

# Respirator Issuance and Control

**Tank Farm Plant Operating Procedure**

**General**

## Changes “Other Than Inconsequential” Require These Additional Reviews:

222-S Laboratory  
(Keith Greenough)

**USQ # N/A-4**

CHANGE HISTORY ( ≤ LAST 5 REV-MODS )			
Rev-Mod	Release Date	Justification	Summary of Changes
B-6	09/30/2014	Per Radcon. Request	Page 11 – Delete Step 5.1.2.2 Page 14 – Delete Step 5.1.6
B-5	08/19/2014	Inconsequential Change	Change Base Ops to Production Ops
B-4	01/07/2014	<p>Document Control/Operations Request</p> <p>Operations Request</p> <p>Actual Site Forms name.</p> <p>Operations Request</p> <p>To conform to TFC-OPS-OPER-STD-01 Operations Request</p> <p>To conform to TFC-OPS-OPER-STD-01</p>	<p>Multiple Pages: Deleting Attachments 1,2,3 and 4 and refer end user to the following Site Forms: • A-6006-491• A-6006-490• A-6006-489• A-6006-492</p> <p>Page 5: Clarified Work Control Documents definition.</p> <p>Multiple Pages: Changed "Issues and Concerns Form" to Respiratory Issues and Concerns Form".</p> <p>Page 8, 14: Deleted Warning "Scott AV-3000 is the only respirator to be used working in an arch flash boundary. Utilizing any other respirator may result in injury and/or death." in 3.1 Personnel Safety and before Step 5.1.7.</p> <p>Page 9: Added to performance documents: •A-6006-489 •A-6006-490•A-6006-491•A-6006-492•A-6005-593•A-6006-205•A-6004-341. Updated Prerequisite Training.</p> <p>Page 21, 22: Updated sign in/sign out and inspection process for bottle cart breathing air.</p> <p>Page 23: Consolidated Notes for section 5.2.</p> <p>Page 25: Added Note for recording bottle cart calibrations.</p> <p>Page 27: Added note for steps to be performed by FWS to allow steps to begin with an action verb.</p>
B-3	11/13/2013	Engineering request.	Deleted TO-020-024 from performance document because it was replaced by DOE-0352-008.
B-2	07/25/2013	Operations request and WRPS-PER-2013-0367	Modified Scope statement to include additional respirator station at MO-568 and to address WRPS-PER-2013-0367

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# Respirator Issuance and Control

## 1.0 PURPOSE AND SCOPE

### 1.1 Purpose

This procedure provides instructions for storing, issuing and controlling the inventory of respirators and equipment at the Respiratory Issue Station per DOE-0352, Hanford Site Respiratory Protection Program (HSRPP).

### 1.2 Scope

This procedure applies to the storage, issuance and control of respirators and equipment at the following Respiratory Issue Stations:

#### Respiratory Issue Station Locations

There are four Respiratory Issue Stations at the Tank Farm complex. Each station is manned by qualified Mask Station Issuers at the following locations:

- 2704-HV, G-127 (373-2082)
  - Closure Operations Issue Station
- 278-AW (373-0050)
  - Production Operations Issue Station
- 222-S, Room 5D corridor 8J (372-2938)
  - Laboratory Issue Station
- MO-568 (509) 392-2043
  - Construction Satellite Issue Station.

# Respirator Issuance and Control

## 2.0 INFORMATION

### 2.1 Terms and Definitions

Voluntary Use /Upgrade	The Safety & Health professional is the primary individual responsible to evaluate voluntary use and/or upgrade of respiratory protection. The Respiratory Protection Form (RPF) will identify respiratory protection that may be used when voluntary use or an upgrade is requested.
Respiratory Protection Form A-6005-593	When the IH or Radiological Work Planner/Engineer specify the required respiratory protection, type of respiratory equipment (i.e., SCBA, PAPR, APR ), type of canister/cartridge and change out schedule to be used. The RPF document will be provided to the respiratory issue station by the FWS or a management designated person.
Work - Control Documents	<ul style="list-style-type: none"><li>• Job hazard Analysis (JHA), Standing Job Hazard Analysis (SJHA), and Abnormal Operating Procedure (AOP), Standard Operating Procedures (SOP). When these documents require the use of respiratory protection a Respiratory Protection Form may be completed or refer the user to a secondary document that will have a RPF attached, such as a TVIS</li><li>• RWP's and TVIS are a secondary document and can only be used when directed by a Work Control Document or an RPF.</li></ul>

# Respirator Issuance and Control

## 2.2 General Information

### Issuer Responsibilities

- Maintain positive control of respiratory equipment at the Respiratory Issue Station
- When station is not manned control access by keeping doors and gate locked
- Users receive respiratory that is clean and good working order
- Verify correct respiratory equipment configuration.

### Management/Field Work Supervisor

- Ensures issuers are trained and qualified
- Ensure respiratory issue station receives Respiratory Protection Form (RPF)
- Proper care, use and return of respiratory equipment is enforced
- Employees know the hazard that requires the use of the respiratory equipment and any job specific limitations for the assigned tasks. Issues with respiratory should be resolved in the pre-job
- Ensures positive control of respiratory is maintained at Issue Station
- Assists on the completion of a PER and Respiratory Issues and Concerns form (A-6006-205) when requested by respiratory user.

### Respiratory User

- Meet requirements for respiratory use. (clean shaven, weight loss/gain, dental work or other condition(s) that could affect use)
- Provide documentation for training, mask fit, and medical clearance for respiratory equipment
- Signing for respiratory equipment received states the user meets respiratory qualifications and has received the correct equipment per RPF and work control document
- Maintain positive control of respiratory equipment and return equipment before the end of the shift unless notification has been made to the issue station for overtime use
- Notify management and issue station of failed equipment, respiratory issues or concerns and complete a PER and Respiratory Issues and Concerns Form.

## Respirator Issuance and Control

### 2.2 General Information (Cont.)

#### The Mask Station Issuer Duties Include

- Track respiratory equipment issued and returned
- Properly store and control respiratory equipment in a designated and secure area
- Store respirators and associated respiratory protection equipment in the facility/project respiratory controlled distribution area in a manner that will protect the integrity of the equipment against physical and chemical agents such as sunlight, heat, cold, extreme cold, excessive moisture, mice droppings, dust or damaging chemicals
- Perform monthly accountability of designated respiratory equipment using established equipment checklists sheets
- Assign unique identifiers to new equipment and add to the appropriate respiratory inventory logs
- Assist in the completion of a PER and Respiratory Issue and concerns form when requested and notification to the RPPA ( Respiratory Protection Program Administrator)
- Prior to issuing respiratory equipment, verify that the wearer is authorized to use requested respiratory equipment specified for the job/task on the work control document and has a current mask fit, respiratory training and physical
- Issue cartridges per the RPF
- Confirm damaged respiratory equipment is tagged, logged and sent to the Hanford Fire Department for repair
- Maintain and update inventory logs of repaired, calibrated or removed from service respiratory equipment
- Maintain appropriate levels of stock in distribution area, order supplies when required
- Track, log and notify Respiratory Station Manager of damaged, failed equipment or equipment not turned in at the end of shift or after two consecutive shifts. A PER and Respiratory Issues and Concerns form should be completed
- Perform housekeeping duties of mask station
- If needed, provide turn over to oncoming issuer
- Provide assistance when requested for completion of the Respiratory Issues and Concerns form.

## Respirator Issuance and Control

### 2.2 General Information (Cont.)

#### **Basic Requirements and Training for Respirator User:**

- Physical
- Mask Fit (Unless restricted to hood only)
- Received training on respiratory equipment
- Respiratory Knowledge Initial

**OR**

Respiratory Knowledge Based Refresher.

### 3.0 PRECAUTIONS AND LIMITATIONS

#### 3.1 Personnel Safety

WARNING - Mixing different manufacture's respiratory equipment may result in equipment malfunction and serious injury and/or death.

WARNING - Failure to select a proper respirator may result in personnel injury and/or death.

