

BROOKHAVEN NATIONAL LABORATORY Safety & Health Services Division	NUMBER IH72300
	REVISION FINAL Rev 2
Subject: Respiratory Fit Testing- QNFT Program Policy & Principles	DATE 07/13/04
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1.0 PURPOSE & SCOPE

Purpose: This procedure defines the role of the IH group in developing and coordinating an effective respiratory protection **Quantitative Fit Test (QNFT)** program. As a minimum, the program will comply with OSHA 29CFR1910.134 Respiratory Protection and ANSI Z88.2. American National Standard for Respiratory Protection. Elements of ANSI Z88.10 (Respirator Fit Testing Methods) are followed as a Best Management Practice. This SOP describe the principles and policies of QNFT and is designed to be used in conjunction with IH72350 (*Operation of the Portacount™ Plus*) or IH72360 (*Operation of the Portacount™*) that describe the operation of a particular fit test apparatus.

2.0 RESPONSIBILITIES

- 2.1 This program is implemented through the SHSD Industrial Hygiene Group Leader and the *Respiratory Protection Program Administrator (RPPA)*. Members of the SHSD Industrial Hygiene Group and other BNL organizations, with qualifications accordance with Section 4 of this procedure, can perform fit testing.
- 2.2 It is the responsibility of persons conducting testing to comply with all provisions in the Respiratory Protection Program Procedure IH72100 and Instrument Operation Procedure

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IH72350 or IH72360, and IH72450. It is the responsibility of persons conducting testing to document results of the testing in compliance with these SOPs.

- 2.3 The IH Group maintains the equipment used in this procedure.

3.0 DEFINITIONS

- 3.1 *QNFT- Quantitative Fit Test:* A test in which a challenge agent is administered outside the face piece and the presence of the agent is detected and enumerated by analytical instrumentation. Agents used include corn oil, saccharin, and ambient room dust.
- 3.2 *Portacount™:* A QNFT apparatus manufactured by TSI® Inc. utilizing the particulates found in ambient air as the challenge medium. Quantification is by optical density measurement using condensation nucleus counting technology. The instrument specifications include detection of particles as small as 0.02 µm in a range of 0.1 to 5 x 10⁵ particles/cm³.
- 3.3 *Tight fitting facepiece:* Any respirator facepiece that relies on a 'mask to face' seal to provide protection. This class includes quarter, half, and full facepiece masks used in both negative and positive pressure modes in air purifying and supplied air respirators. Excluded from this classification are hoods and helmet style respirators.

4.0 PREREQUISITES

- 4.1 **Calibration of equipment:** Test equipment used in this program will be calibrated on an annual basis by the manufacturer of equipment, or by an equivalent, independent calibration service provider. The IH Group will maintain records for a minimum of three years.
- 4.2 **Fit Testers Qualifications:** Only persons with current qualification can perform the role of *Fit Tester* in this program. Approval is as per Section 7.
- 4.3 **Persons being fit tested:** Only persons who have documented records of compliance with the Respiratory Protection Program requirements for OMC Respirator Protocol and BNL Office of Training and Qualification (OTQ) training (or BNL Respiratory Protection Program Administrator approved equivalent) for the type of mask being fitted are allowed to be fit tested. It is the role of the fit tester to verify compliance with the Respiratory

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Protection Program requirements prior to commencing the fit test by examining the BNL Respirator Authorization Card or accessing the employee's records in the Brookhaven Training Management System (BTMS). Acceptable OMC and Training status are:

IND317 Fit Test to be Conducted	Training 12 month cycle	OMC Approval 18 month cycle
Half face- APR/PAPR HP-IND-317D North 7700-Half Mask	IND-301/301W	Half-Mask Air Purifying Respirator
Full Face- APR/PAPR HP-IND-317C North 7600-FF HP-IND-317C North7800-PAPR FF HP-IND-317E North FullFace HP-IND-317F Racal PAPR Full Face HP-IND-317B MSA Ultra View APR	IND-301/301W	Full-Face Air Purifying Respirator
Full Face- Supplied Airline	RPPA approved record	Air-Line Respirator (mask/ hood and hoses)
SCBA HP-IND-317A Cairns SCBA	IND-309 or Emergency Services Training record equivalent.	Self-Contained Breathing Apparatus
Avon Military Mask HP-IND-317H	SSD training record	Full-Face Air Purifying Respirator

