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**Gulf**of**Mexico**



## **Operations: Health**

### **Respiratory Protection Safe Work Practice**

## AMENDMENT RECORD

Amendment Date	Revision Number	Amender Initials	Amendment
05-Feb-02	0		Initial issue as controlled document. Prior revision history located in hard-copy consolidated manual.
31-Jan-06	1		Reviewed no content changes. Changed 3 authorities and one custodian name. Changed CD # from 10069 to UPS-US-SW-GOM-HSE-DOC-00128-2.
31-Oct-08	2		Changes include: expanded definition section, expanded respirator selection matrix, expanded section on approved equipment, detailed key responsibilities and new site specific respiratory protection SWP form(s). Revised authority and custodian.
20-Jun-09	3		Added supplied air respirator regulator inspection/flow/function test requirement every two years to Section 4.2. and 5.8.
31-Aug-09	4		Added Scott AV-3000 as an approved respirator to Appendix E. Updated Toluene TLV in Appendix D.
15-Aug-12	5		Changed all BP Occupational Health Services to GoM Health Team. Eliminated WL Health Services. Changed Supervisors in section 4.4 to Site Leaders. Clarified section 4.6 by naming the duties for GoM Health Team, and creating a new section (4.6) specifically for GoM Health Team. Added RN in Sec. 5.5. Changed as to a in Sec.5.5. Updated hyperlinks for 29CFR1910.1020 in Sec. 5.5 and Appendix A in Sec. 5.6. Updated hyperlinks for 1910.134 and 142.39 in Sec. 6.1. Updated Table 6.2-1 values for PEL/TLV for Chlorine, Benzene, and H2S. Updated Appendix D for PEL/TLV and STEL values for Benzene and Ethyl Benzene.
25-Aug-14	6	VDM	No revisions made to document.
15-Oct-14	7	KBT	Changes to format. Deleted definition for Atmosphere supplying respirator, employee

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			<p>exposure, National Institute for Occupational Safety and Health, and Physician or other licensed health care professional. Added definition for Issuing Authority and Performing Authority. Removed training content requirements and instead referred to requirements set by OSHA. Moved specific record retention information to site specific plan. Condensed program evaluation requirements and added self-verification section. Changed key responsibilities for OIM and H&amp;S Site Lead, split GoM Health Team responsibilities into Industrial Hygiene and Occupational Health responsibilities and added responsibilities for Issuing Authority and Performing Authority. Removed Administration section and added Site Specific Respiratory Protection Plan section. Changed Exposure Assessment section to Hazard and Risk Assessment and aligned with GoM Health Risk and Exposure Assessment Plan. Split Inspection, Maintenance and Care section into individual Inspection, Maintenance, and Use sections. Incorporated appendices into either SWP or site specific plan template. Deleted GoM Respirator Selection Matrix, checklist for respirator SWP evaluation, and respirator issuance record. Revised and added Monthly SCBA checklist to site specific plan making UPS-US-SW-GOM-HSE-DOC-00601-2 obsolete.</p>
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## 1 Purpose / Scope

This safe work practice (SWP) provides processes for selection, use, and care of respiratory protection equipment to protect personnel from potential exposures to airborne contaminants. Airborne contaminant exposures shall be reduced following the hierarchy of controls, with the use of respiratory protection as the last option.

This SWP applies to all BP GoM employees who are required to wear a respirator to perform assigned duties as well as individuals who utilize respiratory protection on a voluntary basis. Contractors who utilize respiratory protection while performing work for BP GoM shall implement a written SWP that meets the requirements of the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard 29 CFR 1910.134 and this BP GoM Respiratory Protection SWP.

## 2 Key Responsibilities

### 2.1 Offshore Installation Manager (OIM), Person In Charge (PIC) or designate

Verify risk assessments are conducted to identify potential activities needing respiratory protection.

### 2.2 Health and Safety (H&S) Site Lead

- A. Identify activities needing risk assessments to determine respiratory protection requirements.
- B. Notify GoM Health and Industrial Hygiene Team:
  - a. When changes occur in an employee's physical condition, in workplace hazards and/or when work tasks change, that could affect respirator fit.
  - b. Prior to purchase or rental of respiratory protection equipment used on site, including compressor units used to supply breathing air.
  - c. Of exposure complaints relating to the use or misuse of respiratory protective equipment.
- C. Maintain records of annual fit-tests.
- D. Complete and update annually the GoM Site-Specific Respiratory Protection Plan Form found in Attachment 9.1 Site Specific Respiratory Protection Plan Template.
- E. Arrange for the visual and functional inspection of supplied air respirator regulators with a flow device by a certified technician. The regulator must be flow checked every two years (more often if recommended by the manufacturer).
- F. Verify that only Grade D breathing air is being supplied by monitoring the air supply systems and by sampling air from supply systems quarterly for laboratory analysis.