## Respirator Issuance and Control

### 4.0 PREREQUISITES

#### 4.1 Special Tools, Equipment and Supplies

The following supplies may be needed to perform this procedure:

- Hearing protection
- Safety glasses
- Safety shoes
- Leather or equivalent safety gloves
- Other tools, equipment and supplies as identified by Shift Manager/OE/FWS.

#### 4.2 Performance Documents

The following Procedures may be needed to perform this procedure:

- TFC-ESHQ-S IH-C-05, Respiratory Protection
- TFC-ESHQ-S-STD-24, Bloodborne Pathogen Exposure Control Standard
- TFC-ESHQ-S-STD-25, Storing, Using, Handling, and Transporting Compressed and Liquefied Gases
- DOE-0352, Hanford Site Respiratory Protection Program
- DOE-0352-008 Cleaning and In Service Testing of SCOTT E-Z Flow Regulator.
- A-6006-489- Bulk Issue/ Equipment Repair / Calibration Log
- A-6006-490- Powered Air Purifying Respirator Sign-In / Sign-Out Log
- A-6006-491-Respiratory Equipment Sign-In/ Sign-Out Log
- A-6006-492-Breathing Air Cart Sign-In / Sign-Out Log
- A-6005-593-Respiratory Protection Form
- A-6006-205-Respiratory Protection Issue and Concerns Form
- A-6004-341-Air Systems Breathing Air Bottle Cart Checklist Form

#### 4.3 Field Preparation

4.3.1 **CONFIRM** working to most current copy of this procedure.

## Respirator Issuance and Control

### 4.4 Prerequisite Training

The following annual training must be complete and current prior to assuming an assignment as a Respiratory Station Issuer:

- Respiratory Issuer Training (course # 357845)
- Knowledge-Base Respiratory Training (course # 020066)
- Respiratory Protection Issuer Training (course #020104)
- Respiratory equipment training specific for the issue station you're assigned
- TOC Blood borne Pathogen (course #351526)
- Demonstrate the ability to perform the cleaning, inspection, of respiratory regulators per procedure DOE-0352-008
- Ability to locate and use related administrative procedures.

## Respirator Issuance and Control

### 5.0 PROCEDURE

#### 5.1 Issuing Respirators

5.1.1 FWS/ DESIGNEE **PROVIDE** a Respiratory Protection Form (RPF) to the Respiratory Issue Station (Site Form A-6005-593).

5.1.2 **REVIEW** the RPF for the following:

- Prescribed or identified for voluntary use respiratory equipment (SCBA, PAPR, APR, Hood /full face)

NOTE - All chemical canister/cartridges require a change out schedule including canister/cartridges that have the end of service life indicator, i.e., ESLI.

- Canister/cartridges. Type of canister/ cartridge and change out schedule for chemical cartridges
- Equipment limitations or restrictions (i.e., supplied air hose lengths, Carri-Air 5 minute required/not required).

5.1.2.1 **ISSUE** only what has been prescribed or identified for voluntary use per RPF.

NOTE - Copies of mask fit cards will be accepted as long as all information is legible and picture of user is clear.

- Expiration dates are good until midnight of the day of expiration.  
EXAMPLE: 5/31/2007 expires at 11:59 pm (2359hrs) on that date.
- Use of a mask fit card will only be required when access to the Resp/Qual/TRN system icon is not available.

5.1.3 **IF** access to the Resp/Qual/TRN system icon is available, **GO TO** Step 5.1.5.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

5.1.4 **IF** access to Resp/Qual/TRN system icon is not available, **PERFORM** the following:

5.1.4.1 **CHECK** the following on the user mask fit card to confirm it is not expired:

- Mask fit date (not required for hood use)
- Appearance of user to picture
- Physical date
- Approved respirators.

5.1.4.2 **CONFIRM** the following using a copy of training report provided by Respirator user:

- User is qualified for respiratory equipment requested
- Qualification is current (not expired).

NOTE - Specific training requirements for different types of respiratory equipment is provided in Table 1.

5.1.5 **ACCESS** Respiratory Qualification /Training **AND**

**PERFORM** the following:

5.1.5.1 **DOUBLE CLICK** the RESP\QUAL\TRN icon on desktop.

NOTE - If the person you are looking up has no current training, a blank screen will show that states, "Current Query has no Results.

5.1.5.2 **ENTER** HID minus the h of the worker **AND**

**CLICK** submit.

NOTE - The user can but does not need to provide a mask fit card, the RESP/QUAL/TRN icon can be used to verify the users physical date, specific respiratory equipment qualification, respiratory training, mask fit, mask type, size and mask fit picture.

5.1.5.3 **CONFIRM** the word CLEAR appears in the medical section and physical date is current.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

5.1.5.4 **IF** the word **CLEAR** is not present or there is a discrepancy on the physical date, **STOP AND**

- a. **IF** during dayshift, **CALL** HPMC for a medical clarification.
- b. **IF** during off shift, **ASK** that person to resolve all discrepancies through their manager.

5.1.5.5 **CONFIRM** qualification for specific respiratory equipment requested and that training is current (not expired).

5.1.5.6 **CHECK** the picture against the appearance of the user, with special attention to the following:

- NOTE - If an employee receives a mask fit clean-shaven, and later grows a mustache, issuers will not issue respirators for use, because additional facial hair voids the mask fit approval. The user must return to the Hammer Mask Fit Station for evaluation or a new mask fit. A new picture will be taken showing approved facial hair.
- If an employee receives a mask fit with an approved mustache, or facial hair that is not in the sealing surface and later shaves it, becoming clean-shaven, the user will receive a respirator. Absence of facial hair doesn't affect fit.
  - Any additional facial hair.
  - Dental work that could affect fit, i.e., braces, dentures, extractions etc.
  - Facial piercing in sealing area
  - Obvious weight gain or loss.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

#### WARNING

**Failure to select a proper respirator may result in personnel injury and/or death.**

#### WARNING

**Mixing different manufacture's respiratory equipment may result in equipment malfunction and serious injury and/or death.**

NOTE - When either outside or inside ambient temperature is at or below 32°, tight fitting face pieces must be equipped with a nose cup in accordance with manufacturer's instructions.

5.1.6 **WHEN** the following have been verified,

- Respiratory Protection Form,
- User respiratory qualifications.

**ISSUE** the respiratory equipment in accordance with Steps 5.1.7 through 5.1.15.4 and the guidance provided in each attachment listed in the Table below:

Attachment 1 - Scott O-Vista 2000/CS	Attachment 2 - Scott AV-2000/CS
Attachment 3 - Scott AV-3000	Attachment 4 - Scott "Weld-O-Vista" Mask
Attachment 5 - MSA Ultra Elite	Attachment 6 - MSA UltraTwin/Vue/DuoTwin
Attachment 7 - MSA Advantage® 200LS	Attachment 8 - 3M 6000 Series Full Face
Attachment 9 - Self-Contained Breathing Apparatus (SCBA)	Attachment 10 - Carri-Air
Attachment 11 - SKA-PAK/EZ-FLO	Attachment 12 - PAPR MSA OptimAir TL
Attachment 13 - PAPR 3M Breathe Easy	Attachment 14 - Breathing Air Cart Issuance and Control
Attachment 15 - Tank Farm Voice Communicators	Attachment 16 - Change Out Criteria and Expiration Dates for Respirator Cartridges or Canisters
Attachment 17 - Mask Cartridge Shelf Life	

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

NOTE - There are 4 Sign-in/Sign-out logs:

- Respiratory Equipment Sign-In/Sign-Out Log (Site Form A-6006-491),
- Powered Air Purifying Respirator Sign-In/Sign-Out Log (Site Form A-6006-490),
- Bulk Issue / Equipment Repair / Calibration Log (Site Form A-6006-489),
- A-6006-492 Breathing Air Cart Sign-In/Sign-Out Log (Site Form A-6006-492).