5.0 PRECAUTIONS

- 5.1 **Equipment Contamination:** It is possible that some individuals may have an undiagnosed contagious disease that could be transmitted from person to person by close contact with face-pieces if the equipment is not properly sanitized between users. In all cases, personal protective equipment owned by the IH Group that is used for fit testing must be thoroughly sanitized between wearers following procedures set up in the SOP IH72450.
- 5.2 Fit testers are not authorized to conduct fit testing on persons with diagnosed, contagious infectious diseases.
- 5.3 **Personal Protective Equipment (PPE) for fit tester:** The operation of the fit test equipment does not expose the fit tester to any hazard. Personal protective equipment is not required.
- 5.4 **Hazard Determination:** The operation of fit test equipment does not cause exposure to any chemical, physical, or radiological hazards. The equipment does not generate Hazardous Waste.

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6.0 PROCEDURE

6.1 Equipment:

- 6.1.1 TSI® Portacount™ Respirator Fit Tester, or equivalent..
- 6.1.2 Appropriate respirators- probed for fit testing.
- 6.1.3 HEPA filter cartridges for above respirators.
- 6.1.4 Authorization Cards, laminating pouches (GBC 3202105 from Corporate Express)
- 6.1.5 Intentionally damaged/defective facepieces for examination by wearers.

6.2 **Pre-Test Qualification:** Verify that the person to be tested is in compliance with the Respiratory Protection Program Medical Approval and Training requirements prior to commencing the fit test. This can be done by examining the person's BNL Respirator Authorization Card or by accessing the employee's records in the Brookhaven Training Management System (BTMS).

6.3 **Screening:** Observe that the worker does not have any disqualifying conditions. As per OSHA 29CFR1910.134 Appendix A, do not perform a fit test on anyone:

- 6.3.1 With any hair growth between the skin and facepiece seal surface. This includes stubble beard growth, beards, moustaches, or sideburns that cross the respirator seal surface.
- 6.3.2 Exhibiting difficulty in breathing during the tests or who otherwise demonstrates signs of medical impairment caused by the test.

6.4 **Defective Mask Inspection:** Have the worker examine the intentionally damaged/defective mask demonstration units and point out the defects in the equipment. Answer and questions on the equipment design and use. Record the test results on Attachment 9.6.

6.5 **User Instruction:** Instruct the user on proper techniques for donning and fitting the respirator, including:

- 6.5.1 Initial inspection,
- 6.5.2 Cartridge/canister installation (if applicable),
- 6.5.3 Donning, positioning, and adjusting the mask,
- 6.5.4 Leak check procedures,
- 6.5.5 QNFT test protocol and tests with a demonstration of each exercise.

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- 6.6 **Selection of mask:** Select the respirator to be fit tested based on the type indicated on the *Employee Respirator Medical Approval Form* (i.e. half face, full face, SCBA, Avon, etc). See Attachment 9.4. Allow the user to try on respirators from available sizes and choose the respirator that is most comfortable and passes the leak check tests. If the preferred manufacturer model fails to provide a passing fit test, attempt a fit test from at least one other model or vendor in appropriate style. Ensure that the respirator selected is acceptable and comfortable to the worker.
- 6.7 **Leak Checks:** Have the user perform a positive and where possible a negative pressure leak check on the mask.
- 6.7.1 Negative pressure leak check: Have the user seal the inlet valve(s) to the respirator by covering the exposed face of the cartridges or removing the cartridges and covering the openings with the palm of the hand. Have the user inhale and verify that the mask contracts slightly inward before leakage occurs.
- 6.7.2 Positive Pressure leak check: Have the user seal the exhalation valve(s) of the respirator with the palm of the hand and blow gently into mask. Verify that the mask expands slightly outward before leakage occurs.
- 6.7.3 Record the results of the checks on Attachment 9.6
- 6.8 **Familiarization Period:** Allow the user to wear the mask for a familiarization period of at least five minutes prior to the fit test. If the mask becomes uncomfortable during that period, allow the user to select another mask and repeat the leak checks and familiarization period.
- 6.9 **Facepiece set-up:** Use either a surrogate facepiece having a sealing surface and material of construction that are the same as the wearer's facepiece in the workplace, or use the wearer's individually assigned facepiece. Tight fitting positive pressure respirator facepieces are to be fit tested only in the negative-pressure mode regardless of the mode of operation in use.
- 6.10 **Fit test and Exercise regimen:** Following the appropriate Fit Test Apparatus procedure for start up, validation, and operation. Have the worker complete a regimen of exercises that at the minimum include sixty seconds of the following exercises:
- Normal breathing
 - Deep breathing
 - Side to side head movement
 - Up and down head movement
 - Talking- counting backwards from 100, reciting the alphabet, Rainbow Passage, etc.
 - Grimace- smiling or frowning (15 seconds only)