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## 2.3 Issuing Authority (IA)

Issuing authorities are responsible for management of the permit to work process within their defined area and skill set.

- A. Ensure that the team understands the assessment process and that the aim is to recognize and reduce inhalation risks for the task to be completed safely or, if risks cannot be controlled, to prevent the task from taking place.
- B. Ensure that members of the risk assessment team have a full opportunity to contribute and that the details of the assessment are agreed by team members.
- C. Ensure that the assessment team includes personnel with the necessary knowledge and competence for the task involved. Request industrial hygiene evaluation when needed for tasks involving respirator usage.
- D. Reviews the risk assessment to ensure the inhalation hazards were adequately identified, assessed and mitigated. Works closely with the Performing Authority when planning work control certificates (WCCs) to confirm that appropriate controls and respiratory protection are identified for each identified inhalation hazard.
- E. Ensure that the details of the assessment are accurately recorded.
- F. Conducts a worksite inspection to ensure the appropriate control measures, including breathing air systems, respiratory protection, medical clearance and fit testing, are in place prior to a WCC being issued.
- G. Instructs personnel to stop work if a change occurs that can create an unsafe condition.

## 2.4 Performing Authority (PA)

The Performing Authority is the responsible person for the activity being carried out under the WCC. The Performing Authority may be the person carrying out the task or may be supervising a group of people conducting the job.

- A. Inspection of the worksite, either alone or preferably with the Issuing Authority to identify the inhalation hazards and planned controls prior to completion of the risk assessment for the task being planned.
- B. Document the task hazards associated with inhalation, risks and controls, jobsite and process safety hazards on the WCC-Permit with input from the Issuing Authority.
- C. Select work crew members who are competent and have been medically cleared and fit tested to execute the task detailed on the WCC-Permit.
- D. Conduct a pre-job toolbox talk with the work crew to communicate the WCC content and requirements and verify their understanding before the Work Crew sign the work party declaration section of the WCC-Permit.
- E. Ensure that the work site is kept in a clean and safe condition including maintaining controls specified on the WCC both during and on completion of the task
- F. Communicate with the IA when the task is completed, suspended (e.g., stop the job event) or if worksite conditions change. Reports unsafe conditions such as incorrect respirator usage, facial hair, etc to IA immediately for evaluation and appropriate action.

## 2.5 Workers Assigned / Volunteer to Wear Respirators

- A. Complete and submit the annual Respirator Medical Evaluation Questionnaire.
- B. Complete annual fit testing.

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- C. Use respirators in accordance with the work permit.
  - D. Advise Occupational Health, IA / PA or the H&S Site Lead of any medical, physical, or psychological condition that would preclude use of a respirator.
  - E. Ensure that nothing is allowed to interfere with a proper respirator to skin seal. An employee with facial hair, including stubble, mustache, sideburns, beard, low hair hairline, bangs, which interferes with the skin to mask seal shall not be permitted to wear a respirator. (See Section 3.4 Facial Hair)
  - F. Inspect the respirator before use to ensure it is in proper working condition. Perform a positive/negative fit check before each use or when adjusted to assure the respirator is properly seated to the face.
  - G. Stop the job and report to the IA / PA for any odor, malfunction or problem while using the respirator.
  - H. Clean, sanitize, and properly store the respirator according to section **5.9 Cleaning and Storage**.
  - I. Provide input to H&S Site Lead, Team Leader, or IA / PA regarding respiratory protection SWP issues for self and others.

## 2.6 Industrial Hygienist

- A. Select respirators based on job task and exposure level.
- B. Conduct workplace exposure assessments including air-monitoring as necessary.
- C. Evaluate exposure complaints relating to the use or misuse of respiratory protective equipment.
- D. Maintain air monitoring data.
- E. Verify assets are doing the quarterly breathing air analysis.
- F. Determine purchase or rental specifications for respiratory protection equipment used on site, including compressor units used to supply breathing air.
- G. Conduct annual site-specific respirator program evaluation.

## 2.7 Occupational Health Team

- A. Maintain an Occupational Health Database listing workers enrolled in the Respiratory Protection Program. The database contains all records pertaining to required respirator medical clearance.
- B. Provide list of respiratory surveillance participants to VTA to assign training requirements.
- C. Review annual respirator questionnaire for changes in health status affecting workers' ability to wear a respirator.
- D. Refer employee to physician for further evaluation when indicated.
- E. Notify the affected employee, employee's supervisor, and H&S Site Lead when an employee is not medically cleared to wear respiratory protective equipment.
- F. Assist in the evaluation of exposure complaints relating to the use or misuse of respiratory protective equipment.