5.1.7 **IF** issuing to individual users of Respiratory Equipment, **COMPLETE** Respiratory Equipment Sign-In/Sign-Out Log as follows:

5.1.7.1 **PRINT** users name.

5.1.7.2 **ENTER** the following in correct column:

- Work control document number located on the RPF. If a TVIS is identified on the RPF then it will also be recorded
- Location of use, (i.e., farm or building number).

5.1.7.3 **ENTER** the following in correct columns of log sheet as applicable:

- Equipment ID ( i.e., SCBA, Ska-Pak, Air cylinder)
- Carry case number (if applicable)
- Type of canister/cartridge
- Mask manufacturer, style and size
- Voice communicator.

5.1.7.4 **ENTER** Date out and issuer's initials.

5.1.7.5 **REQUEST** user sign Respiratory Equipment Sign-In/Sign-Out Log for all equipment received.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

5.1.8 **WHEN** equipment is returned to the issue station, **ENTER** Date in and issuer initials.

5.1.8.1 **INSPECT** all returned respiratory equipment for damage prior to cleaning and reuse.

5.1.9 **REVIEW** Respiratory Equipment Sign-In/Sign-Out Log before the end of every shift **AND**

**NOTIFY** the user and/or their manager of any equipment that is not returned.

5.1.9.1 **INSTRUCT** the user and/or their manager to turn in equipment that can't be returned before the end of the shift into the Production Ops. Shift office.

NOTE - Equipment may be kept for a maximum of 2 consecutive shifts on the same work control document with notification from the user to the respiratory issuing station.

5.1.9.2 **PLACE** a colored tab with brief explanation next to a respiratory users name in Respiratory Equipment Sign-In/Sign-Out Log for equipment that has been requested to be kept for use into the next shift.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

5.1.10 **IF** issuing PAPR respirators, **COMPLETE** Powered Air Purifying Respirator Sign-In/Sign-Out Log as follows:

5.1.10.1 **PRINT** users name.

5.1.10.2 **ENTER** the following in correct column:

- Work control document number located on the RPF. If a TVIS is identified on the RPF then it will also be recorded
- Location of use, (i.e., farm or building number).

5.1.10.3 **ENTER** the following in correct columns as applicable:

- Equipment ID (Blower unit, battery pack)
- Number of cartridges
- Cartridge type
- Hood or for full face use, the mask manufacturer, style and size.

5.1.10.4 **ENTER** Date out **AND**.

Issuer **INITIAL**.

5.1.10.5 **REQUEST** user sign Powered Air Purifying Respirator Sign-In/Sign-Out Log for all equipment received.

NOTE - Equipment that will be kept into the next shift will be noted on the log in/ log out sheet. Equipment may be kept for a maximum of 2 consecutive shifts on the same work control document with notification from the user to the respiratory issuing station.

5.1.11 **REVIEW** Powered Air Purifying Respirator Sign-In/Sign-Out Log before the end of every shift **AND**

**NOTIFY** the user and/or their manager of any equipment that is not returned.

5.1.11.1 **PLACE** a colored tab with brief explanation next to a respiratory users name in the Powered Air Purifying Respirator Sign-In/Sign-Out Log (Site Form A-6006-490) for equipment that has been requested to be kept for use into the next shift.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

\_\_\_\_\_ 5.1.12 **IF** bulk issuing Respiratory Equipment, **COMPLETE** Bulk Issue / Equipment Repair / Calibration Log as follows:

\_\_\_\_\_ 5.1.12.1 **COMPLETE** information required at bottom of log.

\_\_\_\_\_ 5.1.12.2 **ENTER** property ID number in appropriate column.

NOTE - A qualified issuer is a person that has completed Respiratory Issuer Training course and will be identified on the HSWET (Hanford Site Worker Eligibility Tool) eligible worker List. Only Qualified Issuers may check out bulk equipment. The issuer requesting bulk respiratory equipment will be required to date and sign for issuance of bulk amounts of equipment. The signature indicates responsibility for the bulk equipment.

#### **Bulk Equipment Issuer**

\_\_\_\_\_ 5.1.12.3 **FILL** out Respiratory Equipment Sign-In/Sign-Out Log per Steps 5.1.7.1 through 5.1.7.4 **AND**

\_\_\_\_\_ **RETURN** it at the end of shift, completed, with property ID numbers and a user signature.

#### **Respiratory Station Issuer**

\_\_\_\_\_ 5.1.12.4 **CONFIRM** that entries are legible and correct on Respiratory Equipment Sign-In/Sign-Out Log returned with bulk equipment.

\_\_\_\_\_ 5.1.12.5 **CONFIRM** requesting Bulk Issuer signs Bulk Issue / Equipment Repair / Calibration Log.

NOTE - Equipment that will be kept into the next shift will be noted on the Respiratory Equipment Sign-In/Sign-Out Log .

- Equipment may be kept for a maximum of 2 consecutive shifts on the same work control document with notification to the Respiratory Issuing Station.
- Respiratory equipment that is loaned to another issue station, will be recorded on a Bulk Issue / Equipment Repair / Calibration Log for tracking purposes and will not be required to be returned after two consecutive shifts or return a completed Respiratory Equipment Sign-In/Sign-Out Log.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

- \_\_\_\_\_ 5.1.12.6 **REVIEW** the log before the end of every shift **AND**  
**NOTIFY** the user and/or their manager of any equipment that is not returned.
- \_\_\_\_\_ 5.1.12.7 **WHEN** the return of all bulk issued respiratory equipment has been verified, **INITIAL AND DATE** Bulk/Repair/calibration log.
- \_\_\_\_\_ 5.1.12.8 **ATTACH** Bulk Issue / Equipment Repair / Calibration Log prior to placing in the completed log book.
- \_\_\_\_\_ 5.1.12.9 **INSPECT** all returned respiratory equipment for damage prior to cleaning and reuse.
- \_\_\_\_\_ 5.1.13 **COMPLETE** Bottle Cart Breathing Air Cart Sign-In/Sign-Out Log for the specific cart located in the Bottle Cart binder as follows:
- NOTE - Training verification for bottle cart is not required for issuance. The POC/FWS will verify and assign qualified and trained personnel to operate bottle cart.
- \_\_\_\_\_ 5.1.13.1 **PRINT** POC/FWS name on the corresponding bottle cart log-in log-out for the cart being issued to the field.
- \_\_\_\_\_ 5.1.13.2 **ENTER** the following in the correct column:
- Work Control document number and work location,
  - Number of airline hose requested,
  - Length of airline hose.
- \_\_\_\_\_ 5.1.13.3 **IF** additional respiratory equipment is requested to be issued with the bottle cart and will be issued in the field,  
**GO** to step 5.1.12.
- \_\_\_\_\_ 5.1.13.4 **IF** issuing to individuals,  
**GO** to step 5.1.

## Respirator Issuance and Control

### 5.1 Issuing Respirators (Cont.)

NOTE - Bottle Carts may be kept longer than the maximum of 2 consecutive shifts on the same work control document because of their use and set up in the field with notification to the Respiratory Issuing Station.

- Respiratory equipment that is loaned to another issue station is recorded on a Bulk Issue / Equipment Repair / Calibration Log for tracking purposes and will not be required to be returned after two consecutive shifts.
- Issue station will be notified when the Bottle Cart location changes so it can be documented on Breathing Air Cart Sign-In/Sign-Out Log.

