A Visibility Network Photo Log* (35 mm camera only).
- *A Camera Test Form* (8 mm camera only).
- A tripod mount and mounting hardware.
- An environmentally-sealed and lockable enclosure.

Equipment and materials required to test a camera system at a local factory-authorized dealer also include a multi-plex camera tester.

#### **3.2 REQUIRED EQUIPMENT AND MATERIALS FOR SVHS VIDEO SYSTEMS**

Equipment and materials required to test an SVHS time-lapse video system include:

- A high-resolution color video camera with lens.
- A programmable SVHS video recorder.
- A color video monitor.
- Power and signal cables.

- A cross-polarizing lens filter.
- A camera enclosure.
- SVHS videotapes.
- A voltmeter.
- *An SVHS Time-Lapse Video System Test Log.*

### **3.3 REQUIRED EQUIPMENT AND MATERIALS FOR DIGITAL CAMERA SYSTEMS**

Equipment and materials required to test a digital camera system include:

- A voltmeter test platform.
- A high-resolution digital camera with zoom lens, integrated scripting, and batteries installed.
- Camera cables.
- A PDA (Personal Digital Assistant) palm computer interface with batteries installed and HotSync cable.
- A custom-designed controller.
- A battery-backed power system (AC or solar power).
- A DC charge regulator.
- A tripod with quick release plate.
- Miscellaneous hardware and controller components.
- A high-resolution color video camera with lens.
- A camera enclosure.
- *A Digital Camera System Test Log.*

### **3.4 INVENTORY**

An up-to-date accounting of purchase and warranty information, location, and status of all purchased equipment is maintained. Primary accounting is performed on an equipment database developed by ARS. The database can be searched and sorted by fields to yield reports such as equipment listings by site, equipment type, manufacturer, model number, serial number, property number, purchase order number, date purchased, or a variety of additional search fields.

## **4.0 METHODS**

This section includes the following three (3) subsections:

- 4.1 Procurement
- 4.2 Acceptance Testing
- 4.3 Shipping

### **4.1 PROCUREMENT**

Purchase Orders (POs) for system components or fully integrated systems are generated by the data coordinator and sent to the project manager for approval. Upon approval, the POs are sent to the appropriate equipment vendors. Upon arrival at ARS, the equipment is cross-checked against the PO and readied for acceptance testing. Complete descriptions of procurement procedures are detailed in the system-specific TIs listed in Section 1.0

All photographic and video system components purchased undergo thorough manufacturer testing. All components are guaranteed.

### **4.2 ACCEPTANCE TESTING**

Photographic or video equipment purchased from a manufacturer is subject to thorough inspection and acceptance testing upon receipt at ARS. These inspections include individual component and full system checks to verify that the equipment is operating within manufacturer's specifications. Enclosures are also prepared for monitoring component installation, and operator's manuals and supplies are prepared for shipment to the monitoring sites.

ARS has a long, established relationship with local factory-authorized repair facilities. These facilities provide prompt, thorough photographic testing and preventive maintenance and repair services. Cameras that pass all tests are then tested as part of the integrated monitoring system.

Complete descriptions for ARS testing and factory-authorized dealer testing are detailed in the system-specific TIs listed in Section 1.0.

### **4.3 SHIPPING**

Integrated photographic systems or individual components are packed for shipping following successful testing. All shipments will be made by the most expedient, cost-effective method. Packing slips containing item description, serial number, quantity, weight, and insurance value for all shipments accompany each shipping container. A record of the shipment including a copy of the packing slip is kept on file by the data coordinator.