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## 3 General Requirements

### 3.1 Site Specific Respiratory Protection Plan

Each facility utilizing respiratory protection shall complete the GoM Region Site-Specific Respiratory Protection Plan Template (Site Specific Respiratory Protection Plan Template) and upload into the facility's Atlas system. The site-specific plan shall contain the following:

- Selection of respirators based on task
- Medical evaluations
- Fit testing procedures
- Use, inspection, maintenance and care of respirators
- Breathing air quality
- Training and Recordkeeping
- Program Evaluation

### 3.2 Hazard and Risk Assessment

Exposure assessments (i.e. workplace exposure to chemical or dust) shall be conducted according to the [GoM Region Health Risk and Exposure Assessment SWP](#). A Level 2 Risk Assessment is required for activities involving exposure to substances for which there are defined exposure limit values and no task based data. Where the personal exposure is not identified or reasonably estimated, the atmosphere shall be considered Immediately Dangerous to Life and Health (IDLH).

### 3.3 Voluntary Use

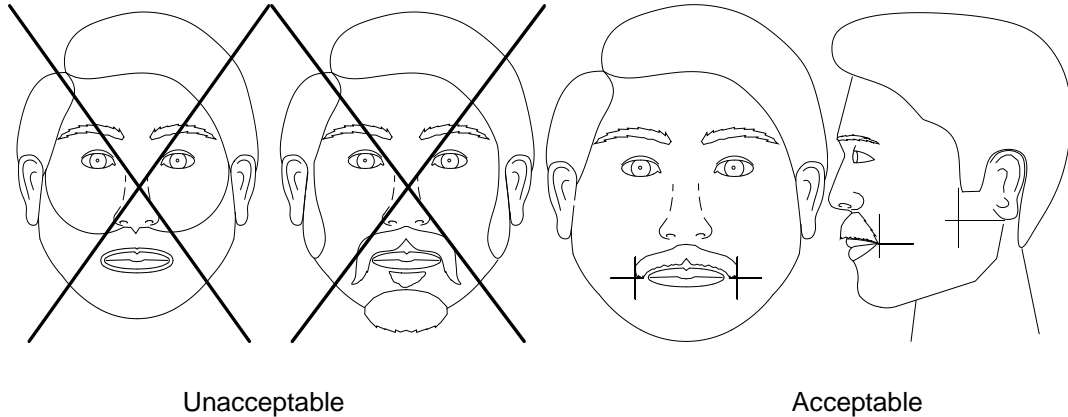
Dust masks and tight fitting respirators can be used voluntarily in non-hazardous atmospheres that do not require respiratory protection provided the respirator use will not create a hazard to the employee and the employee obtains approval from the H&S Site Lead. Tight fit respirator use requires medical clearance, fit testing and training on how to clean, store and maintain the respirator.

### 3.4 Facial Hair

Facial hair that passes between the face and the sealing surface of the respirator is not permitted.

Facial hair is defined as beard, mustache, sideburns, and stubble of greater than 24 hours growth, low hairline, or bangs. Additionally, any growth of facial hair must not be of such length as to interfere with the functioning of the respirator. The diagram below depicts unacceptable and acceptable facial hair.

Figure 3.4.1 Facial Hair Guidance



## 3.5 Types of Respirators

### 3.5.1 Air Purifying Respirators

Air purifying respirators shall **not** be used in:

- Immediately dangerous to life or health (IDLH) atmospheres
- H<sub>2</sub>S environments

Filters, cartridges and canisters shall be:

- Legibly labeled and color coded with the National Institute for Occupational Safety and Health (NIOSH) approval labels and in good condition.
- Appropriate for the contaminant to be protected against.
- Replaced when:
  - The task ends or at the end of the full shift, whichever comes first
  - Chemical odor breakthrough
  - Breathing resistance increases
  - Indicated by the End of Service Life Indicator (ESLI) where applicable

### 3.5.2 Air Supplying Respirators

- A. Air supplying respirators are either self-contained breathing apparatus (SCBA) or airline respirators and shall be the "positive-pressure" type with an emergency egress air supply. The emergency egress air supply shall only be used in emergencies.
- B. In confined space work, supplied air respirators shall be equipped with 5-minute escape bottles, regardless of backup air outside the confined space.
- C. Regulators used with SARs must be flow checked in accordance with manufacturer's requirements.