- \_\_\_\_\_ 5.1.13.5 **ENTER** date of issuer's initials.
- \_\_\_\_\_ 5.1.13.6 **REQUEST** POC/FWS to sign Breathing Air Cart Sign-In/Sign-Out Log.
- \_\_\_\_\_ 5.1.13.7 **ENSURE** a current copy of the Air Systems Breathing Air Bottle Cart Checklist (Site Form A-6004-341) is available on cart.
- \_\_\_\_\_ 5.1.13.8 **ENTER** date in and issuer initials on the corresponding Breathing Air Cart Sign-In/Sign-Out Log when equipment is returned to the issue station.
- \_\_\_\_\_ 5.1.14 **INSPECT** all returned equipment for damage prior to cleaning and reuse.
- 5.1.15 **IF** issuing Tank Farm Voice Communicators, **PERFORM** the following:
- \_\_\_\_\_ 5.1.15.1 **RECORD** voice communicators property ID number in column provide on Respiratory Equipment Sign In/Sign Out Log.
- NOTE - Batteries for communicators are not left in the units.
- Only non-rechargeable, 9-volt batteries are to be used with the communicators.
- \_\_\_\_\_ 5.1.15.2 **CHECK** communicator batteries **AND**  
**REPLACE** as needed or every two times used.
- \_\_\_\_\_ 5.1.15.3 **ENSURE** discarded used batteries are placed in the battery recycle receptacle.
- \_\_\_\_\_ 5.1.15.4 **INSPECT** the units prior to issuing.

## Respirator Issuance and Control

### 5.2 Requirements for Packaging and Cleaning

NOTE - Scott respiratory equipment will be cleaned per DOE-0352-008, most current revision.

- Respiratory equipment that requires repair/calibration is addressed in Section 5.3.
- For Asbestos work permit jobs that require the use of respiratory equipment, used equipment prior to being returned to the issue station may be required to meet one of the following packaging requirements. All packaging will be performed in the field prior to the return of equipment to issuance station.
- Negative Exposure Assessment (NEA) Used respirators will be wet wiped and considered non-asbestos contaminated.
- Respirators not used under a NEA shall be wet wiped and held pending air sample results, if sample results are below PEL then the respirators may be released as non-asbestos contaminated.
- Respirators whose sample results are above the PEL must be wet wiped and placed in a water soluble bag with an asbestos label and accompanied with a signed/dated note from the project supervisor stating they were wet wiped.
- Bio-Hazard (vomit, blood) contaminated respirators are not cleaned, they are packaged in Bio-Hazard bag if available and disposed of in approved containers.

- \_\_\_\_\_ 5.2.1      **PACKAGE** used respirators in cardboard boxes.
- \_\_\_\_\_ 5.2.2      **STAGE** packaged respirators for pickup by Unitec for cleaning.
- \_\_\_\_\_ 5.2.3      **RECORD** special instructions for the handling or cleaning of respirators on tape attached to the top of the box.
  - \_\_\_\_\_ 5.2.3.1      **CONTACT** IH for Bio-Hazard disposal guidance.
  - \_\_\_\_\_ 5.2.3.2      **CONTACT** the mask station RPPA for questions on packaging or acceptance for other contaminates.
- \_\_\_\_\_ 5.2.4      **WHEN** clean respirators are returned, **CONFIRM** a Return Sheet is provided to the Respiratory Issue Station.
- \_\_\_\_\_ 5.2.5      **PLACE** returned clean boxed respirators in designated storage area.

## Respirator Issuance and Control

### 5.3 General Respiratory Equipment Inspection/Repair

NOTE - Respiratory equipment found in need of calibration and/or repair during cleaning activities or inventory checks does not require a Respiratory Protection Issue and Concerns Form to be completed.

\_\_\_\_\_ 5.3.1     **TRACK AND RECORD** the calibration dates for equipment in the equipment status book

\_\_\_\_\_ 5.3.2     **ENTER** other ID numbers (serial number, PIN, cal date, or any general information) into the book.

NOTE - Bulk Issue / Equipment Repair / Calibration Log is kept in the equipment status book. HFD service department makes all repairs and calibrations on SCOTT Equipment.

\_\_\_\_\_ 5.3.3     **COMPLETE** Bulk Issue / Equipment Repair / Calibration Log for equipment sent in or returned from the HFD.

\_\_\_\_\_ 5.3.4     **TAG AND/OR LOG** all SCOTT supplied air equipment that is damaged or in need of repair/calibration with brief description of the repair/calibration needed on Bulk Issue / Equipment Repair / Calibration Log.

\_\_\_\_\_ 5.3.4.1    **ENSURE** the tag states the following:

- Issue station,
- Equipment identification number,
- Deficiency (for example, 278-AW Mask Station SCBA #16 missing O-ring).

\_\_\_\_\_ 5.3.4.2    **AFFIX** tag to the respiratory equipment identifying the problem (Example: harness strap needs replaced).

\_\_\_\_\_ 5.3.4.3    **SEND** Masks (APRs) in need of repair to Unitech:

## Respirator Issuance and Control

NOTE - PAPRS are not part of the mask stations monthly accountability inventory. They are only checked for expiration dates and to ensure there are enough available for use.

- PAPRs that are used or expired are returned to IH techs.
- Bottle carts due for calibration or repair will be recorded on the Breathing Air Cart Sign-In/Sign-Out Log.

- \_\_\_\_\_ 5.3.4.4 **SEND** Bottle carts due for calibration or repair to Fire Systems Maintenance.
- \_\_\_\_\_ 5.3.4.5 **WHEN** repaired equipment is returned, **HIGHLIGHT** the entry on Bulk Issue / Equipment Repair / Calibration Log to indicate its return.
- \_\_\_\_\_ 5.3.4.6 **WHEN** all equipment on sheet is returned, **MOVE** the log to completed section of the Respiratory Equipment Status book.

## Respirator Issuance and Control

### 5.4 Respiratory Equipment Infield Failure Actions

NOTE - In an effort to prevent future failures, the following actions will be taken to gather data on the failures and confirm the failed equipment is evaluated to determine the failure mechanism(s).

- Steps 5.4.1 through 5.4.4 are performed by Field Work Supervision (FWS).

\_\_\_\_\_ 5.4.1      **CONFIRM** the On-Call Safety Representative is notified.

\_\_\_\_\_ 5.4.2      **REQUEST** the following personnel to determine if the affected employee(s) can resume work with replacement equipment:

- On-call safety representative
- Affected employee(s)
- FWS.

\_\_\_\_\_ 5.4.3      **NOTIFY** the on-duty Shift Manager and Respiratory Issuing Station of the nature of the equipment failure and the decision for affected employee(s) to resume work.

\_\_\_\_\_ 5.4.4      **ENSURE** failed equipment is segregated and identified as out of service.

\_\_\_\_\_ 5.4.5      **RETURN** equipment to issuing mask station.

NOTE - The following action confirms the equipment will be evaluated by the fire department or applicable vendor to determine what may have caused the failure.

\_\_\_\_\_ 5.4.6      **REQUEST** a PER be completed.

\_\_\_\_\_ 5.4.7      **REQUEST** a Respiratory Protection Issue and Concerns form be completed with the PER attached to it.

\_\_\_\_\_ 5.4.8      **PRINT** copy of the Respiratory Issues and Concerns form **AND**  
**PROVIDE** to the respiratory issue station.

NOTE - The On-call safety representative, in conjunction with the respiratory protection subject matter expert are responsible for performing Step 5.4.9.

5.4.9      **DETERMINE** any follow-up actions needed.

5.4.10      **ATTACH** a copy of the failure questionnaire from Respiratory Issuing Station to failed equipment **AND**

5.4.10.1      **DELIVER** to HFD for evaluation,

5.4.10.2      **FORWARD** copies to RPPA.

## Respirator Issuance and Control

### 5.5 Ordering Equipment and Supplies

NOTE - Respiratory equipment and supplies are ordered as needed.

- Respiratory station inventory is maintained through rotation of supplies from supply building to the issue station.

5.5.1 **WHEN** inventory of supplies runs low, **NOTIFY** supply operator.

5.5.2 **ASSIGN** unique identifiers to new respiratory equipment **AND**  
**RECORD** new equipment in appropriate respiratory inventory logs.

## Respirator Issuance and Control

### 5.6 Perform Daily/Monthly Equipment Accountability

NOTE - A system of accountability for respiratory equipment is to be performed and documented monthly. Each type (i.e., SCBA, Ska-Paks) of respiratory equipment will have its own inventory check list with the equipment identification numbers listed.