The only official copy is on-line at the SHSD IH Group website.
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- Bending over
- Normal breathing

6.11 **Calculation of Fit Test Factor:** Via the automated calculation of the Portacount Plus or by the following formulae, determine the fit factor:

<p>Fit Factor (FF) = $\frac{\text{Concentration outside the mask}}{\text{Concentration inside the mask}}$</p> <p>Overall Fit Factor = $N / (1/FF_1 + 1/FF_2 + \dots + 1/FF_N)$</p> <p>Where: N = number of exercises FF₁ = fit factor on the first exercise FF₂ = fit factor on the second exercise FF_N = fit factor on the Nth exercise</p>
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6.12 **Determine Passing Test based on BNL Fit Factor Criteria:**

- ANSI Z88.2 sets the fit factor to be at least 10 times greater than the Assigned Protection Factor and at a minimum of at least 100.
- OSHA 29CFR1910.134 requires the fit factor to be at least 100 for tight fitting HALF face, and equal to or greater than 500 for tight fitting FULL face.
- BNL policy shall require the fit test to meet the following fit test factor in order to pass based on the following table:

Mask Type	Required Fit Test Factor
APR- Half Face North 7700-Half Mask	500
APR- Full Face MSA Ultra View APR North 7600 Wilson F-710-FF Full Face APR	1000
PAPR- Half Face	500
PAPR- Full Face North 7600-FF/7800-PAPR Racal PAPR Full Face	1000

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SCBA Pressure Demand- Full Face Cairns SCBA Full Face	1000
Airline, Demand, Full Face	1000
Airline, Continuous flow, Full Face	1000
Airline, hood or helmet	N/A
Airline, loose fitting facepiece	N/A
Military Mask M-17 Gas Mask Avon F-12 Gas Mask	1000

(a) NIOSH Respirator Decision Logic Publication 97-108. & NIOSH Pocket Guide to Chemical Hazards (2002 Web)
 (b) ANSI Z88.2- 1992. (c) OSHA 29CFR1910.134

- 6.13 Printout the fit test record from the automated system. Explain the results to the employee and obtain the fit testers and workers signature. Save the test results to computer memory. File the record under the employee's name. The IH Group will maintain the hardcopy records of the fit test for a minimum of three years.
- 6.14 Complete a *BNL F2287A, Respirator Authorization Card*, laminate, and give it to the worker. See Attachment 9.3.
- 6.15 Complete the record of the testing (*Fit Test Completion Record*) form contained in Attachment 9.4 of this SOP, copy, and send the original to the BNL Training and Qualification Program Office.
- 6.16 Complete the *Fit Test & Respirator Inspection for Defects* record contained in Attachment 9.6 and keep the record with the IH Groups' documentation of the fit test session.
- 6.17 SHSD fit test records should contain at a minimum the following information: Type of fit test and the fit test apparatus used, instrument calibration and repair, name of person conducting the fit test, specific make, model and size of respiratory protective devise, name of person tested, date of test, results of fit test, success or failure, any special considerations or difficulties in wearing (contact lenses, glasses, etc).