- D. Bottled Air System Installation, Breathing Air Compressor Installation, and Breathing Air Systems Daily Operations checklists to help ensure proper installation and operation are located in the Site-Specific Plan.

Note: For self-contained underwater breathing apparatus (SCUBA) or diving respirator / breathing air requirements, refer to EP SDS 3.2-0001.

### 3.5.3 Compressed Air Systems

#### 3.5.3.1 *Breathing Air Quality*

Breathing air will meet the specifications for Grade D Air described in ANSI/Compressed Gas Association Commodity Specification for Air G-7.1-1989 (Table 1).

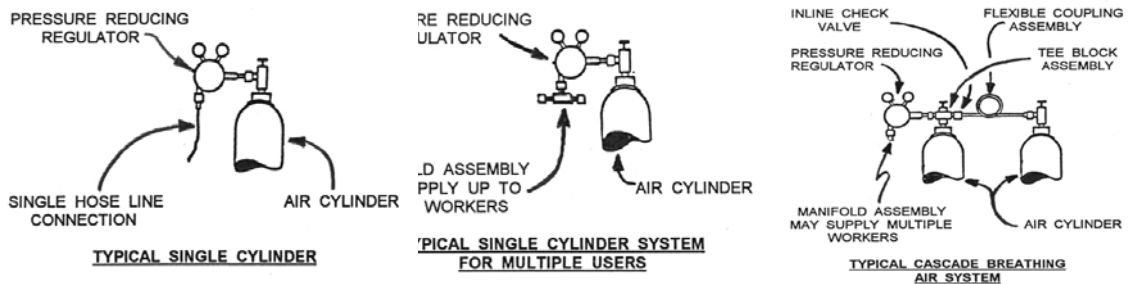
**Table 1 : Grade D Breathing Air Specifications**

Contaminant	Specification
Carbon Monoxide	10 ppm (Maximum)
Carbon Dioxide	1000 ppm (Maximum)
Oxygen	19.5 – 23.5 percent by volume
Oil Mist (condensed hydrocarbon)	5 mg/m <sup>3</sup> (Maximum)
Odor	Free from noticeable odor
Water	Line pressure dew point should be at least 18°F below the minimum ambient temperature for that location.

#### 3.5.3.2 *Breathing Air Cylinders*

Typical air cylinder systems for field use of supplied air respiratory protective equipment is shown below.

**Figure 1. Typical Air Cylinder Systems**



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Breathing air cylinders shall meet the following requirements:

- A. Shall be labeled Grade D breathing air and be marked in accordance with NIOSH Respirator Certification Standard (42CFR part 84)
- B. The supplier of compressed air used for respirators shall furnish, at each batch filling of air cylinders, written documentation certifying that the air meets or exceeds specifications for Grade D breathing air
- C. Air moisture content shall not exceed a dew point of -50F at 1 atmosphere pressure
- D. No asphyxiates shall be introduced into the air lines
- E. Air cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls below the manufacturer's recommended pressure level.
- F. Airline couplings shall be incompatible with outlets for other gas systems to prevent inadvertent servicing of airline respirators with non-respirable gases or oxygen.
- G. A person shall monitor compressed breathing air cylinders at **all** times while equipment is in use.
- H. Compressed breathing air cylinders shall be properly secured in an upright position.
- I. If a backup person is necessary due to working environment, the backup person shall work off of a separate breathing air cylinder or SCBA.
- J. Hoses for cylinder air supply shall be inspected prior to use and protected from damage including cutting, kinking, crushing, or burning. Hose couplings shall be protected against inadvertent disconnection. Hoses shall be arranged to minimize tripping hazards and to permit escape. No individual hose line shall exceed 300 feet in length or three couplings.
- K. The air cylinder regulator shall be set to maintain a normal operating pressure of 125 psi.
- L. If an SCBA cylinder has not been used for a period in excess of one year, air in the cylinder must be slowly depressurized to atmosphere and refilled with Grade D breathing air.

### **3.5.3.3 Breathing Air Compressors**

Breathing air compressors shall meet the following requirements:

- A. Grade D breathing air quality (Refer to section 3.5.3.1 Breathing Air Quality).
- B. Breathing air compressors shall have breathing air samples tested at least quarterly by an accredited testing laboratory to assure that the air meets Grade D specifications
- C. Prevent contaminated air from entering the air supply
- D. Minimize moisture content so that the dew point at 1 atmosphere pressure is 10F below ambient temperature
- E. Have in-line air purifying sorbent beds and filters
- F. Have a tag on the compressor with the name of the person and date the person changed the sorbent/filters
- G. Have alarms to indicate compressor failure and overheating
- H. If an oil-lubricated compressor is used, it shall be equipped with high-temperature and carbon monoxide alarms
- I. For airline respirator system use, an attendant shall be positioned where he/she can monitor the supplied air system, react to alarms, and remove workers from the work area in the case of an air supply malfunction.
- J. To prevent cross-contamination of the lines, the breathing air system must be supplied from a certified source that is never used with any other tools or equipment.