- Respiratory Issue Station management may request additional equipment inventory checks as needed.

5.6.1 **OBTAIN** monthly inventory checklists for equipment from the Respiratory Monthly Inventory book **AND**

**PERFORM** the following:

5.6.1.1 **HIGHLIGHT OR MARK OFF** equipment ID numbers of all equipment that is located on checklist.

5.6.1.2 **RECORD** equipment ID numbers for all equipment that cannot be located in the comment section.

5.6.1.3 **SIGN AND DATE** Inventory Check List (s) for Respiratory Equipment **AND**

**PLACE** back in Monthly Inventory book.

## Respirator Issuance and Control

### 5.7 Maintain Bottle Inventory

5.7.1 **LOG** air cylinders out on Bulk Issue / Equipment Repair / Calibration Log when the following activities occur:

- When sent for inspection,
- When sent for hydro,
- When they will be left at the fire department for refill.

5.7.2 **TRANSPORT** compressed air bottles to and from the Hanford Fire Department in a designated vehicle that is properly equipped for bottle transport.

## Respirator Issuance and Control

### 5.7 Maintain Bottle Inventory (Cont.)

NOTE - A maximum of 20 full air cylinders may be transported at one time. Additional DOT requirements will be required for transporting more than 20 full air cylinders.

5.7.3 **CONFIRM** air cylinders due for Hydro are empty.

5.7.4 **IF** air cylinders due for Hydro are not empty, **PERFORM** the following:

5.7.4.1 **ISOLATE** area, using appropriate barriers, where cylinders will be vented.

5.7.4.2 **DON** appropriate PPE for hands, feet and eyes,

5.7.4.3 **VENT** slowly a few cylinders until empty.

5.7.5 **TRANSFERT** to the HFD at the following frequency:

- 60 min bottles every 5 yrs (carbon, fiberglass, aluminum)
- 30 min bottles every 5 yrs (carbon, fiberglass, aluminum)
- 5 min bottles every 3 yrs (fiberglass, aluminum).

5.7.6 **RECORD** air cylinder(s) ID# on A-6006-489 Bulk Issue / Equipment Repair / Calibration Log.

5.7.7 **WHEN** air cylinder hydro or refill is complete **AND**  
**WHEN** pickup from HFD is requested, **PERFORM** the following:

NOTE - A maximum of 20 full air cylinders may be transported at one time. Additional DOT requirements will be required for transporting more than 20 full air cylinders.

5.7.7.1 **PICKUP** cylinder(s) from HFD.

5.7.7.2 **LOG** cylinder(s).

5.7.7.3 **CHECK** cylinders against Bulk Issue / Equipment Repair / Calibration Log.

5.7.7.4 **RECORD** new hydro date with corresponding mask station ID number in the Tracking and Calibration book.

5.7.7.5 **PLACE** completed Bulk Issue / Equipment Repair / Calibration Log in Tracking and Calibration book .

## Respirator Issuance and Control

### 5.8 Housekeeping

- 5.8.1 **PERFORM** the following to maintain a clean and orderly issue station.
- 5.8.1.1 **ENSURE** exits are clear and free of tripping hazards.
- 5.8.1.2 **ENSURE** respiratory equipment is stored in designated locations.
- 5.8.1.3 **WIPE** the following Mask Station areas regularly with a damp cloth or disinfectant wipes:
- Counters
  - Phones
  - Computer key boards.
- 5.8.1.4 **ENSURE** the garbage is emptied regularly.
- 5.8.1.5 **ENSURE** the desk is orderly to provide an environment conducive to good recordkeeping.
- 5.8.1.6 **SWEEP** and mop floors in the respiratory cleaning and drying rooms.

## Respirator Issuance and Control

### 5.9 Records

NOTE - The following records are generated during the performance of this procedure:

5.9.1 **SUBMIT** completed records to IH Records Management for records retention.

- Respiratory Equipment Sign-In/Sign-Out Log ,
- Powered Air Purifying Respirator Sign-In/Sign-Out Log,
- Bulk Issue / Equipment Repair / Calibration Log,
- Breathing Air Cart Sign-In/Sign-Out Log.

The record custodian identified in the Company Level Record Retention and Disposition Schedules (RIDS), is responsible for record retention in accordance with TFC-BSM-IRM\_DC-C-02.

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## Respirator Issuance and Control

**Table 1 - Respiratory Training Requirements**

NOTE - All respiratory equipment that a person is qualified on will be listed and identified on their RESP/QUAL/TRN report. No respiratory equipment can be issued to an individual unless it is identified on their report.

- X indicates all the requirements that must be completed by the user prior to receiving that type of respiratory equipment from an issuing station. Confirm all dates are current (physical, mask fit, respiratory qual).

User Required User Needs	Physical	Mask Fit	Respiratory Knowledge Training	Spec ific APR	SCBA	Ska-Pak Airline	Supplied Air Entry/Exit Systems	PAPR Hood* Specific	PAPR Full Face* Specific
ARP W/Cartridges	X	X	X	X					
SCBA	X	X	X		X				
Ska-Pak Airline	X	X	X			X			
Carri-Air	X	X	X			X	X		
PAPR Hood* Specific	X		X					X	
PAPR Full Face* Specific	X	X	X						X
* The individuals training report will list the specific qualification for each piece of respiratory equipment i.e. MSA OptimAir TL Full face/Hood, or Breath Easy PAPR Hood. The generic term Hood or Full face PAPR on the training report is no longer an accepted user training verification.									

## Respirator Issuance and Control

### Attachment 1 - Scott O-Vista 2000/CS

- NOTE - The Scott O’Vista and O’Vista CS (O’Vistas do not have a nose cup or “speaker diaphragms”) These are restricted from being used in temperatures 32°F and below.
- The O’Vista comfort seal mask will be stamped with L (large) and the stamp will be in a different location than the O’Vista size large. There are a few ways to identify an O’Vista Comfort Seal (CS):
    - Rib under chin cup notes a comfort seal. The other sizes do not have a rib
    - Comfort Seal has a deeper chin cup than the other sizes.
    - Comfort Seal has a “double flap” and the other sizes have “single flap” for their sealing surface. This “double or single” flap may also be known as a “lip”. On the comfort seal the “lip” is on the inside and for all other sizes (S, L, XL, the “lip” is on the outside).
  - Chemical cartridges and cartridge change out schedule will be determined by an Industrial Hygienist and Documented, see Attachment 16.
  - The mask fit card will indicate which model, size, and harness type the person was fit for: Scott OV-2000 Lg w/Poly Harness. Scott OV-2000 CS w/Poly Harness, etc.
  - The OV-2000 mask comes without a nose cup and speaker diaphragms installed
  - The word Silicone must be in the respirator size/type description on the mask fit card in order for the user to be issued a silicone mask. (Example: SCOTT OV CS silicone w/Poly Harness.)

Component	Options
Sizes	NOTE - The stamp showing the size is generally located on the sealing surface near the right temple. Small (green), Large (black), Extra Large (red), and Comfort Seal™ (black)
Sealing Surface	Rubber, Silicone, Comfort Seal
Head Harness	Poly (black), Kevlar (yellow)
Cartridges	Chemical (7422-SC1)Chemical/P100 (7422-SD1)Mercury/P-100 (7422-ZB1)P-100 Particulate (7422-FP1)
Communication Device	None

## Respirator Issuance and Control

### Attachment 2 - Scott AV-2000/CS

NOTE - The Scott AV and the AV Comfort seal ( CS ) masks have a nose cup. The stamp for the AV will be in a different location than the CS. There are a few ways to identify a AV Comfort Seal (CS):

- Rib under chin cup notes a comfort seal. The other sizes do not have a rib
  - Comfort Seal has a deeper chin cup than the other sizes
  - Comfort Seal has a “double flap” and the other sizes have “single flap” for their sealing surface. This “double or single” flap may also be known as a “lip”. On the comfort seal the “lip” is on the inside and for all other sizes (S, L, XL, the “lip” is on the outside).
- The mask fit card will indicate which type the person was fit for: Scott AV-2000 Lg w/Poly Harness. Scott AV-2000 CS w/Poly Harness, etc.
  - The AV-2000 mask comes with a nose cup and speaker diaphragms installed. The mask must be fit and worn with the nose cup in.
  - The word Silicone must be in the respirator size/type description on the mask fit card in order for the user to be issued a silicone mask.
    - Example: Scott AV200 silicone XL W/Poly Harness.
  - Chemical cartridges and cartridge change out schedule will be determined by an Industrial Hygienist and Documented, see Attachment 16.