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7.0 Implementation and Training

- 7.1 For SHSD personnel, the IH Group Leader or Respiratory Protection Program Administrator shall qualify persons to perform testing under this program. The qualification criteria for a *Fit Tester* are:
- 7.1.1 An overall knowledge of respiratory protection principles and successful completions of the BNL courses (or equivalent) in APR/PAPR and SCBA,
 - 7.1.2 Successful completion of CPR certification.
 - 7.1.3 Specific knowledge of this procedure, OSHA 29CFR1910.134, ANSI Z88.2, and Z88.10. This can be gained from work experience or specialized training courses.
 - 7.1.4 Demonstrated competency in performing this test to the satisfaction of the IH Group Leader or Respiratory Protection Program Administrator via:
 - Visual observation of the fit test technique using the fit test apparatus and the ability to assemble the respiratory protective equipment.
 - Demonstrated knowledge in the types of respiratory protective equipment used at BNL.
 - Demonstrated knowledge in respirator cleaning technique.
 - 7.1.5 The SHSD IH Group Leader will transfer the names of SHSD persons who have passed the competency tests for *Fit Tester* to the BNL BTMS Administrator for inclusion in that database. *Fit Tester* personnel shall be re-qualified at a frequency not to exceed three years. See form in Attachment 9.1 *Qualification Documentation for QNFT Fit Tester*.
- 7.2 For non-SHSD personnel conducting fit testing, the *Fit Tester's* line management shall establish qualification criteria that are compliant with ANSI and OSHA drivers and shall qualify persons to perform fit testing under this program.

8.0 REFERENCES

- 8.1 OSHA 29CFR1910.134 (*Respiratory Protection*)
- 8.2 ANSI Z88.2. (*American National Standard for Respiratory Protection*).
- 8.3 ANSI Z88.10 (*Respirator Fit Testing Methods*)
- 8.4 BNL SHSD Procedures: *IH72200, IH73350, IH72360, IH72450.*

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9.0 ATTACHMENTS

- 9.1 Qualification Documentation for QNFT Fit Tester
- 9.2 Sample of Printed Documentation of Fit Test Record
- 9.3 BNL F2287A, *BNL Respirator Authorization Card*
- 9.4 Sample of *OMC Medical Approval form*
- 9.5 Training & Qualifications Program Office - *Fit Test Completion Record*
- 9.6 *Fit Test & Respirator Inspection for Defect* record
- 9.7 *Visual And Physical Respirator Inspection Checklist*

10.0 Documentation

Document Review Tracking Sheet		
Prepared By: <i>(signature/date on file)</i> R. Selvey 04/02/02 Certified Industrial Hygienist	Reviewed By / Date: <i>(signature/date on file)</i> D. Wadman 04/03/02 SHSD respirator Fit Tester Lead	Approved By / Date: <i>(signature/date on file)</i> R. Selvey 04/03/02 Industrial Hygienist Group Leader
Filing Code: IH52QR.01	QA Review / Date:	Effective Date: 04/04/02

Periodic Review Record (1 year cycle)		
Date of Review	Reviewer Signature and Date	Comments Attached
04/12/04	<i>(signature/date on file)</i> R. Selvey	Revised format to add Section 7. Minor text improvements.
07/13/04	<i>(signature/date on file)</i> R. Selvey	Added Attachment 9.6 and revised and added text in Section 6.

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Attachment 9.1

Qualification Documentation for QNFT Fit Tester Qualification Code: IH-IHP-72300

Identification of person being qualified	Name of employee	BNL Life#
Activities qualified to perform	Fit Tester for testing the mask to face fit of respiratory protection equipment OSHA 20CFR1910.134 and ANSI Z88.2 protocols.	
Basis used for certification (education, experience, indoctrination, and training)	Course: [School and Date] Experience at BNL using SOP IH72300 and Apparatus SOP <input type="checkbox"/> CPR Qualified <input type="checkbox"/> APR trained <input type="checkbox"/> SCBA trained Test results (where applicable): Not applicable	
Results of capability demonstration:	<input type="checkbox"/> Observed performing the testing procedure accurately <input type="checkbox"/> Observed cleaning equipment accurately	
Results of physical examinations	Not required	
Signature of employer's designated representative	[Name of person performing the qualification, Title]	
Date of Certification	(date)	
Date of Expiration	(date) 36 months	

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Attachment 9.2

Sample of Printed Documentation of Fit Test Record

03/12/2002

LAST NAME GA [REDACTED]
 FIRST NAME MI [REDACTED]

FIT TEST REPORT
 Fit test information

ID NUMBER 22 [REDACTED]
 LAST NAME G [REDACTED] CUSTOM1
 FIRST NAME M [REDACTED] CUSTOM2
 COMPANY SHSD CUSTOM3
 LOCATION BLDG 902A/8236 CUSTOM4
 NOTE