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### 3.5.4 Emergency / IDLH Atmosphere Respirators

IDLH atmospheres, known or suspected, require a full facepiece, positive pressure SCBA, certified by NIOSH for a minimum service life of 30 minutes or a combination full facepiece positive pressure airline respirator with auxiliary self-contained air supply.

Escape respirators provided solely for escape from IDLH atmospheres must be NIOSH certified for escape from the atmosphere in which they will be used. **All oxygen deficient atmospheres must be considered IDLH.**

SCBAs shall be:

- operated in the positive pressure flow mode.
- used in IDLH atmospheres involving permit required confined spaces shall be in accordance with the GoM Confined Space Entry SWP.
- used in IDLH atmospheres involving uncontrolled releases of hazardous substances shall follow specific HAZWOPER emergency procedures.

### 3.5.5 Interior Structural Firefighting

In order to fight interior fires, fire team members must wear SCBAs and follow procedures for working in IDLH atmospheres described in 3.5.4. Other requirements include:

- A. At least two fire team members entering the interior space and maintaining communication with each other
- B. At least two fire team members outside the space to provide assistance.

## 4 Process

### 4.1 Program Evaluation

Workplace evaluations will be conducted to ensure that the facility site-specific plan is effective for the hazards. The site-specific plan shall be reviewed, evaluated (using the GoM Region Respiratory Protection Program Evaluation Form) and updated by the H&S Site Lead as necessary to reflect changes in workplace conditions that affect respirator use or following personnel changes. The site-specific plan shall be approved by the Occupational Health and Industrial Hygiene Advisors.

### 4.2 Self-Verification

**Table 2 : Self-Verification Frequency & Rationale**

Checklist / Audit	Frequency	Responsible Person	Rational
GoM Region Respiratory Protection	Annual	Industrial Hygienist	Assesses effectiveness of the workplace evaluations and the facility site-specific plan.

Checklist / Audit	Frequency	Responsible Person	Rational
Program Evaluation Form			
Surveys	Random	Industrial Hygienist	A review of a specific task or area requiring respiratory protection.
Unscheduled inspection visits	As Required	Industrial Hygienist	A visit in response to a specific issue or concern, which may have been raised or needs more immediate support
Breathing Air Systems Daily Operations Checklist	As Required	Operator / User, Instrument / Electrical Technician, H&S Site Lead	Provide daily verification of the integrity of installed breathing air systems.
Breathing Air Compressor Installation Checklist	As Required	IA / PA, H&S Site Lead	Ensure consistent installation and utilization of breathing air systems from compressor sources during operations where supplied air respiratory protection is specified.
Bottled Air System Installation Checklist	As Required	IA / PA, H&S Site Lead	Ensure consistent installation and utilization of breathing air systems from bottled air sources during operations where supplied air respiratory protection is specified.
Monthly SCBA Inspection Checklist	Monthly	Fire Team Members	Provide monthly verification of the integrity of SCBA equipment.
Respirator Inspection Checklist	As Required	Individual donning respiratory protection	Provide verification of the integrity of respiratory protection equipment.

### 4.3 Respirator Selection

NIOSH certified respirators shall be selected and approved for use by the GoM Health Team.

Respirator selection is based upon

- A. Task based exposure assessment
- B. Physical and chemical properties of air contaminants
- C. Workplace processes
- D. Contaminant concentration likely to be encountered

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E. Assigned protection factor and maximum use concentration

Note: If employees have any questions regarding the respirator selection for a specific application, they should contact the H&S Site Lead and / or GoM Health and Hygiene Team

## 4.4 Medical Evaluation

Employees included in the GoM Respiratory Protection Program (i.e., required use and voluntary use) shall complete a medical evaluation. A determination of the employee's ability to wear a respirator will be made prior to fit testing and respirator use and periodically (at least annually) thereafter unless the employee's work no longer requires a respirator.

The process for medical evaluation is:

1. Employee completes the on-line "OSHA Medical Evaluation Questionnaire" ..
2. Questionnaire is reviewed by GoM Occupational Health.
3. GoM Occupational Health provides medical recommendation (medical clearance letter).
4. The employee will be provided the opportunity to review the medical evaluation and / or examination result with GoM Occupational Health.