Component	Options
Sizes	NOTE - The stamp showing the size is generally located on the sealing surface near the right temple. Small (green), Large (black), Extra Large (red), and Comfort Seal™ (black)
Sealing Surface	Rubber, Silicone, Comfort Seal
Head Harness	Poly (black), Kevlar (yellow)
Cartridges	Chemical (7422-SC1)Chemical/P100 (7422-SD1)Mercury/P-100 (7422-ZB1)P-100 Particulate (7422-FP1)
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	Nose cup and speaker diaphragms. Can use the Voice Vector

## Respirator Issuance and Control

### Attachment 3 - Scott AV-3000

- NOTE - The mask fit card will indicate which type the person is fit for; examples include:
- Scott AV-3000 S w/SD Poly Harness
  - Scott AV-3000 M w/SD Kevlar Harness
  - Scott AV-3000 L w/LG Poly Harness.
- Harness Attachment: The AV-2000 harness attachment pivots as a unit. The AV-3000 harness attachment pivots independent from the pull strap.
  - Harness Sizes: The head harnesses for AV-3000 come in size standard “SD” and size large “LG”. When purchasing a mask, the size Small and Medium mask come equipped with a Standard size harness and the size Large mask comes equipped with a size Large harness.
  - The size of the nose cup DOES NOT change fit, form, or function. The mask must be fit with the nose cup in and worn with the nose cup in, but the size of the nose cup does not matter, therefore it isn’t listed on the mask fit card.
  - Chemical cartridges and cartridge change out schedule will be determined by an Industrial Hygienist and documented, see Attachment 16.
  - The mask fit card will indicate which harness and mask size the person was fit for: Scott AV-3000 M w/Poly Harness.etc.
  - The AV-3000 mask only comes with a nose cup. The user may change the size of the nose cup without having to be refit. The mask must be fit and worn with the nose cup in.

Component	Options
Sizes	Small (black), Medium (black), Large (black),
Sealing Surface	Polyisoprene
Head Harness	Poly (black), Kevlar (yellow)
Cartridges	Chemical (7422-SC1)Chemical/P100 (7422-SD1)Mercury/P-100 (7422-ZB1) Can Not be used w/AV-3000 APR’sP-100 Particulate (7422-FP1)
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	Nose cup and speaker diaphragms Nose cup sizes: small, medium, large, and extra large

## Respirator Issuance and Control

### Attachment 4 - Scott “Weld-O-Vista” Mask

NOTE - For fit-testing and mask issuing purposes, this mask needs to be identified as follows:

#### Scott Weld-O-Vista

- Individuals being issued Scott welding respirators must have a specific mask fit for the configuration. To wear the mask shown above, the mask fit card of the user must have one of the following items listed on their card:
  - Scott Weld-O-Vista S w/Kevlar Harness
  - Scott Weld-O-Vista L w/Kevlar Harness
  - Scott Weld-O-Vista XL w/Kevlar Harness
  - Scott Weld-O-Vista CS w/Kevlar Harness.
- To distinguish between the newest Weld-O-Vista and the two older versions, note that the new Weld-O-Vista only allows viewing through the welding visor, the rest of the face shield is black.
- Being fit for a Scott AV2000 or Scott OV2000 Weld Shield does not give permission for user to be issued Scott Weld-O-Vista.

Component	Options
Sizes	NOTE - The stamp showing the size is generally located on the sealing surface near the right temple. Small (green), Large (black), Extra Large (red), and Comfort Seal™ (black) This mask only comes with a nose cup.
Sealing Surface	Rubber, Silicone
Head Harness	Kevlar (yellow), Poly (black)
Cartridges	Chemical (7422-SC1)Chemical/P100 (7422-SD1)Mercury/P-100 (7422-ZB1)P-100 Particulate (7422-FP1)
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	None

## Respirator Issuance and Control

### Attachment 5 - MSA Ultra Elite

NOTE - MSA Ultra Elite masks come in softfeel hycar rubber or silicone. The size of the mask small, medium or large will be stamped in the MSA logo, if the mask is silicone the word silicone will be stamped in the MSA logo also. Elites that are hycar rubber will not have additional wording stamped in the MSA circle.

- Silicone MSA's are available in colors of black and gray.
- The word SILICONE must be in the respirator size/type description on the users mask fit card. Example: MSA Ultra Elite Silicone L.
- The Ultra Elite comes equipped with a speaker diaphragm.
- Requires the use of the Twin Cartridge Adapter and optional use of the component keeper for use as an APR or may be used with a single cartridge OptiFilter XL HE (P-100).
- Approved for use with the MSA OptimAir TL PAPR.
- Mask fit for the Ultra Elite is a separate fit test and does not qualify the use of a Ultra Twin/Vue mask.
- Chemical cartridges and cartridge change out schedule will be determined by an Industrial Hygienist and documented (See Attachment 16).

Component	Options
Sizes	Small, Medium, Large
Sealing Surface	SoftFeel Hycar Rubber, Silicone
Head Harness	Hycar, Silicone
Cartridges	GME                    Chemical cartridge GME P-100        Chemical/P100 cartridge P-100                Particulate cartridge Mersorb            Mercury/P-100
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	Speaker diaphragm

## Respirator Issuance and Control

### Attachment 6 - MSA UltraTwin/Vue/DuoTwin

- NOTE - MSA Ultra Twin/Vue come in three sizes, small ( light gray band), medium (black band) and large (orange band) and either in hycar rubber or Silicone. A silicone mask will have the word silicone stamped in the MSA logo. The hycar rubber masks do not have additional wording stamped in the MSA circle.
- The sealing surface of the UltraTwin/Vue/DuoTwin are identical therefore the HAMMER mask fit station only stocks and fits to the MSA UltraTwin.
  - Silicone MSA's are available in colors of black, yellow, and light blue. The MSA UltraTwin may come equipped with a speaker diaphragm.
  - The word SILICONE must be in the respirator size/type description on the users mask fit card. Example: MSA UltraTwin/Vue/DuoTwin Silicone L.
  - MSA has different nose cup sizes available to install in the UltraTwin mask to reduce fogging, nose cups are required at temperatures 32°F and below. MSA does not require the nose cup to be installed at the time of mask fit.
  - Chemical cartridges and cartridge change out schedule will be determined by an Industrial Hygienist and Documented, see Attachment 16.

Component	Options
Sizes	NOTE - The size is stamped on the inside of the mask. Small (Gray), Medium(black), Large (Orange)
Sealing Surface	Hycar Rubber, Silicone
Head Harness	Hycar, Silicone
Cartridges	GME                    Chemical cartridge GME P-100        Chemical/P100 cartridge P-100                Particulate cartridge Mersorb            Mercury/P-100 Cartridge
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	Nose cup sizes: S,M,L and XL

## Respirator Issuance and Control

### Attachment 7 - MSA Advantage® 200LS

- NOTE - LS = Lighter and Softer Blue in color. Sizes are small, medium and large, The size marking is on the side of the nose piece.
- Users of other Advantage 200 half-mask models do not need to be fit-tested again before they wear the Advantage 200 LS Respirator.
  - The Advantage 200 LS is normally disposed of when returned to the Mask Station but can be sent in to be laundered
  - Advantage face piece adapter kit (#809999) allows the use of the MSA APR cartridges.
  - Chemical cartridges will be determined by an Industrial Hygienist and Documented, see Attachment 16.