TEST DATE 03/12/2002 PORTACOUNT S/N 15463
 TEST TIME 13:53 N95 COMPANION N
 DUE DATE 03/12/2003

RESPIRATOR PROTOCOL DEFAULT 29CFR1910.134
 MANUFACTURER CAIRNS PASS LEVEL 1000
 MODEL SCBA
 MASK STYLE FULL FACE
 MASK SIZE MED/LARGE
 APPROVAL
 EFF. < 99% N

EXERCISE	DURATION (SEC)	FIT FACTOR	PASS
NORMAL BREATHING	60	19100	Y
DEEP BREATHING	60	3540	Y
HEAD SIDE TO SIDE	60	18100	Y
HEAD UP AND DOWN	60	15700	Y
TALKING	60	1970	Y
GRIMACE	10	Excl.	X
BEND AND TOUCH TOES	60	2080	Y
NORMAL BREATHING	60	23400	Y

OVERALL FF 4720 Y

FIT TEST OPERATOR [REDACTED] DATE 3/12/02
 SELVEY

NAME [REDACTED] DATE 3/12/02
 MIKE GAFFNEY

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Attachment 9.3

BNL F2287A, *BNL Respirator Authorization Card*

FRONT OF CARD

BROOKHAVEN NATIONAL LABORATORY RESPIRATOR AUTHORIZATION CARD	
NAME <i>John Doe</i>	
LIFE# <i>12345</i>	DEPT/DIV: <i>HP</i>
MEDICAL APPROVAL	
BNL OMC	EXPIRES <i>02/02/05</i>
TRAINING	
APR/PAPR	EXPIRES
SCBA	EXPIRES <i>02/07/05</i>
AIR LINE	EXPIRES

BNL F2287A

Obtain this information from the card being surrendered and replaced or from the BTMS database

BACK OF CARD

FIT TESTING		
MFGR / STYLE	SIZE	EXPIRES
NORTH 7700 HALF		<i>02/02/05</i>
NORTH 7600 FULL		
CAIRNS FULL FACE		
MSA FULL FACE		<i>02/07/05</i>
RESTRICTIONS		
<i>X</i> EYE GLASSES		
OTHER		

Write in the appropriate date, i.e. 12 months from the date of fit testing

Check this if the employee needs to wear prescription glasses within the facepiece to conduct work safely.

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Attachment 9.4

Sample of OMC Medical Approval form

(See next pages)

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Attachment 9.5

TRAINING & QUALIFICATIONS PROGRAM OFFICE FIT TEST COMPLETION RECORD

[Samples]

(See next pages)

Brookhaven National Laboratory Respiratory Protection Program Record BNL Employee Respirator Medical Approval Form

This form should be completed and available to the examining physician at the Occupational Medicine Clinic (OMC) at the time of your medical evaluation for respirator use.

Employee Last Name: _____ First Name: _____

Life No: _____ Dept./Div. _____ Building No: _____ Extension: _____

Types, approximate weights of respirator, and respiratory working conditions for this employee

<input type="checkbox"/> Self-Contained Breathing Apparatus (20 Lbs.)	<input type="checkbox"/> Full-Face Air Purifying Respirator (2 – 3 Lbs.)
<input type="checkbox"/> Air-Line Respirator (mask/ hood and hoses) (9 Lbs.)	<input type="checkbox"/> Half-Mask Air Purifying Respirator (0.75 Lb.)
<input type="checkbox"/> Powered Air Purifying Respirator (5 Lbs.)	<input type="checkbox"/> Escape Pack (3 Bottle Unit) (16 Lbs.)

Duration and frequency of respirator use: Hours per Day Days per Week Weeks per Year

Expected physical work effort: Light Moderate Strenuous Very Strenuous

Potential for Heat Stress: Maximum Expected Temp F C Maximum Expected Humidity (%)

Use for: _____
 Additional: _____
 Res: _____

These blocks indicate the type of respirator to fit test the person for.