Additional medical evaluations may be required based on the following conditions;

- A. Employee reports medical signs or symptoms related to his or her ability to use a respirator,
- B. Supervisor or H&S Site Lead informs Occupational Health of employee who needs to be re-evaluated or requires a follow up evaluation,
- C. Observations made during fit testing and Program evaluation, indicates a need for employee re-evaluation or
- D. A change occurs in workplace conditions (i.e., physical work effort, protective clothing, temperature, etc.) that may result in a substantial increase in the physiological burden placed on an employee.

## 4.5 Fit Testing

- A. Employees shall have medical clearance prior to fit testing.
- B. Employee must be fit-tested with the same make, model style, and size of respirator that will be used. Facial hair that comes between the sealing surface of the face piece, or any condition that interferes with the respirator valve function as defined in Section 3.4 Facial Hair, is not permitted during fit testing.
- C. The qualitative and/or quantitative fit test shall be performed using modified facepieces as required by the OSHA standard (29CFR1910.134). These facepieces should not be used for protection while modified. The respirator must be cleaned and disinfected in between employee fit tests. Quantitative fit testing (QNFT) with a Portacount will be the preferred method of fit testing. To pass a QNFT, the fit factor for a half-face respirator is 100 or greater and for a full-face respirator, is 500 or greater.
- D. Positive pressure tight-fitting respirators will be fit-tested in the negative pressure mode. Air supplied respirators and PAPR must be tested in the negative pressure mode.

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- E. Fit testing will be done initially upon employee assignment to an area where respirators are required and repeated at least every 12 months thereafter. When an employee has weight changes, dental work or scarring, etc., fit-testing may need to be repeated sooner.
  - F. If it is determined that an individual cannot obtain an adequate fit with any negative pressure respirator, another respirator may be selected by Occupational Health or a powered air purifying or supplied air respirator may be required instead.
  - G. Employees who need corrective lenses while wearing full-face respirators may wear contact lenses or can request spectacle kits.

## 4.6 Fit Checks

Each individual who uses a tight-fitting respirator must perform a positive and negative pressure seal check to ensure that an adequate seal is achieved each time the respirator is put on.

Directions on performing user seal checks will be given to employees during respirator protection training and are located in the Site Specific Plan.

## 4.7 Inspection, Maintenance and Use

### 4.7.1 Inspection

Respirators used in routine and voluntary situations shall be inspected before each use and during cleaning.

SCBA's and respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations and shall be checked for proper function before and after each use. Monthly inspections (inspection checklist can be found in the facility site-specific plan) shall verify that the regulator and warning devices function properly.

Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

Respirator inspection(s) shall include the following:

- A. a check of respirator function
- B. tightness of connections
- C. condition of the facepiece respiratory inlet covering, head harness, valves, connecting tubes, harness assemblies, hoses, filters, cartridges, canisters and shelf life date(s)
- D. proper function of regulators, alarms, and other warning systems
- E. Each rubber or other elastomeric part shall be inspected for pliability and signs of deterioration.

Employees' assigned responsibility for inspecting respirators maintained for emergency use shall do the following.

- A. Certify the respirator by documenting the date the inspection was performed including;



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1. the name or (signature) of the person who made the inspection,
  2. the findings, required remedial action(s) and
  3. a serial number or other means of identifying the inspected respirator.
- B. Provide the above information on a tag or label attached to the storage compartment for the respirator and include in the inspection reports.

Respirators that fail an inspection or are otherwise found to be defective shall be removed from service and are either discarded or repaired. The H&S Site Lead shall be contacted immediately before any item is replaced or repaired.

#### **4.7.2 Maintenance**

Maintenance to respirators shall be performed using only the manufacturer's NIOSH - approved parts designed for the specific type of respirator.

No attempt will be made to replace components or make adjustments, modifications or repairs beyond the manufacturer's recommendation.

Hydrostatic testing of cylinders is required every three years for composite and every five years for steel and aluminum.

A visual and functional inspection of the regulator must be done by a technician. The inspection must be done **every year if it is a Chemical, Biological, Radiological, and Nuclear (CBRN) SCBA and every two years if it is a non-CBRN SCBA.**

#### **4.7.3 Use**

Employees are required to leave the contaminated area to replace their cartridges/filters/canisters and to notify their Supervisor, H&S Site Lead and/or GoM Health Team of any of the following issues:

- A. Malfunction of the respirator,
- B. Detection of leakage of contamination into the respirator (odor, taste, irritation),
- C. Increased breathing resistance of the respirator is noted,
- D. Severe discomfort
- E. Illness including sensation of dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, itching, fever and chills

### **4.8 Cleaning and Storage**

Respirators must be cleaned and disinfected as often as necessary to be maintained in a sanitary condition following guidelines in the Site Specific Plan.