Component	Options
Sizes	Small, Medium, Large
Sealing Surface	Thermoplastic rubber
Head Harness	Plastic and Elastic Straps
Cartridges	GME                      Chemical cartridge GME/P-100            Chemical/P-100 cartridge P-100                    Particulate cartridge Mersorb                Mercury/P-100 Cartridge
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	None

## Respirator Issuance and Control

### Attachment 8 - 3M 6000 Series Full Face

NOTE - The 3M 6000 series mask can be used in both the negative pressure (as an APR mask) and positive pressure (as a PAPR mask) mode. Currently at tank farms, the 3M 6000 is only used in the APR mode.

- The size is located on the top front of the face piece with the letter S (small), M (medium) or L (large).
- Chemical cartridges and cartridge change out schedule will be determined by an Industrial Hygienist and Documented, see Attachment 16.

Component	Options
Sizes	Small, Medium, Large
Sealing Surface	Silicone
Head Harness	Silicone
Cartridges	P-100                      Pink Pad-2091 or hard shell 7093) Particulate cartridge MultiGas/Vapor/P100    #60926 MultiGas                      #6006 Mersorb                      Mercury/P-100 Cartridge                      #60929
Cartridge Shelf Life	Refer to Attachment 17
Communication Device	None

## Respirator Issuance and Control

### Attachment 9 - Self-Contained Breathing Apparatus (SCBA)

- NOTE - SCBA's can be issued to individuals in three different ways: Harness only; Harness and air cylinder with case or bulk issued to a group in the field.
- The Scott SCBA is a respirator designed to provide mobility while providing approximately 30 minutes or 1 hour of breathable air to personnel:
    - The 60 and 30 minute cylinders (carbon fiberglass aluminum) are required to be hydro test every 5 years.
  - All SCBA units (rack and air cylinder) must be transported in a case and an approved vehicle. Air cylinders must be transported in approved vehicles in cases or cylinder carrying boxes.
  - All SCBA equipment has a unique identifier number and inventoried monthly.
  - The issuer is responsible for completing the Sign-In/Sign-Out Log Sheet and verifying user training for the equipment that is being requested.
  - The user must sign for all equipment received.
  - Equipment will be cleaned per current cleaning procedure DOE-0352-008.
  - The user will perform the pre-use inspections of respiratory equipment:
    - This will include checking to confirm the bottle is full, alarm function, bottle hydro and bench test dates are current.
  - Check the test date on the reducer or regulator. Test date sticker must be on one or the other, but is not required on both for use.
  - The issuer may prepare an air cylinder with SCBA harness in a case and note the equipment unique identifiers on the outside of the case (typically written on masking tape).
  - The issuer will not hookup the air cylinder to the SCBA harness.
  - If the SCBA is expected to be used at temperatures 32 °F and below, the user must use the Scott Mask with nose cup.

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### Attachment 10 - Carri-Air

- NOTE - When issuing a Scott Carri-Air the respiratory user must also be trained and qualified on a Scott SKA-PAK and fitted for a Scott mask.
- Scott EZ-FLO regulators can be used like a Scott SKA-PAK and do not require the use of a 5 minute bottle.
    - It cannot be used in an IDLH atmosphere or in a VCZ posted area
    - Limited to a 25 ft. airline without an attendant.
  - Assembly of a Carri-Air can only be used with a 1 hour cylinder. SKA-PAK unit or EZ-FLO, and airline hose (limit of 25' without an attendant).
  - If a Carri-Air is issued with a 1 hour air cylinder the unit will be placed in a black carrying case. All air cylinders must be transported in approved vehicles and in cases or cylinder carrying boxes.
  - Upon return to the issue station, the issuer will inspect the Carri-Air unit.
  - The unit will be wiped down to remove dirt with a clean, damp cloth if needed.
  - The airline hose will be reconnected into its self for storage.

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### Attachment 11 - SKA-PAK/EZ-FLO

NOTE - Prior to issuing a SKA-PAK/EZ-FLO, an inspection must be performed on the belts, straps, airline hoses, coupling, bottles, and regulator.

- When issuing the SKA-PAK/EZ-FLO, verify that the user is qualified to wear SKA-PAK and fitted for Scott Masks. A SKA-PAK qualification also allows the use of a EZ-FLO regulator.
- An EZ-FLO regulator can be used like a SKA-PAK but without the 5 minute bottle:
  - EZ-FLO regulators cannot be used in an IDLH atmosphere or VCZ areas. The protection factor is a 1000 without the 5 minute bottle
  - Both units are limited to a 25' airline without an attendant
  - Industrial Hygiene will make the determination when a SKA-PAK is required or when the EZ-FLO can be used instead of a SKA-PAK.
- Equipment will be cleaned per current cleaning procedure DOE-0352-008.
- The belts and straps are visually inspected for damage.
- It is important to confirm that the belts and straps are whole, without cuts, abrasions, or other visual damage.
- Airline hoses on the harness are visually inspected for damage.
- The hoses must indicate that they are manufactured by Scott, or labeled Flex, Dayco, or Aeroquip.
- The fittings must be verified to be Foster Schrader fittings only.
- An inspection is performed on the respirator coupling system:
  - This inspection is performed on the O-ring to confirm it is in place, and not damaged, free of debris, and verify that the threading is not worn or cross-threaded
  - A visual inspection of SKA-PAK air cylinders are to be performed to determine that there are no nicks, or gouges or other damage
  - In addition, the hydro date must be within 3 years from the inspection date
  - The regulator is inspected to confirm that it is properly cleaned, bagged, and the bench test date is current on the reducer and/or the regulator.

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### Attachment 11 - SKA-PAK/EZ-FLO (Cont.)

- The SKA-PAK assembly process involves two harnesses, the old style of harness, and the new style of harness:
  - The old harness is black, and uses hose clamps to attach the cylinder. The cylinders are slightly larger, with flat bottoms
  - The new style of harness is black with a yellow stripe and have “Scott” imprinted on the shoulder strap. The cylinders are smaller and have a round bottom along with a clip on the side.
- The appropriate bottle is attached to the harness, making sure that the hose bands are tight and/or the clip is fully engaged:
  - Attach the coupling to the bottle, making sure that the O-ring is installed. The coupling must be fully threaded and tightened.

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### Attachment 12 - PAPR MSA OptimAir TL

#### WARNING

The use of MSA TL PAPRs is not approved for use when temperatures are 32 °F and below and 3M BreathEasy at 10 °F and below due to decreased battery life. Use of these respirators at temperatures below the recommended limits may result in personnel injury and or death.

#### WARNING

The MSA OptimAir TL respirator must not be worn in an atmosphere which is immediately dangerous to life or health or in which contaminant concentrations are unknown.

#### WARNING

The use of MSA OptimAir TL as an underwater device may result in personnel injury and/or death.

- NOTE - The motor-blower, battery pack and filters are worn as an assembly on the support belt.
- The breathing tube connects the belt-mounted assembly to the face piece or hood. The OptimAir TL has separate breathing tubes depending on whether the unit is used with a full face or with a hood.
  - When using a single Bib hood, the knit collar must contact the wearer's skin. Beards or long hair shall not extend into the collar area.
  - The OptimAir TL PAPR can be adapted for use of a hard hat under the PAPR hood. Only the MSA V-Gard hard hat can be worn with this unit. The hood may also be worn with or without the use of a suspension.
  - The OptimAir TL does not require the use of a flow test indicator prior to use.

Component	Options
Sizes	Ultra Elite: Small, Medium, Large
Sealing Surface	Rubber, Silicone
Hood	Tyvek
Cartridges	Type HE cartridge Other cartridge types are available.
Communication Device	None

## Respirator Issuance and Control

### Attachment 13 - PAPR 3M Breathe Easy

#### WARNING

**Due to decreased battery life the use of 3M-BE PAPR when temperatures are below 10 °F or below may result in injury and or death.**

#### WARNING

**The use of 3M BreathEasy as an underwater device may result in personnel injury and/or death.**

NOTE - Used Breathe Easy equipment will be returned to IH techs for maintenance.