_____ worn or carried _____

Visual Activities Distant Visual Activities Spectacle Kit Needed

BNL Supervisor _____ FS Rep. _____
 Printed Name _____ Mail _____ Printed Name _____ Mail _____

ES&H Coordinator _____
 Printed Name _____ Signature _____ Date _____ Mail _____

This portion to be completed by Occupational Medicine Clinic (OMC):

Respirator use ***approved without limitation.***

Respirator users who have been medically qualified remain so until the next scheduled examination or eighteen months, whichever occurs first. No additional evaluation is required for 18 months from this date with the following exceptions:

Respirator use approved with limitations (checks or complete any that apply).

Respirator approval only through (specify date): _____

Employee approved for specific respirator and/or conditions, as follows _____

This is the date of Medical Approval, add 18 months and enter on authorization Card at OMC expiration date

Not approved for respirator use: Until further notice Until (specify date) _____

Employee should return to OMC on _____ for re-evaluation of respirator approval status.

This page should contain NO personal medical information

OMC Physician _____
 Signature _____ Date _____

- | | |
|---|---|
| <input type="checkbox"/> Original on file in OMC medical record | <input type="checkbox"/> Copy mailed to Facility Support Rep. |
| <input type="checkbox"/> Copy given to employee | <input type="checkbox"/> Copy mailed to ES&H Coordinator |
| <input type="checkbox"/> Copy to Office of Training and Qualifications (Bldg.703) | <input type="checkbox"/> Copy to Fit Test Office (Bldg. 129) |
- Brookhaven National Laboratory Occupational Medicine Clinic (OMC), Building 490-OMC Upton, New York 11973 (631) 344-3670



**TRAINING & QUALIFICATIONS PROGRAM OFFICE
FIT TEST COMPLETION RECORD**

Send to: Training, Bldg. 703, or Fax to 8283

Course Number: HP-IND-317 (A thru I) Date: _____	Course Name: Respirator Fit Testing Operator(s): _____
---	---

	First Name (print)	Last Name (print)	Life/Guest Contractor #	Dept/Div	Select Respirator from List Below (enter A thru I)	Medical Date OM-MEDSURV-RESP
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

Respirator Fit Testing Entry Codes

- HP-IND-317A Fit Test Cairns SCBA Full Face [1000]
- HP-IND-317B MSA Ultra View APR [1000]
- HP-IND-317C North 7600-FF/7800-PAPR Full Face [1000]
- HP-IND-317D North 7700-Half Mask [500]
- HP-IND-317E North HEPA Filter [1000]
- HP-IND-317F Racal PAPR Full Face [1000]
- HP-IND-317G Wilson F-710-FF full Face APR [1000]
- HP-IND-317H Avon F-12 Gas Mask
- HP-IND-317I MSA M-17 Gas Mask [500]
- HP-IND-317J MSA Advantage 3000 Full Face APR [1000]



**IH72300 Attachment 9.6
HP-IND-317**

Environmental, Safety, Health & Quality Directorate
SHSD Industrial Hygiene

**Fit Test & Respirator Inspection for Defects Record
Job Performance Measure (JPM) Completion Certificate**

Candidate's Name	Life Number:
------------------	--------------

Fitness for Fit Test

Criteria	Qualifying Standard	Unsatis- factory	Recov- ered	Satisf- actory
Medical Approval	OMC (BNL Employees) or Off-site Licensed health care provider (Non-BNL) medical approval is within the last 16 months.			
Training	Documented training in BNL course (BNL Employee) or Contractor (Non-BNL Employee) class on the type of equipment to be fit tested.			
Smoking	Has not smoked within the last 2 hours prior to test.			
Spectacle Kit	Advised on the need the have ownership of eyewear for mask, as appropriate			

Respirator Inspection for Defects, Donning, and Use

Criteria	Qualifying Performance Standard	Unsatis- factory	Recov- ered	Satisf- actory
Inspection of Defective Mask	Identifies the defects in the sample mask			
Donning Equipment	Demonstrates the proper placement of the equipment on the face and tightening of straps, etc.			
Negative Pressure Fit Check	Demonstrates the proper test , and results indicate no leakage.			
Positive Pressure Fit Check	Demonstrates the proper test , and results indicate no leakage.			

Employee: I accept the responsibility for performing this task as demonstrated within this JPM and the corresponding SOP.