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Respirators shall be stored in a clean, dry plastic bag or other air tight container. Respirators shall be packed or stored with the face piece and exhalation valve resting in a position that does not damage or impair the elastomer face piece. Respirators shall not be stored in places such as lockers or tool boxes unless they are in a sealed carrying case, bag, or carton. Air supplied respirators placed at stations and work areas for emergency use shall be stored in compartments built for that purpose, be quickly accessible, and clearly marked as emergency use respirator.

## 5 Training

The GoM Health and Hygiene Team is responsible for maintaining respiratory protection training that meets requirements set by OSHA 29 CFR 1910.134.

The training shall be provided to employees required to use respirators prior to the start of their job and annually thereafter or when;

- A. changes in the workplace or the type of respirator render previous training obsolete,
- B. inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the required understanding or skill,
- C. a workplace situation arises in which retraining appears necessary to ensure safe respirator use.

## 6 Record Keeping

The following records shall be kept:

- A. Employee Medical Evaluations
- B. Respirator Fit Test results
- C. Certificate of analysis from supplier for Grade D breathing air
- D. Company owned breathing air compressor quarterly test results
- E. Self-contained breathing apparatus inspection records (including flow test results)
- F. Respirator Inspection Records
- G. Daily Verification of the Integrity of Installed Breathing Air Systems
- H. Verification for Correct Installation of a Breathing Air Compressor
- I. Verification for Correct Installation of Bottled Air System
- J. Respiratory Protection Safe Work Practice
- K. Site-Specific Respiratory Protection Plan
- L. Training Records

Records will be maintained for a minimum of 1 year and must be made available to employees upon request.

This information shall be used to facilitate employee involvement in the respirator SWP, assist the GoM Health Team in verifying the adequacy of the SWP, and provide a record for compliance determinations by OSHA.

## 7 Definitions

**Table 3: Definitions**

Term	Definition
Air-purifying respirator	A respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
Assigned Protection Factor (APF)	The minimum anticipated protection provided by a properly functioning respirator or class of respirators to a given percentage of properly fitted and trained users.
Canister or cartridge	A container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.
Emergency situation	Any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.
End-of-service-life indicator (ESLI)	A system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.
Escape-only respirator	A respirator intended to be used only for emergency exit. Escape respirators, which also are known as escape hoods, come in two types. One type, called a self-contained escape respirator, consists of a hood with a tightly fitting neckpiece and a contained source of breathing air. The hood provides a barrier against contaminated outside air, and the user breathes air from the attached source. The other type, called an air purifying escape respirator, has a filter canister mounted on the hood. The user breathes outside air through the canister, which filters out harmful contaminants before the air is breathed.
Filter or air purifying element	A component used in respirators to remove solid or liquid aerosols from the inspired air.
Filtering face piece (dust mask)	A negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium.
Fit factor	A quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Term	Definition
High efficiency particulate air (HEPA) filter	A filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.
Immediately dangerous to life or health (IDLH)	An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.
Issuing Authority (IA)	Issuing authorities are responsible for management of the permit to work process within their defined area and skill set. The Issuing Authority is normally a leadership position within a particular discipline (Engineers, Rig Management, Team Leaders, Lead Techs and Tech 1s). There may be more than one issuing authority at a site or premises.
Maximum use concentration (MUC)	The product of the assigned protection factor times the Permissible Exposure Limit.
Negative pressure respirator (tight fitting)	A respirator in which the air pressure inside the face piece is negative during inhalation with respect to the ambient air pressure outside the respirator.
Oxygen deficient atmosphere	An atmosphere with an oxygen content below 19.5% by volume.
Oxygen enriched atmosphere	An atmosphere with an oxygen content above 23.5% by volume.
Performing Authority (PA)	The Performing Authority is the responsible person for the activity being carried out under the WCC. The Performing Authority may be the person carrying out the task or may be supervising a group of people conducting the job. The Performing Authority can be responsible for more than one task at any one time, providing the tasks can be safely managed concurrently
Positive pressure respirator	A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.
Powered air-purifying respirator (PAPR)	An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.
Pressure demand respirator	A positive pressure atmosphere-supplying respirator that admits breathing air to the face piece when the positive pressure is reduced inside the face piece by inhalation.
Qualitative fit test (QLFT)	A pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.
Quantitative fit test (QNFT)	An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.
Self-contained breathing apparatus (SCBA)	An atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Term	Definition
Service life	The period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.
Supplied-air respirator (SAR) or airline respirator	An atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.
Tight-fitting face piece	A respiratory inlet covering that forms a complete seal with the face.
User seal check	An action conducted by the respirator user to determine if the respirator is properly seated to the face.