- The Breathe Easy PAPR is a NIOSH-approved Powered Air Purifying Respirator system that consists of a blower/filtration unit, disposable hood, breathing tube assembly, rechargeable battery, and appropriate filter/cartridge/canister.
- The Breathe Easy is attached to the wearer via a belt assembly. The belts are available in three materials: nylon, polyurethane-coated nylon and leather, and will accommodate up to 60" waist sizes.
- The issuer will prepare used PAPR blower units and batteries to be picked up by the IH techs for maintenance and charging including the mandatory quarterly inspections.
- There are currently two types of hoods that are worn with the Breathe Easy blower unit:
  - 3M H-series hoods (available in regular and large sizes)
  - The 3M H-series hoods are loose fitting headgear, it features a wide view lens and a shoulder length outer shroud
  - General Purpose Headgear
  - General Purpose Headgear consists of a Tyvek face seal with a visor surround and a headband cradle assembly.
  - These hoods will accommodate limited facial hair without compromising the level of protection, provided the facial hair does not come between the elastic edge of the face seal and face, and does not protrude into the neck area.
- Batteries are on a one week recharge cycle if not used daily. Batteries will have two dates assigned to them. One for the one weekly recharge, and one for the initial charge.

## Respirator Issuance and Control

### Attachment 13 - PAPR 3M Breathe Easy (Cont.)

- The blower unit is required to be tested with a flow test device before each use. This will be done by the user:
  - The user is supplied with a flow test indicator. Units must supply 6 CFM when used with a hood and 4 CFM to the face piece when used with a tight fitting mask. This flow test requires the removal of the hood hose and the three cartridges to be installed and plugs removed.
  - The blower unit will have a unique identification number and will display a current date for leak testing.
- The Breath Easy requires 3 cartridges and or canisters and is hood use only:
  - The FR57 canisters are a chemical and P-100 combination
  - P-100 cartridges are for particulates # 450-00-01
  - 3M has other cartridge types that are not currently used at Tank Farms.

## Respirator Issuance and Control

### Attachment 14 - Breathing Air Cart Issuance and Control

- NOTE - Breathing air carts will be issued from established Issue stations and because of their set up and use in the field will not require return after two consecutive shifts.
- There is only one type of air cart:
    - Air System Air Cart
  - Bottle Cart Issuer confirms the following:
    - Breathing Air Cart Sign In/Out Log is available for each cart in the Issue station inventory and that information specific to each cart is documented completely
    - POC is documented legibly in the Name Print/Sign block on the Breathing Air Cart Sign In/Out Log
    - A current copy of the breathing cart checklist is available on each cart (A-6004-341)
    - Information pertaining to the cart issuance and return is completed documented on the Breathing Air Cart Sign In/Out Log
    - Carts are returned to Fire Maintenance annually for required preventive maintenance and calibration
    - Carts are properly stored when not in use.
    - Airline hose is kept at the supply building and the amount will be documented on the sign in sign out log for that cart.
  - User/Point of Contact **MAINTAIN** accountability for the location of all carts issued:
    - Notify the Issue station when the cart location changes so it can be documented on the Breathing Air Cart Sign In/Out Log.
    - Assign only qualified personnel to operate bottle cart.
    - Keep the cart inside a structure or covered to minimize dirt and debris effects whenever the breathing cart is positioned at the work location but not in use
    - Return breathing carts to the Issue station whenever a job has been completed or suspended for an extended period.

## Respirator Issuance and Control

### Attachment 15 - Tank Farm Voice Communicators

NOTE - The voice communicators that may be available at Issue Stations include:

- Voice Vector
  - Kenwood
  - Voice Amps
  - Throat Mics.
- The Mask Operator must inspect the units and wipe clean prior to re-issuance.
  - All communicators are battery powered, using non-rechargeable alkaline batteries.
  - The Mask Operator confirms that discarded, used batteries are placed in the battery recycle receptacle:
    - Communicator batteries are checked, and will need to be replaced as needed. Only non-rechargeable, 9-volt batteries are to be used with the communicators.
  - The Scott Voice Amps and Voice Vectors only fit on a Scott AV 2000 mask. Voice Amps are installed and removed by a qualified Mask Operator only.
  - The Kenwood microphones are connected to a hand-held radio, and to the user's clothing. These microphones are clipped to the lapel of the user:
    - Operating the Kenwood requires the user to key the radio and speak into the microphone.
  - The Voice Vector microphone is similar to the Scott Voice Amps and also the Kenwood because the Voice Vector connects to the speaker port on the Scott AV mask, and is also connected to the radio:
    - The radio must be activated and then the user speaks into the microphone.

## Respirator Issuance and Control

### Attachment 16 - Change Out Criteria and Expiration Dates for Respirator Cartridges or Canisters

- NOTE - A chemical cartridge change out will be determined by an IH as per procedure TFC-ESHQ-S\_IH-C-05, Respiratory Protection (use most current revision):
- This confirms that the air-purifying respirators are not used in situations where a chemical or canister becomes saturated with gases, vapors or contaminants.
  - Many factors can influence the service life of a cartridge or canister, one of which is the chemical properties of contaminants:
    - For chemical or combination cartridges, Industrial Hygienist (IH) will identify the type of cartridge to be used and the change out schedule based on job and chemical data
    - When using cartridges that have a end of service life indicator (ESLI) a change out schedule will still be required by an IH and shall be changed out based on the schedule or the ESLI, whichever comes first.
    - Other factors which can influence the service life of a cartridge or canister are temperature and humidity. High temperatures can directly affect the performance of the activated carbon filter. Humidity greater than 85% reduces the service life of cartridges or canisters by 50%.
    - OSHA states that cartridges or canisters that do not have an end of service life indicator then the user must receive a change out schedule from IH.
  - How to determine the expiration date for cartridges and canisters:
    - 3M prints the expiration date on the cartridge packaging. No calculations required
    - SCOTT prints the expiration date on each 742 style cartridge. No calculation is required. The lot # on the cartridge is the date of manufacture.
    - MSA uses a four digit date code on the cartridges to indicate the date of manufacture. The first two numbers are the WEEK and the next two numbers are the YEAR (example 2088 is the 20th week of 1988), then add the number of years that it is good for to the date and that is the expiration date.

## Respirator Issuance and Control

### Attachment 17 - Mask Cartridge Shelf Life

NOTE - Mask Cartridge Shelf Life

- MSA GME-P-100 3 Years
  - MSA GME 3 Years
  - MSA P-100 No Expiration
  - Mersorb/P-100 3 Years
  - SCOTT 7422-SD1 (chemical/P-100) 3 Years
  - SCOTT 7422-SC1 (chemical) 3 Years
  - SCOTT 7422 FP1 (P-100) 5 years
  - SCOTT 7422-ZB1 (Mercury/P-100) 3 Years
  - 3M 6006 (Multi Gas) 5 Years
  - 3M 60926 (Multi Gas/Vapor/P-100) 5 years
  - 3M 7093/2091 (P-100) No Expiration
  - 3M 60929 Mercury/P-100 5 Years
- How to determine the expiration date for cartridges and canisters:
- 3M prints the expiration date on the packaging. No calculations required
  - SCOTT prints the expiration date on each 742 style cartridge. No calculation is required. The lot # on the cartridge is the date of manufacture.
  - MSA used a four digit date code on the cartridges to indicate the date of manufacture. The first two numbers are the WEEK and the next two numbers are the YEAR (example 2088 is the 20th week of 1988), then add the number of years that it is good for to the date and that is the expiration date.
  - OSHA states that cartridges or canisters that do not have an end of service life indicator then the user must receive a change out schedule from IH.
  - Chemical canisters/cartridges with an ESLI shall be changed out based on the change out schedule or the ESLI, whichever comes first ( ESLI canister/cartridges require monitoring by a coworker when used) per DOE-0352