Candidate Signature:	Date:
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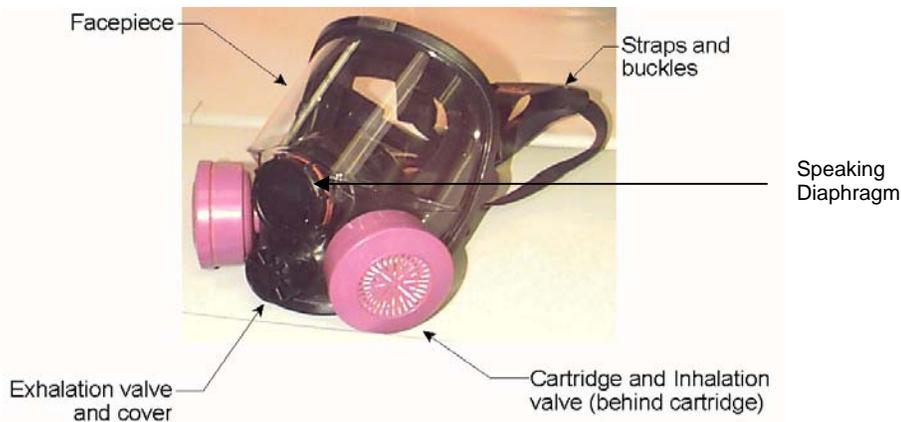
Evaluator: I certify the candidate has satisfactorily performed each of the above listed steps and is capable of performing the task unsupervised.

Evaluator Signature:	Date:
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- Issued **Yellow Approval Card**
- Issued **Voluntary Respirator Use** instruction sheet
- Issued **Inspection Checklist**

VISUAL AND PHYSICAL RESPIRATOR INSPECTION CHECKLIST

User's note: There can be no alteration, modifications or substitution of any components whatsoever to the respirator without the approval of the Manufacturer, otherwise the respirator is not approved by NIOSH.



FACEPIECE LENS

- Check for dirt, scratches or anything that impairs vision.
- Cracks are acceptable if the scratch does not penetrate the lens, i.e., ensure that you cannot feel the crack on the inner side of the lens
- No holes
- No distortion of the lens as if created by heat or temperature variances
- Lens clamp must be secure with bolt and nut

HEADSTRAPS:

- Straps should be complete with no distortions, breaks or tears
- No loss of elasticity
- No broken buckles or attachments
- Check the serrations on the straps to ensure they are not worn
- Note: For MSA equipment, rubber straps cannot be mixed with webbed or cloth straps for radiological decontamination purposes

INHALATION VALVES:

- Lift the valve and check for dust, dirt or any debris
- Look for detergent residue since the respirator's last washing
- Look for cracks or tears in the valve
- Lift the edge of the valve. When you release it, if the valve instantly gains its original shape, it is acceptable
- Check for dust, dirt or soap residue around valve port
 - If it is O.K., reinstall valve
- Check the nasal cup shape. Ensure it is not distorted or misshapen
- Ensure the interior of the nasal cup area is clean
- Look at the back side of the speaking diaphragm and check for cleanliness

- **SPEAKING DIAPHRAM:**

- For NORTH equipment, ensure the red O-ring for the speech diaphragm is in place behind the face lens
- Inspect for any imperfections such as worn threads, obstructions, etc.
- Hand tighten the Speech Diaphragm Housing nut if it is loose.

- **FILTERS:**

- Check that the filter is the correctly prescribed filter for the hazard.
- Unscrew the filter and check the threads on the filter ports that they are not worn or cracked.
- Look inside the filter for any debris or foreign particles.
- Check the threads on the filter.
- Check for cracks or any imperfections in the filter housing.
- If applicable, check the ESLI or end service date.
- Reinstall the filter back on the mask.

- **EXHALATION PORT:**

- Remove the Exhalation Valve Guard and inspect for cracks.
- Note: Check the threads on the inside of the Exhalation Valve Guard to ensure they are intact.
- Check the Exhalation Valve Seat for tears, elasticity and/or any deformity.
- Check the threads on the outer lip of the mask exhalation port.
- Inspect the Exhalation Valve Seat to ensure it is intact and there are no obstructions.
- Screw the Exhalation Valve Seat back onto the Exhalation Valve Guard.
- Screw the Exhalation Valve Guard back on to the mask.

Cairns SCBA



North 7600



MSA Advantage 3000



MSA UltraTwin, UltraVue, and OptimAir