## 8 Key Documents, Tools, References

[OSHA 29 CFR 1910.134 Respiratory Protection](#)

ANSI/Compressed Gas Association Commodity Specification for Air G-7.1-1989

Coast Guard 33 CFR 142.39

## 9 Attachments

### 9.1 Site Specific Respiratory Protection Plan Template



Site-Specific  
Respirator Protection





Administrative MOC

[Yellow box] = Required Field

MOC #: AMOC-GOMDW-14-0187  
 Date Initiated: 10/31/2014  
 Initiator: Thomas, Kayla  
 Stage: Implementations  
 Status: Approved

Facility:  Expected Implementation Date:   
 System:  MOC Duration:  Permanent  Temporary  
 Verifier/Coordinator:

Title: UPS-US-SW-GOM-HSE-DOC-00128 - REV 7 Respiratory Protection Safe Work Practice

Scope:  
 UPS-US-SW-GOM-HSE-DOC-00128 Respiratory Protection SWP has been updated and revised to consolidate current practices, provide more guidance in the site specific respiratory protection plan and align with current regulatory standards and industry best practices. The revision has added UPS-US-SW-GOM-HSE-DOC-00601 GoM Monthly SCBA - Egress Unit Respiratory Inspection Report Form to the site specific plan making UPS-US-SW-GOM-HSE-DOC-00601 obsolete. Specific updates to the Respiratory Protection SWP include aligning key responsibilities including the addition of Issuing Authority and Performing Authority, adding a hazard and risk assessment section, condensing general requirements for types of respirators, adding process for program evaluation and self-verification, moving protocols and procedures to the site specific plan template and general formatting. The SWP revision affects GOO Offshore Leadership, HSSE, Issuing Authorities, Performing Authorities, Fire Team Members and anyone who is required or voluntarily wears a respirator. Rollout method includes overview during monthly AOM HSE meeting and presentation of changes by HSSE Site Leads to Offshore Leadership and Fire Team Members. UPS-US-SW-GOM-HSE-DOC-00128 - REV 7 Respiratory Protection Safe Work Practice will be reviewed by Melissa Mark, GoM GOO HSE Manager and approved by Valerie Murray, GoM Health Manager.

Justification:  
 As part of the Health and Safety document review process and to align with current regulatory standards and industry best practices. Also to consolidate current practices (Respiratory Protection SWP and GoM Monthly SCBA - Egress Unit Respiratory Inspection Report Form).

Risk/Mitigation (attach risk documentation where appropriate):  
 Low Risk - change would have little effect to the affected parties.

Proceed with MOC?  Yes  No/Cancel  Clarify

Completed On	Completed By
<input type="text" value="11/4/2014"/>	<input type="text" value="Loffman, Donna"/>



MOC Reviews

AMOC-GOMDW-14-0187 = Required Field  
 [Blue box] = Reviews have been created but not issued

MOC #: AMOC-GOMDW-14-0187  
 Date Initiated: 10/31/2014  
 Initiator: Thomas, Kayla  
 Stage: Implementations  
 Status: Approved

Reviews Due Date

Review	Responsible Person	Complete	Completed On	Completed By
HSE Manager Review	Mark, Melissa A	<input checked="" type="radio"/> Agree <input type="radio"/> Disagree	<input type="text"/>	Mark, Melissa A
<input type="text"/>	<input type="text"/>	<input type="radio"/> Agree <input type="radio"/> Disagree	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="radio"/> Agree <input type="radio"/> Disagree	<input type="text"/>	<input type="text"/>
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MOC Approval

[Yellow box] = Required Field  
 [Blue box] = Approvals have been created but not issued

MOC #: AMOC-GOMDW-14-0187  
 Date Initiated: 10/31/2014  
 Initiator: Thomas, Kayla  
 Stage: Implementations  
 Status: Approved

Please select the approval levels required for this MOC.  Level 1  Level 2  Level 3

Level 1 Approvals

Approver	Disposition	Date	Approved By
Murray, Valerie	<input checked="" type="radio"/> Approve <input type="radio"/> Cancel <input type="radio"/> Clarify	<input type="text" value="12/30/2014"/>	Murray, Valerie
<input type="text"/>	<input type="radio"/> Approve <input type="radio"/> Cancel <input type="radio"/> Clarify	<input type="text"/>	<input type="text"/>